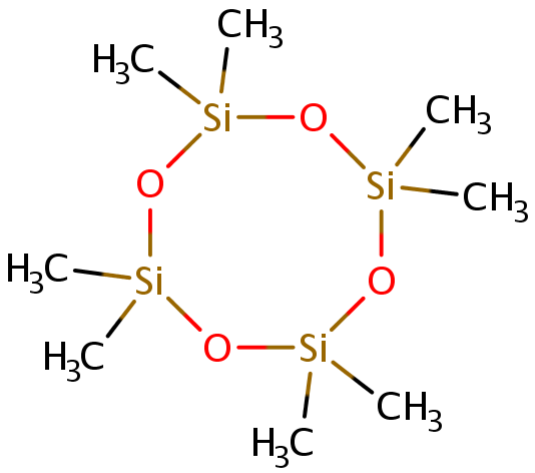
United States
Environmental Protection Agency

February 2022
Office of Chemical Safety and
Pollution Prevention

Final Scope of Risk Evaluation for Octamethylcyclotetra- siloxane (D4)

Supplemental File:

Data Extraction and Data Evaluation Tables for Physical and Chemical Property Studies CASRN: 556-67-2



February 2022

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Data Extraction Tables

In each table, the value preliminarily selected for use in the risk evaluation is in bold.

Table 1. Physical State Study Summary for Octamethylcyclotetra- siloxane (D4)

Study Type	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	**Oily liquid**		**(O'Neil, 2013)**	**High**
Experimental	Colorless liquid		(RSC, 2020)	High
Experimental	Oily liquid		(NLM, 2020)	High
Experimental	Smooth, viscous liquid		(NLM, 2020)	High

Table 2. Physical Properties Study Summary for D4

Study Type	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	**Colorless liquid**		**(RSC, 2020)**	**High**
Experimental	Oily liquid		(O'Neil, 2013)	High
Experimental	Dry powder; liquid		(NLM, 2020)	Unacceptable
Experimental	Colorless, oily liquid		(NLM, 2020)	High
Experimental	D4 does not have an odor; qualitative description that was not the focus of the primary source		(Fuller et al., 2020)	Medium

Table 3. Melting Point Study Summary for D4

Study Type	Substance Purity	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	NR	17.5–18.0 °C	17.6 °C average of 6 values	(U.S. EPA, 2020)	High
Experimental	**NR**	**17.5 °C**		**(O"Neil, 2013)**	**High**
Experimental	NR	17–18.5 °C	15 values were reported in Reaxys; 14 values were in the range of 17–18.5 °C; 1 value was outside this range.	(Elsevier, 2019)	High
Experimental	NR	17.10 °C		(Haynes, 2014)	High
Experimental	NR	17.5 °C		(NLM, 2020)	High
Experimental	NR	17.5 °C		(RSC, 2020)	High
Experimental	NR	17.5–18 °C		(RSC, 2020)	High
Experimental	NR	17–18 °C		(RSC, 2020)	High
Experimental	NR	17–18 °C		(RSC, 2020)	High
Experimental	NR	17–18 °C		(RSC, 2020)	High
Experimental	NR	17–18 °C		(RSC, 2020)	High
Experimental	NR	17–18 °C		(RSC, 2020)	High
Experimental; differential scanning calorimeters ("DSC Q100")	>99.8%	291.12 K	Experimental vapor pressures at 312.97–450.42 K also reported in this study.	(Abbas et al., 2011)	High

Table 4. Boiling Point Study Summary for D4

Study Type	Substance Purity	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	NR	176 °C	176 °C average of 4 values	(U.S. EPA, 2020)	High
Experimental	**NR**	**175 °C**	**STP**	**(O'Neil, 2013)**	**High**
Experimental	NR	74 °C	20 mm Hg	(O'Neil, 2013)	High
Experimental	NR	170–176.4 °C	750–760 torr; 28 values were reported in Reaxys; 19 of these values were reported in the range of 170–176.4 °C at 750–760 torr; 9 values were outside this range or measured at unreported or non-standard pressures.	(Elsevier, 2019)	High
Experimental	NR	175.4 °C		(Haynes, 2014)	High
Experimental	NR	175.8 °C		(NLM, 2020)	High
Experimental	NR	74 °C	20 mm Hg	(NLM, 2020)	High
Experimental	NR	175 °C		(NLM, 2020)	High
Experimental	NR	176 °C		(RSC, 2020)	High
Experimental	NR	175–176 °C		(RSC, 2020)	High
Experimental	NR	175–176 °C		(RSC, 2020)	High
Experimental	NR	175–176 °C		(RSC, 2020)	High
Experimental	NR	175–176 °C		(RSC, 2020)	High
Experimental	NR	175–176 °C		(RSC, 2020)	High

Table 5. Density Study Summary for D4

Study Type	Study Details	Reference Substance	Temperature	Result (g/cm^3)	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental				0.9558	Units not given	(O'Neil, 2013)	High
Experimental			19.99–25°C	0.9497–0.9568	47 values were reported in Reaxys; 21 values were reported in the range of 0.9497–0.9568 g/cm^3 at 19.99-25 °C; 26 values were outside this range or measured at unreported or non-standard temperatures.	(Elsevier, 2019)	High
Experimental			20 °C	0.9561		(Haynes, 2014)	High
Experimental				0.96	Relative density: water = 1	(NLM, 2020)	High
Experimental				0.9558	Units not given	(NLM, 2020)	High
Experimental				0.956	Reported as 0.956 g/mL	(RSC, 2020)	High
Experimental				0.956	Reported as 0.956 g/mL	(RSC, 2020)	High
Experimental				0.956	Reported as 0.956 g/mL	(RSC, 2020)	High
Experimental				0.956	Reported as 0.956 g/mL	(RSC, 2020)	High
Experimental			292.00 K	0.95755	Reported as 957.55 kg/m^3 at 292.00 K; 957.55–790.24 kg/m^3 at 292.00–433.15 K	(Palczewska-Tulinska and Oracz, 2005)	High
Experimental			**293.15** K	**0.95603**	**Reported as 0.95603 g/cm^3 measured at 293.15** K **and atmospheric pressure, 102.355 ± 0.020 kPa**	**(**Zhang et al., 2015**)**	**High**

