

FACT SHEET: CHEMICALS SNAPSHOT

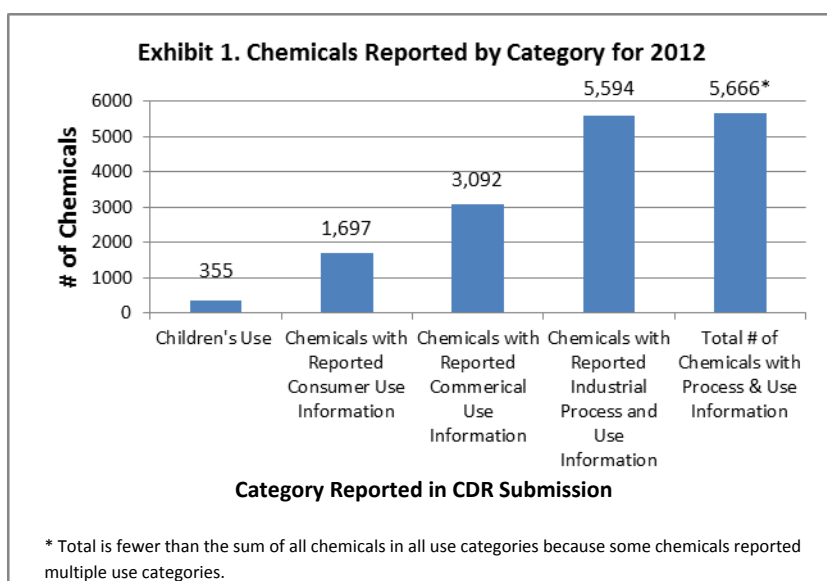
This fact sheet provides a brief overview of the chemical manufacturing, processing, and use information collected for the 2012 Chemical Data Reporting (CDR) rule. When using the data presented in this fact sheet, users should recognize that they do not have access to the complete CDR data set and should draw conclusions from the available data with care.

2012 CDR Data

Under the CDR rule, EPA collects screening-level, exposure-related information on certain chemicals included on the [Toxic Substances Control Act \(TSCA\) Chemical Substance Inventory \(TSCA Inventory\)](#) and makes that information available for use by EPA and, to the extent possible, the public. The 2012 CDR data are reported to EPA by manufacturers (including importers) of chemicals manufactured (including imported) in volumes of 25,000 pounds or more at a single site during calendar year 2011. The 2012 data also include information on industrial processing and consumer and commercial uses of certain chemicals currently listed on the TSCA Inventory. The CDR data allow EPA to have a good sense of domestic chemical manufacturing, as well as imports and use information helpful for assessing potential exposure and risk.



For the 2012 submission, 1,626 companies reporting for 4,785 sites submitted information on 7,690 chemicals.



Chemical Uses

Chemical use information is important because it helps EPA to better assess routes of potential exposure. For the 2012 CDR, EPA required that manufacturers (including importers) report consumer and commercial uses separately to distinguish between the use types. Therefore, CDR submitters are able to report a chemical's use in three categories: industrial, commercial, and consumer. A chemical's use information may be reported in more

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than one category. CDR submitters are also required to report whether a chemical is used in products intended for children. Exhibit 1 shows that 355 of the chemicals reported were intended for use in children's products, 1,697 chemicals were used for consumer applications, 3,092 were used for commercial applications, and 5,594 were used for industrial applications. Process and use information was reported for 5,666 chemicals by CDR submitters for 2012.

Chemicals Reported as Used in Children's, Consumer, and Commercial Products

The threshold in 2012 to report manufacturing information for chemicals under the CDR rule was 25,000 pounds, which was the same for the 2006 collection. However, EPA expanded the range of chemicals for which more in-depth processing and use information was reported by lowering the reporting threshold for processing and use information from 300,000 pounds to 100,000 pounds.

For the 2012 CDR, 355 chemicals were reported as used in products intended for children. For purposes of the CDR, "intended for use by children" means the chemical or mixture is used in or on a product that is specifically intended for use by children age 14 or younger. Table 1 presents the top 20 chemicals reported to be used in children's products, according to the 2012 CDR data.



