201-15017A

U.S. HIGH PRODUCTION VOLUME (HPV)
CHEMICAL CHALLENGE PROGRAM

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ROBUST SUMMARY

1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene) bis(4,1-phenyleneoxy)]bis-
(Bisphenol A Dianhydride; CAS RN 38103-06-9)

Prepared by:
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Pittsfield, MA, USA

Prepared for:
U.S. Environmental Protection Agency
Washington, D.C., USA

December 31, 2003

CHEMICAL IDENTITY AND USE INFORMATION

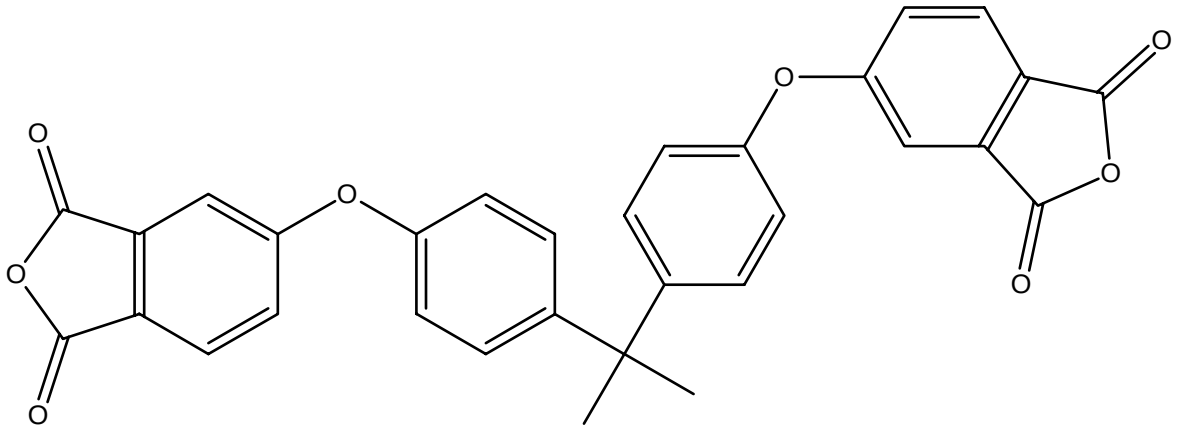
CAS RN

38103-06-9

CHEMICAL NAME

1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-
(hereafter called Bisphenol A Dianhydride)

STRUCTURE, MOLECULAR FORMULA, MOLECULAR WEIGHT



Molecular Formula: $C_{31}H_{20}O_8$
Molecular Wt.: 520.49

OTHER CHEMICAL IDENTITY INFORMATION

Bisphenol A Dianhydride
4,4′-((Isopropylidene)bis(p-phenyleneoxy))diphthalic dianhydride
2,2-bis(4-(3,4-dicarboxyphenoxy)phenyl)propanedianhydride
BPA-DA
Bisphenol-A diphthalic anhydride
Biphenol Dianhydride

PURITY

Typical purity of 4,4'-BPA-DA is 97 wt%. Mono N-methylimide of BPA-DA comprise approximately 2 wt% yielding a purity of all isomers > 98 wt%.

USE PATTERN

BPA-DA is a chemical intermediate that is primarily used as a reactive intermediate to make high molecular weight polyetherimide polymers.

TEST PLAN

Bisphenol A Dianhydride CAS RN: 38103-06-9		Information	OECD Study	GLP	Other Study	Estimation Method	Acceptable	Testing Required
STUDY		**Y/N**	**Y/N**	**Y/N**	**Y/N**	**Y/N**	**Y/N**	**Y/N**
PHYSICAL AND CHEMICAL DATA								
1.0	Melting Point	N	N	N	N	N	N	Y
2.0	Boiling Point	N	N	N	N	N	N	Y
3.0	Vapor Pressure	N	N	N	N	N	N	Y
4.0	Partition Coefficient	N	N	N	N	N	N	Y
5.0	Water Solubility	N	N	N	N	N	N	Y
ENVIRONMENTAL FATE AND PATHWAY								
6.0	Photodegradation	N	N	N	N	N	N	Y
7.0	Stability in Water	N	N	N	N	N	N	Y
8.0	Transport and Distribution	N	N	N	N	N	N	Y
9.0	Biodegradation	N	N	N	N	N	N	Y
ECOTOXICITY								
10.0	Acute Toxicity to Fish	N	N	N	N	N	N	Y
11.0	Toxicity to Algae	N	N	N	N	N	N	Y
12.0	Acute Toxicity to Daphnia	N	N	N	N	N	N	Y
TOXICITY								
13.0	Acute Toxicity	Y	N	N	Y	N	Y	N
14.0	Genotoxicity *In Vitro or In Vivo* (Chromosome Aberration Tests)	N	N	N	N	N	N	Y
15.1	Genotoxicity *In Vitro* (Bacterial Test)	Y	N	Y	Y	N	Y	N
15.2	Genotoxicity *In Vitro* (Mammalian Cells)	Y	Y	Y	N	N	Y	N
16.0	Repeated Dose Toxicity	Y	N	Y	Y	N	Y	N
17.0	Reproductive Toxicity	N	N	N	N	N	N	Y
18.0	Developmental Toxicity / Teratogenicity	Y	N	Y	Y	N	Y	N