Table 6. Vapor Pressure Study Summary for D4

Study Type	Substance Purity	Temperature	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	NR	NR	1.05 torr	Reported as 1.05 mm Hg	(U.S. EPA, 2020)	High
Experimental	**NR**	**25 °C**	**1.05 torr**	**Reported as 1.05 mm Hg**	**(NLM, 2020)**	**High**
Experimental	NR	21.7 °C	133.3 Pa		(NLM, 2020)	High
Experimental	NR	298.15 K	92.8–24.5 Pa	Gas chromatographic retention time (GCRT) technique P(GC) and Liquid state vapor pressure P(L). P(GC) = 92.8 ±0.9 Pa; P(L) 124.5 ±6.2 Pa at 298.15 K. Std. dev. P(L) ± 6.2 Pa; P(GC) ±0.9. Temperature ranges of retention time measurements 308.15-368.15 K.	(Lei et al., 2010)	High
Experimental	NR	361.71–459.65 K	≥5.36 to ≤ 133.26 kPa	Non-guideline; vapor pressures measured in an ebulliometer over the pressure range of 7–133 kPa; experimental data fit for Antoine equation and constants A, B, and C. Temperature measurement readings to the nearest 0.01K	(Flaningam, 1986)	Medium

Table 7. Vapor Density Study Summary for D4

No Vapor Density data was identified for this chemical.

Table 8. Water Solubility Study Summary for D4

Study Type	Substance Purity	Temperature	pH	Analytical Method	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	NR	NR	NR		0.005 mg/L	Average of 2 values; 1.69E- 8 to 1.70E−8 mol/L	(U.S. EPA, 2020)	High
Experimental	NR	23 °C	NR			Reported as 189.86E6 mmol/L	(Elsevier, 2019)	Unacceptable
Experimental	NR	23°C	NR		0.056 mg/L		(NLM, 2020)	High
Experimental	NR	25 °C	NR		0.033 mg/L	Measured in synthetic seawater	(NLM, 2020)	High
Experimental	NR	NR	NR			Reported as "none"	(NLM, 2020)	Unacceptable
Experimental; non-turbulent method	**NR**	**23 °C**	**NR**	**GC-MS**	**0.056 ppm**	**Reported as 56.0 ppb; also, aqueous solubility = 189.86 nmol/L**	**(Varaprath et al., 1996)**	**High**
Experimental; Column generator	>99%	NR	NR		0.074 mg/L	Reported as 74 µg/L in freshwater	(Sousa et al., 1995)	High
Experimental; Column generator	>99%	NR	NR		0.033 mg/L	Reported as 33 µg/L in saltwater	(Sousa et al., 1995)	High
Experimental	99.3%	40 °C	NR	GC-MS	0.161 mg/L	Reported as 544 nmol/L	(Gee, 2015)	High
Experimental	99.3%	60 °C	NR	GC-MS	0.4 mg/L	Reported as 1348 nmol/L	(Gee, 2015)	High
Experimental; Generator Column Method Following TSCA Test Standard 796.1860 and amendment #1	99%	25 °C	NR		29–38 µg/L	Mean is 33 µg/L for 7 measurements; Mean recovery from fresh and filtered seawater was 96.5±3.99% and 97.3±12.2%; RSD was 8.8 and 1.1% at 5.00 and 20.0 µg/L, respectively.	(Springborn Laboratories, 1989c)	High
Experimental; Generator Column Method Following TSCA Test Standard 796.1860 and amendment #1	99%	25 °C	NR		60–94 µg/L	Mean 74 µg/L for 12 measurements; Mean recovery 103+/-12.6%. Likely the same study as HERO ID 7006395	(Springborn Laboratories, 1989b)	High

Study Type	Substance Purity	Temperature	pH	Analytical Method	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	NR	NR	NR		39–47 µg/L	Mean value 42+/-0.9 µg/L	(Bayer AG, 1990)	High
Experimental	NR	25 °C	NR		27–33 µg/L	Mean value 29.5 µg/L	(Bayer AG, 1990)	High
Experimental	NR	15–40 °C	NR		20–750 ppb	The large discrepancy between the results cannot be explained by either the duration of the 2 steps or the stirring temperature. Detection of microbubbles of D4 cannot be checked.	(Rhone-Poulenc Inc, 1990)	Medium
Experimental	NR	20 °C	NR		15–240 ppb	It is impossible to deduce a precise value from the present results.	(Rhone-Poulenc Inc, 1990)	Medium
Experimental	>99.5%	NR	NR		50 ppb	Water solubility determined as a result of log Kow measurement. First determination: 25 ppb in water; second determination: 53 ppb in water	(Dow Corning, 1987a)	High
Experimental	NR	NR	NR		40-80 ppb	Closed recirculating system: 76 ppb (unfiltered); 40 ppb (0.45-micron filter) Open recirculating system: 27 ± 3 ppb (possible evaporative loss) Separatory funnel: 8.1–2.9 ppm (unfiltered); 28–16 ppb (0.20–micron filter) D4 is not truly dispersed in water, may be present in various particle sizes.	(Dow Corning, 1987b)	High
Experimental; Non-Turbulent Partitioning of D4	>99% Pure	23 °C	NR		56 ppb	WS ranged from 50–60 ppb	(Dow Corning, 1991)	High

Study Type	Substance Purity	Temperature	pH	Analytical Method	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental; Generator Column Method Following TSCA Test Standard 796.1860 and amendment #1	99%	25 °C	NR		74 µg/L	Likely the same study as HERO ID 5889414	(Springborn Laboratories, 1989a)	High