As stated above, the 2012 CDR required manufacturers (including importers) to report consumer and commercial uses separately. For the purposes of CDR, "Consumer use" means the use of a chemical or a mixture containing a chemical (including as part of a manufactured item, or article, such as furniture or clothing) when sold to or made available to consumers for their use. "Commercial use" means the use of a chemical substance or a mixture containing a chemical substance (including as part of an article) in a commercial enterprise providing saleable goods or services, for example dry cleaning. Table 2 lists the top 20 chemicals reported to be used in consumer products. Table 3 lists the top 20 chemicals reported to be used in commercial products.

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Table 1: Top 20 Chemicals Used in Children's Products

(Based on production volume reported to be used in children's products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "not known or reasonably ascertainable (NKRA)" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses ⁺
1	Calcium carbonate	471-34-1	1) Paper products 2) Plastic and rubber products 3) Food packaging
2	Aluminum	7429-90-5	1) Food packaging 2) Metal products 3) Water treatment products
3	Propane	74-98-6	1) Plastic and rubber products
4	Ethane	74-84-0	1) Plastic and rubber products
5	Butane	106-97-8	1) Plastic and rubber products
6	Ethyl benzene	100-41-4	1) Food Packaging 2) Toys, playground, and sporting equipment 3) Arts, crafts, and hobby materials
7	2-Methylpropane (Isobutane)	75-28-5	1) Plastic and rubber product
8	Aluminum chloride hydroxide	12042-91-0	1) Water treatment products
9	Zinc	7440-66-6	1) Metal products
10	Glycerol	56-81-5	1) Personal care products
11	Dicalcium silicate	10034-77-2	1) Adhesives and sealants
12	Hexadecanoic acid	57-10-3	1) Laundry and dishwashing products 2) Personal care products 3) Arts, crafts, and hobby materials
13	Titanium dioxide	13463-67-7	1) Non-TSCA use 2) Personal care products 3) Arts, crafts, and hobby materials
14	Sodium hydroxide	1310-73-2	1) Personal care products 2) Water treatment products
15	Aluminum hydroxide	21645-51-2	1) Plastic and rubber products 2) Foam seating and bedding products 3) Floor coverings

+ The top uses listed are based on the uses reported for each chemical, not necessarily the intended use of the product by children. Descriptions under top uses are taken from appendix D of the 2012 CDR Instructions.

* Manufacturers (including importers) are reporting on downstream uses of a chemical; therefore, some uses were reported as non-TSCA uses.

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Table 1: Top 20 Chemicals Used in Children's Products (Cont.)

(Based on production volume reported to be used in children's products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "not known or reasonably ascertainable (NKRA)" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses ⁺ *
16	Butanedionic acid	577-11-7	1) Non-TSCA use
17	Fluorosilicic acid	16961-83-4	1) Water treatment products
18	1,6 Diisocyanatohexane homopolymer	28182-81-2	1) Floor coverings
19	Hetastarch	9005-27-0	1) Paper products
20	Zinc oxide	1314-13-2	1) Personal care products

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Table 2: Top 20 Chemicals Used in Consumer Products

(Based on production volume reported to be used in consumer or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes "not known or reasonably ascertainable (NKRA)" and "Other" designations.)

Rank	Chemical Name	CASRN	Top Uses ⁺ *
1	Tricalcium silicate	12168-85-3	1) Building/construction materials 2) Adhesives and sealants
2	Ethanol	64-17-5	1) Fuels and related products 2) Personal care products 3) Ink, toner, and colorant products
3	Propane	74-98-6	1) Fuels and related products 2) Plastic and rubber products 3) Personal care products
4	Dicalcium silicate	10034-77-2	1) Building/construction materials 2) Adhesives and sealants 3) Building/construction materials – wood and engineered wood products

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(Based on production volume reported to be used in consumer or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes “not known or reasonably ascertainable (NKRA)” and “Other” designations.)

