

## SAFETY DATA SHEET

## 1. Identification

Product identifier	EPA Method 1614 PBDE Congeners Mixture	
Other means of identification		
Item	M-EPA1614BDEAS99	
Recommended use	For Laboratory Use Only	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Chem Service, Inc.	
Address	660 Tower Lane West Chester, PA 19380 United States	
Telephone	Toll Free	800-452-9994
	Direct	610-692-3026
Website	www.chemservice.com	
E-mail	info@chemservice.com	
Emergency phone number	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
<b>Storage</b>	Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isooctane	2,2,4-Trimethylpentane	540-84-1	79.97
Toluene		108-88-3	19.99
Decabromodiphenyl ether (BDE 209)		1163-19-5	0.03
2,2',3,4,4',5',6-Heptabromodiphenyl ether(BDE 183)		207122-16-5	0.002
2,2',4,4',5,5'-Hexabromodiphenyl Ether		68631-49-2	0.002
2,2',4,4',5,6'-Hexabromodiphenyl ether (PBDE 154)		207122-15-4	0.002
2,2',4,4',5-Pentabromodiphenyl Ether		60348-60-9	0.002
2,2',4,4'-Tetrabromodiphenyl ether		5436-43-1	0.002
2,4,4'-Tribromodiphenyl Ether (BDE-028)		41318-75-6	0.002
2,2'.4.4'.6-Pentabromodiphenyl ether		189084-64-8	0.002

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
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<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p>
<b>Environmental precautions</b>	<p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p> <p>Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.</p>

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Isooctane (CAS 540-84-1)	PEL	2350 mg/m3 500 ppm

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Toluene (CAS 108-88-3)	TWA	20 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Isooctane (CAS 540-84-1)	Ceiling	1800 mg/m3 385 ppm
	TWA	350 mg/m3 75 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m3 150 ppm
	TWA	375 mg/m3 100 ppm

#### US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)	TWA	5 mg/m3 0.13 ppm

## Biological limit values

### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

\* - For sampling details, please see the source document.

## Exposure guidelines

### US - California OELs: Skin designation

Toluene (CAS 108-88-3) Can be absorbed through the skin.

### US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3) Skin designation applies.

## Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

## Individual protection measures, such as personal protective equipment

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

## General hygiene considerations

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Liquid.

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** -161.41 °F (-107.45 °C) estimated

**Initial boiling point and boiling range** 210.63 °F (99.24 °C) estimated

**Flash point** 40.0 °F (4.4 °C) estimated

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** 1.1 % estimated

**Flammability limit - upper (%)** 7 % estimated

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** 58.44 hPa estimated

**Vapor density** Not available.

Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	784 °F (417.78 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.73233 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	19.99 % estimated
Specific gravity	0.73 estimated
VOC	19.99 % estimated

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
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### Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways.
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Components	Species	Test Results
Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)		
<u>Acute</u>		
Oral		
LD50	Rat	> 2000 mg/kg
Isooctane (CAS 540-84-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours

\* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
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<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)	3 Not classifiable as to carcinogenicity to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not regulated.	
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	
Not listed.	
<b>Reproductive toxicity</b>	May damage fertility or the unborn child.
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness and dizziness.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

### Persistence and degradability

#### Bioaccumulative potential

##### Partition coefficient n-octanol / water (log Kow)

2,2',4,4',5,5'-Hexabromodiphenyl Ether	6.86 - 7.92
2,2',4,4',5,6'-Hexabromodiphenyl ether (PBDE 154)	6.86 - 7.92
2,2',4,4',5-Pentabromodiphenyl Ether	6.64 - 6.97
2,2',4,4'-Tetrabromodiphenyl ether	5.87 - 6.16
Isooctane	5.18
Toluene	2.73

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****DOT**

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	Flammable liquids, n.o.s. (Isooctane RQ = 1250 LBS, Toluene RQ = 5003 LBS), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB2, T7, TP1, TP8, TP28
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	Flammable liquid, n.o.s. (Isooctane, Toluene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	3H
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

**IMDG**

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (Isooctane, Toluene), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-E, <u>S</u> -E
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.



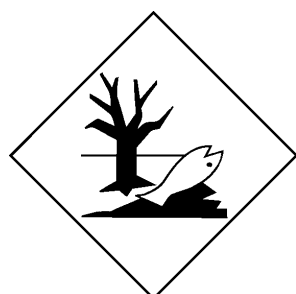
DOT



IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

2,2',3,4,4',5',6-Heptabromodiphenyl ether(BDE 183) (CAS 207122-16-5)	1.0 % One-Time Export Notification only.
2,2',4,4',5,6'-Hexabromodiphenyl ether (PBDE 154) (CAS 207122-15-4)	1.0 % One-Time Export Notification only.
Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)	1.0 % One-Time Export Notification only.

#### TSCA Chemical Action Plans, Chemicals of Concern

2,2',3,4,4',5',6-Heptabromodiphenyl ether(BDE 183) (CAS 207122-16-5)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
2,2',4,4',5,5'-Hexabromodiphenyl Ether (CAS 68631-49-2)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
2,2',4,4',5,6'-Hexabromodiphenyl ether (PBDE 154) (CAS 207122-15-4)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
2,2',4,4',5-Pentabromodiphenyl Ether (CAS 60348-60-9)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
2,2',4,4'-Tetrabromodiphenyl ether (CAS 5436-43-1)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
2,4,4'-Tribromodiphenyl Ether (BDE-028) (CAS 41318-75-6)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
2,2'.4.4'.6-Pentabromodiphenyl ether (CAS 189084-64-8)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan
Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)	Polybrominated Diphenyl Ethers (PBDEs) Action Plan

#### CERCLA Hazardous Substance List (40 CFR 302.4)

2,2',4,4',5,5'-Hexabromodiphenyl Ether (CAS 68631-49-2)	Listed.
2,2',4,4',5-Pentabromodiphenyl Ether (CAS 60348-60-9)	Listed.
2,2',4,4'-Tetrabromodiphenyl ether (CAS 5436-43-1)	Listed.

2,4,4'-Tribromodiphenyl Ether (BDE-028) (CAS 41318-75-6)	Listed.
Isooctane (CAS 540-84-1)	Listed.
Toluene (CAS 108-88-3)	Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**      No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Toluene	108-88-3	19.99

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)  
 Isooctane (CAS 540-84-1)  
 Toluene (CAS 108-88-3)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**      Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3)      6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3)      35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3)      594

**US state regulations**      WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Toluene (CAS 108-88-3)      Listed: January 1, 1991

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

2,2',3,4,4',5',6-Heptabromodiphenyl ether(BDE 183) (CAS 207122-16-5)  
 2,2',4,4',5,5'-Hexabromodiphenyl Ether (CAS 68631-49-2)  
 2,2',4,4',5,6'-Hexabromodiphenyl ether (PBDE 154) (CAS 207122-15-4)  
 2,2',4,4',5-Pentabromodiphenyl Ether (CAS 60348-60-9)  
 2,2',4,4'-Tetrabromodiphenyl ether (CAS 5436-43-1)  
 2,4,4'-Tribromodiphenyl Ether (BDE-028) (CAS 41318-75-6)  
 2,2'.4.4'.6-Pentabromodiphenyl ether (CAS 189084-64-8)  
 Decabromodiphenyl ether (BDE 209) (CAS 1163-19-5)  
 Isooctane (CAS 540-84-1)  
 Toluene (CAS 108-88-3)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 11-09-2021

**Version #** 01

**NFPA ratings** Health: 2  
Flammability: 3  
Instability: 0

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