Table 9. Octanol Water Coefficient (logKow) Study Summary for D4

Study Type	Substance Purity	Temperature	pH	Other Study Details (Amounts of substance liquid phases)	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	NR	NR	NR	NR	6.74		(U.S. EPA, 2020)	High
Experimental	NR	21.6–21.7 °C	NR	NR	6.98	4 data points were reported in Reaxys; 2 of these values were reported as 6.98 at 21.6–21.7°C; 2 data points were measured at unreported temperatures.	(Elsevier, 2019)	High
Experimental	NR	NR	NR	NR	6.74	Average of three measurements	(NLM, 2020)	High
Experimental; double-syringe method	>98%	5.7; 12.2; 21.7; 34.8 °C	NR	2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (µg/L): 1.4–2.0; 0.9–1.3; 0.8–1.5; 1.9–4.0	6.59–7.13	Temperature has substantial effects on measured partition coefficients; equilibrium at 6 hrs	(Xu and Kropscott, 2014)	High
Experimental; double-syringe apparatus	98.1%	21.6; 21.7 °C	NR	2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53E−3; 1.84E−4	6.98	Equilibrium reached at 20 hrs; cryogenic cold trap, dry ice acetone bath	(Xu and Kropscott, 2012)	High

Study Type	Substance Purity	Temperature	pH	Other Study Details (Amounts of substance liquid phases)	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental; Draft OECD Guideline - Slow Stir Method	**99.77; 2 area percent purity**	**25.1°C**	**NR**	**Slow-Stirring Method Using Gas Chromatography and Mass Spectrometry**	**6.488**	**at equilibrium**	**(Kozerski and Shawl, 2007)**	**High**
Experimental	>99%	NR	NR	OECD classical partitioning between 50 mL octanol and 250 mL water	4.0		(Dow Corning, 1982)	High
Experimental	>99.5%	NR	NR	100 µL (0.0956 g) D4 in 25 g (30.23 mL) octanol placed in a 250 mL Wheaton bottle with 150 mL distilled water. The bottle was capped, agitated for an hour on a Burrell wrist-action shaker, and allowed to settle overnight.	5.10		(Dow Corning, 1987a)	High

Table 10. Henry's Law Constant Study Summary for D4

Study Type	Substance Purity	Temperature	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	**NR**	**NR**	**12.0 atm-m^3/mol**		**(U.S. EPA, 2020)**	**High**
Experimental	>98%	5.7±0.2, 12.2±0.1, 34.8±0.2 °C	1.79–3.09	log Kaw = 1.79±0.07, 2.17±0.08 and 3.09±0.14 at 5.7, 12.2 and 34.8 °C, respectively; log Kaw = 2.74 at 25 °C based on linear regression analysis of data.	(Xu, 2014, 2535012)	High
Experimental	NR	NR	12.00 atm-m^3/mol		(NLM, 2020)	High
Experimental	NR	25 °C	13.4 atm-m^3/mol		(NLM, 2020)	High
Experimental	NR	20 °C	3.4	Undimensioned Henry's law constant was 3.4 ±1.37 (grand mean over 5 experiments)	(Hamelink et al., 1996)	High
Experimental; Not reported	98.1% radiochemical purity	21.7 °C	2.70±0.14	log Kaw = 2.70± 0.14; Air = 0.417 mg/L; Water = 8.34×10^{-4} mg/L	(Xu and Kropscott, 2012)	High
Experimental; Not reported	98.1% radiochemical purity	21.6 °C	2.68	log Kaw = 2.68; ± 0.12; Air = 0.741; mg/L Water = 1.53×10^{-3} mg/L	(Xu and Kropscott, 2012)	High
Experimental	>99.9% (w/w)	10–25 °C	1.23–7.66	Mean Hc (undimensional) at temperatures of 10, 15, 20, 25°C were 1.35, 2.38, 2.98, 4.78, respectively. Mean recoveries were 79.8, 80.9, 79.8, 84.5% for respective temperatures.	(Ann Arbor Technical Services, 2000 5889409)	High
Experimental	>99.9% (w/w)	20 °C	0.98–4.10	Mean Hc (undimensional) at 4, 8, 16, 32 µg/L starting concentration were 2.96, 3.53, 1.91, 2.98, respectively. Mean recoveries were 82.0, 80.5, 82.9, 79.8% for respective starting concentrations.	(Ann Arbor Technical Services, 2000 5889409)	High
Experimental	>99.9% (w/w)	20 °C	2.21–8.88	Mean Hc (undimensional) at 24, 48, 72, 96, 120 hours were 4.60, 5.62, 7.77, 5.04, 3.42, respectively. Mean recoveries were 91.6, 101.9, 88.2,	(Ann Arbor Technical Services, 2000 5889409)	High

Study Type	Substance Purity	Temperature	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
				79.0, 78.6% for respective equilibration time.		
Experimental	>99.9% (w/w)	20 °C	13.83–19.41	mean of 3 values 17.0; mean recovery 89.9±3.7%	(Ann Arbor Technical Services, 1990 5889489)	High
Experimental	99.9%	28 °C (301 K)	≥23 to ≤24	Static head space method and modified batch air stripping method (vapor entry loop method VEL) used for direct measurement of Henry's law constant.	(Kochetkov et al., 2001)	High

Table 11. Flash Point Study Summary for D4

Study Type	Substance Purity	Temperature	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	**NR**	**131 °F**	**55 °C**		**(NLM, 2020)**	**High**
Experimental	NR	NR	56 °C		(NLM, 2020)	High
Experimental	NR	NR	57 °C		(RSC, 2020)	High
Experimental	NR	NR	56 °C		(RSC, 2020)	High
Experimental	NR	NR	56 °C		(RSC, 2020)	High
Experimental	NR	NR	54 °C		(RSC, 2020)	High

Table 12. Auto Flammability Study Summary for D4

No Autoflammability data was identified for this chemical.