Rank	Chemical Name	CASRN	Top Uses*
5	Sulfuric acid	7664-93-9	1) Batteries 2) Paper products 3) Water treatment products
6	Butane	106-97-8	1) Fuels and related products 2) Plastic and rubber products 3) Personal care products
7	Toluene	108-88-3	1) Fuels and related products 2) Paints and coatings
8	Sodium carbonate	497-19-8	1) Building/construction materials 2) Laundry and dishwashing products 3) Water treatment products
9	Aluminum calcium iron oxide	12068-35-8	1) Building/construction materials 2) Adhesives and sealants 3) Building/construction materials - wood and engineered wood products
10	Aluminum	7429-90-5	1) Metal products 2) Food packaging 3) Building/construction materials
11	Isopentane	78-78-4	1) Fuels and related products 2) Personal care products
12	Aluminum calcium oxide	12042-78-3	1) Building/construction materials 2) Adhesives and sealants
13	Gasoline	86290-81-5	1) Fuels and related products
14	Calcium carbonate	471-34-1	1) Paper products 2) Adhesives and sealants 3) Plastic and rubber products
15	Ethylene dichloride	107-06-2	1) Plastic and rubber products

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Rank	Chemical Name	CASRN	Top Uses ⁺ *
16	Ammonium sulfate	7783-20-2	1) Agricultural products (non-pesticidal)
17	Diammonium phosphate	7783-28-0	1) Agricultural products (non-pesticidal) 2) Ink, toner, and colorant products
18	Chloroethene	75-01-4	1) Plastic and rubber products
19	Lead	7439-92-1	1) Batteries 2) Metal products 3) Non-TSCA use
20	Urea	57-13-6	1) Agricultural products (non-pesticidal) 2) Lawn and garden care products 3) Fuels and related products

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Table 3: Top 20 Chemicals Used in Commercial Products

(Based on production volume reported to be used in commercial or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes “not known or reasonably ascertainable (NKRA)” and “Other” designations.)

Rank	Chemical Name	CASRN	Top Uses ⁺ *
1	Ethanol	64-17-5	1) Fuels and related products 2) Paints and coatings
2	Iron oxide	1309-37-1	1) Metal products 2) Building/construction materials 3) Water treatment products
3	Tricalcium silicate	12168-85-3	1) Building/construction materials 2) Adhesives and sealants

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Table 3: Top 20 Chemicals Used in Commercial Products (Cont.)

(Based on production volume reported to be used in commercial or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes “not known or reasonably ascertainable (NKRA)” and “Other” designations.)

Rank	Chemical Name	CASRN	Top Uses**
4	Propane	74-98-6	1) Fuels and related products 2) Plastic and rubber products 3) Agricultural products (non-pesticidal)
5	Ethane	74-84-0	1) Plastic and rubber products 2) Fuels and related products 3) Building/construction materials =
6	Butane	106-97-8	1) Fuels and related products 2) Plastic and rubber products 3) Personal care products
7	Urea	57-13-6	1) Agricultural products (non-pesticidal) 2) Lawn and garden care products 3) Building/construction materials - wood and engineered wood products
8	Ammonia	7664-41-7	1) Agricultural products (non-pesticidal) 2) Plastic and rubber products 3) Fabric, textile, and leather products
9	2-Methylpropane (Isobutane)	75-28-5	1) Fuels and related products 2) Plastic and rubber products 3) Personal care products
10	Ammonium nitrate	6484-52-2	1) Agricultural products (non-pesticidal) 2) Explosive materials 3) Lawn and garden care products
11	Sulfuric acid	7664-93-9	1) Batteries 2) Paper products 3) Water treatment products
12	Dicalcium silicate	10034-77-2	1) Building/construction materials 2) Adhesives and sealants 3) Building/construction materials - wood and engineered wood products

+The top uses listed are based on the uses reported for each chemical, not necessarily the intended use of the product by commercial enterprises. Descriptions under top uses are taken from appendix D of the 2012 CDR Instructions.

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Table 3: Top 20 Chemicals Used in Commercial Products (Cont.)

(Based on production volume reported to be used in commercial or both consumer and commercial products and excluding chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs). Top Uses excludes “not known or reasonably ascertainable (NKRA)” and “Other” designations.)