Table 13. Viscosity Study Summary for D4

Study Type	Apparatus	Temperature	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental		25–25.1°C	2.187–2.239 cP	13 values were reported in Reaxys; 4 values were reported in the range of 2.187–2.239 cP at 25–25.1 °C; 9 values were outside this range or measured at unreported or non-standard temperatures.	(Elsevier, 2019)	High
Experimental		**25 °C**	**2.30 cP**	**Reported as 2.30 cSt**	**(NLM, 2020)**	**High**
Experimental		293.15 K	2.45 mPa.s	Reported as 2.45 mPa-s at 293.15 K; ranged from 2.45–0.41 mPa-s at 293.15–423.15 K.	(Palczewska-Tulinska and Oracz, 2005)	High
Experimental		300 K	2.7 mPa.s		(Liu et al., 2013)	High

Table 14. Refractive Index Study Summary for D4

Study Type	Apparatus	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	20 °C/D	1.3968		(O'Neil, 2013)	High
Experimental	19.99–25 °C	1.3935–1.4013	22 values were reported in Reaxys; 15 values were reported in the range of 1.3935–1.4013 at 19.99–25 °C; 7 values were outside this range or measured at unreported or non-standard temperatures.	(Elsevier, 2019)	High
Not specified	20 °C/D	1.3968		(Haynes, 2014)	High
Experimental	NR	1.396		(RSC, 2020)	High
Experimental	NR	1.396		(RSC, 2020)	High
Experimental	20 °C/D	1.3968		(NLM, 2020)	High
Experimental	**293.15K**	**1.39674**	**Reported as 1.39674 at 293.15 K; also measured at 1.38925–1.37917 over 308.15-328.15 K, respectively.**	**(Zhang et al., 2015)**	**High**

Table 15. Dielectric Constant Study Summary for D4

Study Type	Apparatus	Result	Comments	Affiliated Reference	Data Quality Evaluation Results
Experimental	**20 °C**	**2.4–2.405**	**Static Dielectric Constant**	**(Elsevier, 2019)**	**High**

EPI Suite™ Model Outputs

(U.S. EPA, 2012)

SMILES: C[Si]1(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O1
CHEM: OCTAMETHYLTETRASILOXANE
MOL FOR: C8 H24 O4 Si4
MOL WT: 296.62
---------- EPI SUMMARY (v4.11) ----------
Physical Property Inputs:
Log Kow (octanol-water): 6.49
Boiling Point (°C C): 175.80
Melting Point (°C): 17.50
Vapor Pressure (mm Hg): 1.05
Water Solubility (mg/L): 0.056
Henry LC (atm-m3/mole): 12

Log Octanol-Water Partition Coef (SRC):
Log Kow (KOWWIN v1.68 estimate) = 6.79
Log Kow (Exper. database match) = 6.74
Exper. Ref: SEHSC (2009); average

Boiling Pt, Melting Pt, Vapor Pressure Estimations (MPBPVP v1.43):
Boiling Pt (°C): 159.41 (Adapted Stein & Brown method)
Melting Pt (°C): 1.78 (Mean or Weighted MP)
VP(mm Hg,25 °C): 1.18 (Mean VP of Antoine & Grain methods)
VP (Pa, 25 °C): 158 (Mean VP of Antoine & Grain methods)
MP (exp database): 17.5 °C
BP (exp database): 175.8 °C
VP (exp database): 1.05E+00 mm Hg (1.40E+002 Pa) at 25 °C

Water Solubility Estimate from Log Kow (WSKOW v1.42):
Water Solubility at 25 °C (mg/L): 0.1083
log Kow used: 6.49 (user entered)
melt pt used: 17.50 °C
Water Sol (Exper. database match) = 0.005 mg/L (25 °C)
Exper. Ref: DOW CORNING (1987)

Water Sol Estimate from Fragments:
Wat Sol (v1.01 est) = 0.17229 mg/L

ECOSAR Class Program (ECOSAR v1.11):
Class(es) found:
Neutral Organics

Henry's Law Constant (25 °C) [HENRYWIN v3.20]:
Bond Method: 8.72E−002 atm-m3/mole (8.84E+003 Pa-m3/mole)
Group Method: Incomplete
Exper Database: 1.17E−01 atm-m3/mole (1.19E+004 Pa-m3/mole)

For Henry LC Comparison Purposes:
User-Entered Henry LC: 1.200E+001 atm-m3/mole (1.216E+006 Pa-m3/mole)
Henry's LC [via VP/WSol estimate using User-Entered or Estimated values]:
HLC: 7.318E+000 atm-m3/mole (7.415E+005 Pa-m3/mole)
VP: 1.05 mm Hg (source: User-Entered)
WS: 0.056 mg/L (source: User-Entered)

Log Octanol-Air Partition Coefficient (25 °C) [KOAWIN v1.10]:
Log Kow used: 6.49 (user entered)
Log Kaw used: 2.691 (user entered)
Log Koa (KOAWIN v1.10 estimate): 3.797
Log Koa (experimental database): None

Probability of Rapid Biodegradation (BIOWIN v4.10):
Biowin1 (Linear Model): 0.6063
Biowin2 (Non-Linear Model): 0.2309
Expert Survey Biodegradation Results:
Biowin3 (Ultimate Survey Model): 2.5437 (weeks-months)
Biowin4 (Primary Survey Model): 3.4198 (days-weeks)
MITI Biodegradation Probability:
Biowin5 (MITI Linear Model): -0.1670
Biowin6 (MITI Non-Linear Model): 0.0028
Anaerobic Biodegradation Probability:
Biowin7 (Anaerobic Linear Model): 0.1995
Ready Biodegradability Prediction: NO

Hydrocarbon Biodegradation (BioHCwin v1.01):
Structure incompatible with current estimation method!

Sorption to aerosols (25 Dec C)[AEROWIN v1.00]:
Vapor pressure (liquid/subcooled): 140 Pa (1.05 mm Hg)
Log Koa (Koawin est): 3.797
Kp (particle/gas partition coef. (m3/ug)):
Mackay model: 2.14E−008
Octanol/air (Koa) model: 1.54E−009
Fraction sorbed to airborne particulates (phi):
Junge-Pankow model: 7.74E−007
Mackay model: 1.71E−006
Octanol/air (Koa) model: 1.23E−007

Atmospheric Oxidation (25 °C) [AopWin v1.92]:
Hydroxyl Radicals Reaction:
OVERALL OH Rate Constant = 1.1968 E−12 cm3/molecule-sec
Half-Life = 8.937 Days (12-hr day; 1.5E6 OH/cm3)
Half-Life = 107.246 Hrs
Ozone Reaction:
No Ozone Reaction Estimation
Fraction sorbed to airborne particulates (phi):
1.24E−006 (Junge-Pankow, Mackay avg)

1.23E−007 (Koa method)
Note: the sorbed fraction may be resistant to atmospheric oxidation

Soil Adsorption Coefficient (KOCWIN v2.00):
Koc: 1.444E+004 L/kg (MCI method)
Log Koc: 4.159 (MCI method)
Koc: 4.271E+005 L/kg (Kow method)
Log Koc: 5.631 (Kow method)

Aqueous Base/Acid-Catalyzed Hydrolysis (25 °C) [HYDROWIN v2.00]:
Rate constants can NOT be estimated for this structure!

Bioaccumulation Estimates (BCFBAF v3.01):
Log BCF from regression-based method = 3.948 (BCF = 8867 L/kg wet-wt)
Log Biotransformation Half-life (HL) = 1.6572 days (HL = 45.41 days)
Log BCF Arnot-Gobas method (upper trophic) = 3.982 (BCF = 9592)
Log BAF Arnot-Gobas method (upper trophic) = 6.122 (BAF = 1.324e+006)
log Kow used: 6.49 (user entered)

Volatilization from Water:
Henry LC: 12 atm-m3/mole (entered by user)
Half-Life from Model River: 1.758 hours
Half-Life from Model Lake: 163.6 hours (6.816 days)

Removal in Wastewater Treatment (recommended maximum 95%):
Total removal: 99.91 percent
Total biodegradation: 0.18 percent
Total sludge adsorption: 59.87 percent
Total to Air: 39.86 percent
(using 10000 hr Bio P,A,S)

Level III Fugacity Model:
Mass Amount Half-Life Emissions

	(percent)	(hr)	(kg/hr)
Air	31	254	1000
Water	39.2	900	1000
Soil	1.42	1.8e+003	1000
Sediment	28.5	8.1e+003	0

Persistence Time: 214 hr

Data Evaluation Tables

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical State reported by this reference.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical State reported by this reference. Cited reference: OU Chemical Safety Data.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical State reported by this reference. Cited reference: Lewis, R.J. Sr.; Hawley's Condensed Chemical Dictionary 15th Edition. John Wiley & Sons, Inc. New York, NY 2007., p. 918						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical State reported by this reference. Cited reference: O'Neil, M.J. (ed.). The Merck Index – An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical Properties reported by this reference. Cited reference: OU Chemical Safety Data.						

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/ repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical Properties reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR[)**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/ repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Physical Properties reported by this reference. Cited reference: ILO International Chemical Safety Cards (ICSC).						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	Unacceptable	Measured data are not consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors. It is not likely to be a powder with a melting point of 18 °C.	4	1	4
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/ repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	10	5	10
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	2	**Overall Score (Rounded):**	4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Unacceptable[1]
Physical state (dry powder) is inconsistent with subject chemical substance melting point of 18°C. Consistent with our Application of Systematic Review in TSCA Risk Evaluation document, if a metric for a data source receives a score of Unacceptable (score = 4), EPA will determine the study to be unacceptable. In this case, one of the metrics was rated as unacceptable. As such, the study is considered unacceptable and the score is presented solely to increase transparency. Cited reference: EPA Chemicals under the TSCA.						

Study Reference:	Fuller, J; White, D; Yi, H; Colley, J; Vickery, Z; Liu, S. (2020). Analysis of volatile compounds causing undesirable odors in a polypropylene - high-density polyethylene recycled plastic resin with solid-phase microextraction. Chemosphere 260: 127589. HERO ID:6834323					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	The odor intensity was determined qualitatively by pretrained people based on a 1–10 scale.	2	1	2
	Reliability / Analytical Method	Low	Odor assessment was not the focus of the primary study, and only qualitative determination was used.	3	1	3
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	3	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	2	**Overall Score (Rounded):**	2
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Medium
The reviewer agreed with the overall rating for the Physical Properties reported by this reference.						

Study Reference:	U.S. EPA (2020). Chemistry dashboard information for D4. HERO ID:6982826					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Data range determined from multiple primary sources in Chemistry Dashboard.						

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. The Merck index: An encyclopedia for chemicals, drugs, and biologicals. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Data range determined from multiple primary sources in REAXYS.						

Study Reference:	Haynes, W. M. (2014). CRC Handbook of Chemistry and Physics D4. Boca Raton, FL, CRC Press. HERO ID:6982969					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: EPA DSSTox; Hazardous Substances Data Bank (HSDB); ILO International Chemical Safety Cards (ICSC)						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Strem Product Catalog: https://www.strem.com/catalog/v/14-5400/.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Sigma-Aldrich.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: LabNetwork.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Oakwood.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Alfa Aesar.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: Jean-Claude Bradley Open Melting Point Dataset.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference. Cited reference: OU Chemical Safety Data (no longer updated).						

Study Reference:	Abbas, R., Schedemann, A., Ihmels, C., Enders, S., Gmehling, J. Measurement of Thermophysical Pure Component Properties for a Few Siloxanes Used as Working Fluids for Organic Rankine Cycles. Industrial and Engineering Chemistry Research. 2011. 50:9748. HERO ID:6835590					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (*e.g.*, presence of certain functional groups) and/or other physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer- reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Melting Point reported by this reference.						