Rank	Chemical Name	CASRN	Top Uses ⁺
13	Ethylene	74-85-1	1) Plastic and rubber products 2) Non-TSCA use
14	Ammonium hydrogen phosphate	7783-28-0	1) Agricultural products (non-pesticidal) 2) Building/construction materials - wood and engineered wood products 3) Building/construction materials
15	Sodium carbonate	497-19-8	1) Building/construction materials 2) Laundry and dishwashing products 3) Water treatment products
16	Monoammonium phosphate	7722-76-1	1) Agricultural products (non-pesticidal) 2) Lawn and garden care products 3) Building/construction materials
17	Propene	115-07-1	1) Plastic and rubber products 2) Fuels and related products
18	Sulfur	7704-34-9	1) Agricultural products (non-pesticidal) 2) Water treatment products 3) Lawn and garden care products
19	Calcium carbonate	471-34-1	1) Paper products 2) Agricultural products (non-pesticidal) 3) Adhesives and sealants
20	Carbon dioxide	124-38-9	1) Non-TSCA use 2) Fuels and related products 3) Food packaging

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Information by Production Volume

Production volume information is important because CDR reporting is triggered by the production volume of certain chemicals and because it can be used to assess potential exposure and risk. The total reported production volume (domestically manufactured and imported) for the 2012 data was 9.5 trillion pounds. In comparison, the total reported production volume (manufactured and imported) for the most recent data collection in 2006 was 11.6 trillion pounds. Preliminary analysis indicates that several factors influenced the decline in overall reported production volume, including decreases in several large commodity chemicals and change in industrial processes.

The top chemicals reported based on production volume in the 2012 data collection are shown in Table 4. The table also presents the 2006 production volume for each chemical.

Table 4: Top 20 Chemicals Based on the Total Reported Production Volume

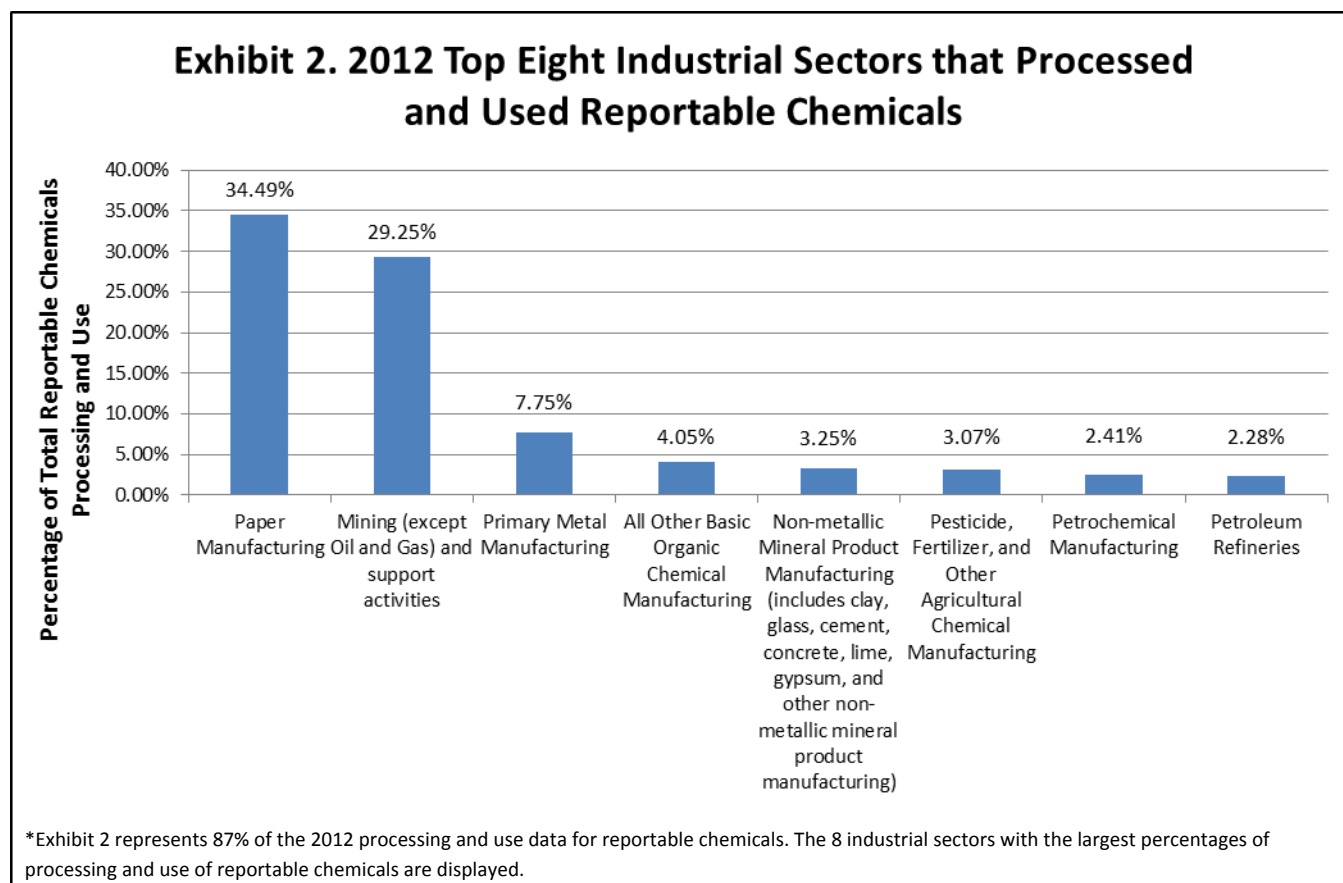
(Numbers reflect volume ranges, in order to protect confidential business information. Excludes chemicals of unknown or variable composition, complex reaction products and biological materials (UVCBs), for example petroleum streams.)