Study Reference:	U.S. EPA (2020). Chemistry dashboard information for D4. HERO ID:6982826					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: Data range determined from multiple primary sources in Chemistry Dashboard.						

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference.						

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: Data range determined from multiple primary sources in REAXYS.						

Study Reference:	Haynes, W. M. (2014). CRC Handbook of Chemistry and Physics D4. Boca Raton, FL, CRC Press. HERO ID:6982969					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer- reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: O'Neil, M.J. (ed.). The Merck Index – An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: O'Neil, M.J. (ed.). The Merck Index – An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: EPA DSSTox.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: Strem Product Catalog: https://www.strem.com/catalog/v/14-5400/.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: Sigma-Aldrich.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: LabNetwork.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: Oakwood.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: Alfa Aesar.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Boiling Point reported by this reference. Cited reference: OU Chemical Safety Data (no longer updated).						

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: Data range determined from multiple primary sources in REAXYS.						

Study Reference:	Haynes, W. M. (2014). CRC Handbook of Chemistry and Physics D4. Boca Raton, FL, CRC Press. HERO ID:6982969					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: O'Neil, M.J. (ed.). The Merck Index – An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: ILO International Chemical Safety Cards (ICSC).						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: Sigma-Aldrich.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: Fluorochem.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: Oakwood.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference. Cited reference: Alfa Aesar.						

Study Reference:	Palczewska-Tulinska, M; Oracz, P. (2005). Selected physicochemical properties of hexamethylcyclotrisiloxane, D4, and decamethylcyclopentasiloxane. Journal of Chemical and Engineering Data 50: 1711–1719. HERO ID:3569075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	3	3	3
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference.						

Study Reference:	Zhang, Y; Dong, H; Wu, C; Yu, L; Xu, J. (2015). The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures. The Journal of Chemical Thermodynamics 81: 16–25. HERO ID:4279677					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	3	3	3
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Density reported by this reference.						

Study Reference:	U.S. EPA (2020). Chemistry dashboard information for D4. HERO ID:6982826					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a recognized, peer- reviewed data collection. Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Vapor Pressure reported by this reference. Cited reference: Physprop.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer- reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Vapor Pressure reported by this reference. Cited reference: EPA DSSTox; Hazardous Substances Data Bank (HSDB).						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR})**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use or includes references to the original sources.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Vapor Pressure reported by this reference. Cited reference: ILO International Chemical Safety Cards (ICSC).						

Study Reference:	Lei, YD; Wania, F; Mathers, D, an. (2010). Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers. Journal of Chemical and Engineering Data 55: 5868–5873. HERO ID:2629388					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Vapor Pressure reported by this reference.						

Study Reference:	Flaningam, O. L. (1986). Vapor pressures of poly(dimethylsiloxane) oligomers. Journal of Chemical and Engineering Data 31(3): 266–272. HERO ID:6989156					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Low	Data are obtained by accepted standard analytical methods. Score reduced because all measurements were outside of environmental range.	3	1	3
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	4	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.75	**Overall Score (Rounded):**	1.8
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Medium
The reviewer agreed with the overall rating for the Vapor Pressure reported by this reference.						

Study Reference:	U.S. EPA (2020). Chemistry dashboard information for D4. HERO ID:6982826					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference. Cited reference: Physprop; Kovdienko, et. al. Molecular informatics 29.5 (2010): 394–406.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	Unacceptable	Data measured for the subject chemical substance are not consistent with the subject chemical substance structural properties, features or behaviors.	4	1	4
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use or includes references to the original sources.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	10	5	10
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	2	**Overall Score (Rounded):**	4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Unacceptable[a]

[a]The value was determined to be misreported in the secondary source when compared to the primary source. Consistent with our Application of Systematic Review in TSCA Risk Evaluation document, if a metric for a data source receives a score of Unacceptable (score = 4), EPA will determine the study to be unacceptable. In this case, one of the metrics was rated as unacceptable. As such, the study is considered unacceptable and the score is presented solely to increase transparency.
Cited reference: Varaprath S et al; Environ Toxicol Chem 15(8): 1263–1265 (1996).

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	Unacceptable	Source reports as none which may indicate the compound was not tested.	4	1	4
	Appropriateness	Low	Data measured for the subject chemical substance are not consistent with the subject chemical substance structural properties, features or behaviors.	3	1	3
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a recognized, peer- reviewed data collection.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	12	5	12
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	2.4	**Overall Score (Rounded):**	4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Unacceptable[a]

[a] Consistent with our Application of Systematic Review in TSCA Risk Evaluation document, if a metric for a data source receives a score of Unacceptable (score = 4), EPA will determine the study to be unacceptable. In this case, one of the metrics was rated as unacceptable. As such, the study is considered unacceptable and the score is presented solely to increase transparency.

Cited reference: ILO International Chemical Safety Cards (ICSC).

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR})**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference. Cited reference: ECHA; Search for Chemicals. D4 (CAS 556-67-2) Registered Substances Dossier. European Chemical Agency. Available from, as of Aug 17, 2015: http://echa.europa.eu/.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference. Cited reference: Varaprath S et al; Environ Toxicol Chem 15(8): 1263–1265 (1996)						

Study Reference:	Varaprath, S., et al. (1996). Aqueous solubility of permethylsiloxanes (silicones). Environmental Toxicology and Chemistry 15(8): 1263–1265. HERO ID:6984031					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Sousa, JV; Mcnamara, PC; Putt, AE; Machado, MW; Surprenant, DC; Hamelink, JL; Kent, DJ; Silberhorn, EM; Hobson, JF. (1995). Effects of D4 (OMCTS) on freshwater and marine organisms. Environ Toxicol Chem 14: 1639–1647. HERO ID:6834101					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is described in limited detail but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Sousa, JV; Mcnamara, PC; Putt, AE; Machado, MW; Surprenant, DC; Hamelink, JL; Kent, DJ; Silberhorn, EM; Hobson, JF. (1995). Effects of D4 (OMCTS) on freshwater and marine organisms. Environ Toxicol Chem 14: 1639–647. HERO ID:6834101					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is described in limited detail but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Gee, RP. (2015). Emulsion polymerization of dimethylcyclosiloxane in cationic emulsion: Mechanism study utilizing two phase liquid-liquid reaction kinetics. Colloid Surface Physicochem Eng Aspect 481: 297–306. HERO ID:6833841					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Gee, RP. (2015). Emulsion polymerization of dimethylcyclosiloxane in cationic emulsion: Mechanism study utilizing two phase liquid-liquid reaction kinetics. Colloid Surface Physicochem Eng Aspect 481: 297–306. HERO ID:6833841					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Springborn Laboratories, D4 - determination of the water solubility in synthetic seawater. 1989. HERO ID:5889412					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Springborn Laboratories, D4 - determination of the water solubility in freshwater. 1989. HERO ID:5889414					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Bayer AG, Contributions on assessment of the aquatic toxicity of OMCTS with cover letter. 1990. HERO ID:5899898					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is non- standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:	1.5	Overall Score (Rounded):	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			Overall Quality Level:	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Bayer AG, Contributions on assessment of the aquatic toxicity of OMCTS with cover letter. 1990. HERO ID:5899898					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is non- standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Rhone-Poulenc Inc. Environmental fate of D4 with cover letter. 1990. HERO ID:5899916					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Low	The methodology indicates that method bias is likely.	3	1	3
	Reliability / Analytical Method	Low	The analytical method described is not appropriate.	3	1	3
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	8	4	8
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	2	**Overall Score (Rounded):**	2
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Medium
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Rhone-Poulenc Inc, Environmental fate of D4 with cover letter. 1990. HERO ID:5899916					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Low	The methodology indicates that method bias is likely.	3	1	3
	Reliability / Analytical Method	Low	The analytical method described is not appropriate.	3	1	3
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	8	4	8
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	2	**Overall Score (Rounded):**	2
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	Medium
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Dow Corning. The n-octanol/water partition coefficient of D4 with attachment and cover letter dated 092987. 1987. HERO ID:5905948					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (*e.g.*, presence of certain functional groups).	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	Medium	Analytic method is non-standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	5	4	5
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.25	**Overall Score (Rounded):**	1.3
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Dow Corning, The water solubility of D4 with attachments and cover letter dated 092987. 1987. HERO ID:5905954					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (*e.g.*, presence of certain functional groups).	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytic methods.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Springborn, L. (1989). Octamethycyclotetrasiloxane – Determination of the water solubility in freshwater. Washington, DC, Silicones Health Council. HERO ID:7006395					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	Dow Corning, Aqueous solubility studies of D4. 1991. HERO ID:7310465					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Water Solubility reported by this reference.						

Study Reference:	U.S. EPA (2020). Chemistry dashboard information for D4. HERO ID:6982826					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer- reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference. Cited reference: Physprop.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference. Cited reference: Data range determined from multiple primary sources in REAXYS.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use or includes references to the original sources.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference. Cited reference: Xu S et al; Environ Sci Technol 48: 11748–11759 (2014).						

Study Reference:	Xu, S. and B. Kropscott (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12): 2702–2710. HERO ID:2535012					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference.						

Study Reference:	Xu, S. and B. Kropscott (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4): 1948–1955. HERO ID:2188633					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference.						

Study Reference:	Dow Corning, The n-octanol/water partition coefficient of D4 with attachment and cover letter dated 092987. 1987. HERO ID:5905948					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (*e.g.*, presence of certain functional groups).	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytic methods.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference.						

Study Reference:	Dow Corning, Subject: Monthly summary 10/1982, octanol-water coefficients. 1982. HERO ID:7310176					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	NR	Data are measured for the subject chemical substance.	NR	NR	NR
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	3	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.3	**Overall Score (Rounded):**	1.3
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference.						

Study Reference:	Kozerski, G., Shawl, H. Determination of the 1-octanol/water partition coefficient of D4 (D4) by the slow-stirring method using gas chromatography. 2007. HERO ID:6987895					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Octanol Water Coefficient (logKow) reported by this reference.						

Study Reference:	U.S. EPA (2020). Chemistry dashboard information for D4. HERO ID:6982826					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference. Cited reference: Physprop.						

Study Reference:	Xu, S. and B. Kropscott (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12): 2702–2710. HERO ID: 2535012					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (*e.g.*, presence of certain functional groups).	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Analytic method is non-standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	5	4	5
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.25	**Overall Score (Rounded):**	1.3
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is the analytical method is unknown but is likely to be appropriate likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference. Cited reference: Xu S, Kropscott B; Environ Toxicol Chem 33(12): 2702–10 (2014).						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not rated)**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/ repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	7	5	7
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.4	**Overall Score (Rounded):**	1.4
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference. Cited reference: EPA DSSTox.						