Chemical Name	CASRN	2006 Production Volume Range (billion pounds)	2012 Production Volume Range (billion pounds)	Change (2006 to 2012)
1. Carbon dioxide	124-38-9	35-40	135-140	↑
2. Ethanol	64-17-5	15- 20	85-90	↑
3. Sulfuric acid	7664-93-9	75-80	80-85	↑
4. Tricalcium silicate	12168-85-3	270-275	80-85	↓
5. Ethene	74-85-1	50-55	55-60	↑
6. Propane	74-98-6	70-75	55-60	↓
7. Calcium carbonate	471-34-1	45-50	55-60	↑
8. Calcium oxide	1305-78-8	55-60	50-55	↓
9. Butane	106-97-8	45-50	50-55	↑
10. Iron oxide	1309-37-1	15-20	50-55	↑
11. Hydrogen	1333-74-0	15-20	50-55	↑
12. Ethane	74-84-0	20-25	40-45	↑
13. Ammonia	7664-41-7	35-40	35-40	-
14. Cumene	98-82-8	5-10	35-40	↑
15. 2-Methylpropane (isobutane)	75-28-5	20-25	35-40	↑
16. Propene	115-07-1	130-135	30-35	↓
17. Sulfur	7704-34-9	20-25	30-35	↑
18. Ethylene dichloride	107-06-2	25-30	25-30	-
19. Sodium hydroxide	1310-73-2	20-25	25-30	↑
20. Urea	57-13-6	20-25	25-30	↑

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Industrial Sectors that Process and Use CDR Chemicals

For each reportable chemical, manufacturers (including importers) were required to report the Industrial Sector (IS) for all sites that received the chemical from them directly or indirectly and that process and use the chemical. For the purposes of CDR, “industrial use” means use at a site at which one or more chemicals or mixtures are manufactured (including imported) or processed. Exhibit 2 depicts the breakdown of the top eight industrial sectors reported for the 2012 data collection.



Recycling

CDR reporters were required to identify whether a chemical was recycled, remanufactured, reprocessed, or reused. According to the 2012 CDR submission, recycling was reported for 18 percent of chemicals. Collection of recycling information is valuable because EPA and other interested parties can analyze future trends in recycling.

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Confidential Business Information

Data submitters for the 2012 CDR were able to designate individual CDR data elements as confidential business information (CBI). Eleven percent of the information for the 2012 CDR was claimed as CBI by submitters. Table 5 presents the percentage of CBI claims for different data elements reported in 2012 and a comparison to 2006.

Table 5: CBI Claims by CDR Data Element

Category	Percentage Claimed CBI in 2006	Percentage Claimed CBI in 2012	Change (2006 to 2012)
Chemical Identity	2%	3%	↑
Domestic Production Volume	37%	23%	↓
Import Volume	28%	18%	↓
Processing and Use Information	29%	6%	↓
Used in Children's Products	27%	0.3%	↓

For Additional Information

For more information please visit the CDR website at <http://www.epa.gov/cdr>.

A non-confidential collection of historical data, as well as the 2012 CDR data is available at <http://www.epa.gov/cdr/tools/data/index.html>.

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