Study Reference:	Hamelink, JL; Simon, PB; Silberhorn, EM. (1996). Henry's law constant, volatilization rate, and aquatic half-life of D4. Environ Sci Technol 30: 1946–1952. HERO ID:2803124					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Xu, S. and B. Kropscott (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4): 1948–1955. HERO ID:2188633					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance's other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	Medium	The analytical method is non- standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	5	4	5
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.25	**Overall Score (Rounded):**	1.3
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Xu, S. and B. Kropscott (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4): 1948–1955. HERO ID:2188633					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance's other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	Medium	The analytical method is non- standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	5	4	5
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.25	**Overall Score (Rounded):**	1.3
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Ann Arbor Technical Services, Inc., Phase II studies of the Henry's law constant of OMCTS (D4). 2000. HERO ID:5889409					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	1	1	1
	Reliability / Analytical Method	High	The analytical method is non-standard but is expected to be appropriate.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Ann Arbor Technical Services, Inc., Phase II studies of the Henry's law constant of OMCTS (D4). 2000. HERO ID:5889409					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	1	1	1
	Reliability / Analytical Method	High	The analytical method is non- standard but is expected to be appropriate.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Ann Arbor Technical Services, Inc., Phase II studies of the Henry's law constant of OMCTS (D4). 2000. HERO ID:5889409					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	1	1	1
	Reliability / Analytical Method	High	The analytical method is non- standard but is expected to be appropriate.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Ann Arbor Technical Services, Inc., Henry's law constant of OMCTS (D4) at 20 degrees. 1990. HERO ID:5889489					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	4	4	4
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	Kochetkov, A., et al. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10): 2184–2188. HERO ID:7303416					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured for the subject chemical substance.	1	1	1
	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.	1	1	1
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate.	2	1	2
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Henry's Law reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Flash Point reported by this reference. Cited reference: ILO International Chemical Safety Cards (ICSC).						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Flash Point reported by this reference. Cited reference: Sigma-Aldrich; Safety Data Sheet for D4. Product Number: 235695, Version 3.14 (Revision Date 02/28/2015). Available from, as of September 30, 2015: http://www.sigmaaldrich.com/safety- center.html.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Flash Point reported by this reference. Cited reference: LabNetwork.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not rated)**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Flash Point reported by this reference. Cited reference: Oakwood.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Flash Point reported by this reference. Cited reference: Alfa Aesar.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Flash Point reported by this reference. Cited reference: OU Chemical Safety Data (no longer updated).						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Viscosity reported by this reference.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Viscosity reported by this reference. Cited reference: Hazardous Substances Data Bank (HSDB).						

Study Reference:	Palczewska-Tulinska, M; Oracz, P. (2005). Selected physicochemical properties of hexamethylcyclotrisiloxane, D4, and decamethylcyclopentasiloxane. Journal of Chemical and Engineering Data 50: 1711–1719. HERO ID:3569075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	3	3	3
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Viscosity reported by this reference.						

Study Reference:	Liu F et al. 2013. Atomic force microscopy of confined liquids using the thermal bending fluctuations of the cantilever. Phys Rev E 87: 62406. HERO ID:6835221					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	3	3	3
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Viscosity reported by this reference.						

Study Reference:	O'Neil, M. J. (2013). The Merck Index D4. Cambridge, UK, The Royal Society of Chemistry. HERO ID:6982970					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/ recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference. Cited reference: Data range determined from multiple primary sources in REAXYS.						

Study Reference:	Haynes, W. M. (2014). CRC Handbook of Chemistry and Physics D4. Boca Raton, FL, CRC Press. HERO ID:6982969					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference. Cited reference: Sigma-Aldrich.						

Study Reference:	RSC (2020). ChemSpider: D4. HERO ID:6982833					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference. Cited reference: Alfa Aesar.						

Study Reference:	NLM (2020). PubChem database: compound summary: D4. HERO ID:6982832					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference. Cited reference: Hazardous Substances Data Bank (HSDB).						

Study Reference:	Zhang, Y; Dong, H; Wu, C; Yu, L; Xu, J. (2015). The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures. The Journal of Chemical Thermodynamics 81: 16–25. HERO ID:4279677					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.	1	1	1
	Reliability / Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or another developed standard.	1	1	1
Other	**Databases**	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	3	3	3
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Refractive Index reported by this reference.						

Study Reference:	Elsevier (2019). Reaxys: physical-chemical property data for D4. CAS Registry Number: 556-67-2. HERO ID:6984075					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated [NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	High	Data are measured or estimated for the subject chemical substance.	1	1	1
	Appropriateness	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	2	1	2
	Reliability / Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	2	1	2
Other	**Databases**	High	Data is from a secondary database with a reference to the peer-reviewed original source.	1	1	1
	Models	NR	Rating of this factor is not applicable to this kind of information.	NR	NR	NR
			Sum of scores:	6	4	6
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1.5	**Overall Score (Rounded):**	1.5
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High
The reviewer agreed with the overall rating for the Dielectric Constant reported by this reference. Cited reference: Data range determined from multiple primary sources in REAXYS.						

Study Reference:	U.S. EPA. (2012). Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11 (Computer Program). Washington, DC. HERO ID:2347246					
Domain	**Metric**	**Qualitative Determination (*i.e.*, High, Medium, Low, Unacceptable, or Not Rated NR])**	**Comments**	**Metric Score**	**Metric Weighting Factor**	**Weighted Score**
Substance	**Representativeness**	NR	The metric is not applicable to this study type (SAR).	NR	1	NR
	Appropriateness	NR	The metric is not applicable to this study type (SAR).	NR	1	NR
Test Reliability	**Reliability / Unbiased (Method Objectivity)**	NR	The metric is not applicable to this study type (SAR).	NR	1	NR
	Reliability / Analytical Method	NR	The metric is not applicable to this study type (SAR).	NR	1	NR
Other	**Databases**	NR	The metric is not applicable to this study type (SAR).	NR	1	NR
	Models	High	The models in EPI Suite™ have defined endpoints. Chemical domain and performance statistics for each model are known, and unambiguous algorithms are available in the EPI Suite™ documentation and/or cited references to establish their scientific validity. Many EPI Suite™ models have correlation coefficients >0.7, cross-validated correlation coefficients >0.5, and standard error values <0.3; however, correlation coefficients (r^2, q^2) for the regressions of some environmental fate models (*i.e.*, BIOWIN) are lower, as expected, compared to regressions which have specific experimental values such as water solubility or log Kow (octanol-water partition coefficient).	1	1	1
			Sum of scores:	1	1	1
High	Medium	Low	**Overall Score = Sum of Weighted Scores/Sum of Metric Weighting Factors:**	1	**Overall Score (Rounded):**	1
≥1 and <1.7	≥1.7 and <2.3	≥2.3 and ≤3			**Overall Quality Level:**	High

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