

## SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>European Regulation Standards PCB Congener Mixture - 3</b>	
<b>Other means of identification</b>		
<b>Item</b>	M-EUPCB3K10	
<b>Recommended use</b>	Not available.	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	Chem Service, Inc.	
<b>Address</b>	660 Tower Lane West Chester, PA 19380 United States	
<b>Telephone</b>	Toll Free	800-452-9994
	Direct	610-692-3026
<b>Website</b>	www.chemservice.com	
<b>E-mail</b>	info@chemservice.com	
<b>Emergency phone number</b>	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>	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	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.	

## Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Highly flammable liquid and vapor. Causes skin irritation. May cause drowsiness or dizziness. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	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. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/eye protection/face protection.
<b>Response</b>	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. Call a poison center/doctor if you feel unwell. If skin irritation occurs: 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>	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. 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	99.986
2,2',3,3',4,4',5,5'-Octachlorobiphenyl		35694-08-7	0.001
2,2',3,3',4,4',5-Heptachlorobiphenyl		35065-30-6	0.001
2,2',3,4,4',5,5'-Heptachlorobiphenyl		35065-29-3	0.001
2,2',3,4,4',5'-Hexachlorobiphenyl		35065-28-2	0.001
2,2',3,4',5',6-Hexachlorobiphenyl		38380-04-0	0.001
2,2',4,4',5,5'-Hexachlorobiphenyl		35065-27-1	0.001
2,2',4,5,5'-Pentachlorobiphenyl		37680-73-2	0.001
2,2',5,5'-Tetrachlorobiphenyl		35693-99-3	0.001
2,2',5-Trichlorobiphenyl		37680-65-2	0.001
2,3',4,4',5-Pentachlorobiphenyl		31508-00-6	0.001
2,4,4'-Trichlorobiphenyl		7012-37-5	0.001
2,2'.3.5'-Tetrachlorobiphenyl		41464-39-5	0.001
2.4'.5-Trichlorobiphenyl		16606-02-3	0.001
Decachlorobiphenyl		2051-24-3	0.001

### 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. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain.
<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. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. 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.
<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

**Personal precautions, protective equipment and emergency procedures** 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. Avoid breathing 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.

**Methods and materials for containment and cleaning up** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. 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.

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.

**Environmental precautions** Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

**Precautions for safe handling** 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. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. 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

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

Components	Type	Value
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)	PEL	1 mg/m <sup>3</sup>
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	PEL	1 mg/m <sup>3</sup>
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	PEL	1 mg/m <sup>3</sup>
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	PEL	1 mg/m <sup>3</sup>
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	PEL	1 mg/m <sup>3</sup>
2,4',5-Trichlorobiphenyl (CAS 16606-02-3)	PEL	1 mg/m <sup>3</sup>
Decachlorobiphenyl (CAS 2051-24-3)	PEL	1 mg/m <sup>3</sup>
Isooctane (CAS 540-84-1)	PEL	2350 mg/m <sup>3</sup> 500 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)	TWA	1 mg/m <sup>3</sup>
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	TWA	1 mg/m <sup>3</sup>
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	TWA	1 mg/m <sup>3</sup>
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	TWA	1 mg/m <sup>3</sup>
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	TWA	1 mg/m <sup>3</sup>
2,4',5-Trichlorobiphenyl (CAS 16606-02-3)	TWA	1 mg/m <sup>3</sup>
Decachlorobiphenyl (CAS 2051-24-3)	TWA	1 mg/m <sup>3</sup>

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

Components	Type	Value
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7)	TWA	0.001 mg/m <sup>3</sup>
2,2',3,3',4,4',5'-Heptachlorobiphenyl (CAS 35065-30-6)	TWA	0.001 mg/m <sup>3</sup>
2,2',3,4',5',6'-Hexachlorobiphenyl (CAS 38380-04-0)	TWA	0.001 mg/m <sup>3</sup>
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)	TWA	0.001 mg/m <sup>3</sup>
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)	TWA	0.001 mg/m <sup>3</sup>
2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)	TWA	0.001 mg/m <sup>3</sup>
2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)	TWA	0.001 mg/m <sup>3</sup>
Isooctane (CAS 540-84-1)	Ceiling	1800 mg/m <sup>3</sup> 385 ppm
	TWA	350 mg/m <sup>3</sup> 75 ppm

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### US - California OELs: Skin designation

2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)	Can be absorbed through the skin.
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	Can be absorbed through the skin.

2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)  
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)  
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)  
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)  
Decachlorobiphenyl (CAS 2051-24-3)

Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.

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

2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)  
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)  
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)  
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)  
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)  
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)  
Decachlorobiphenyl (CAS 2051-24-3)

Skin designation applies.  
Skin designation applies.  
Skin designation applies.  
Skin designation applies.  
Skin designation applies.  
Skin designation applies.  
Skin designation applies.

**US - Tennessee OELs: Skin designation**

2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)  
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)  
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)  
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)  
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)  
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)  
Decachlorobiphenyl (CAS 2051-24-3)

Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)  
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)  
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)  
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)  
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)  
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)  
Decachlorobiphenyl (CAS 2051-24-3)

Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
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**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)  
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)  
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)  
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)  
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)  
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)  
Decachlorobiphenyl (CAS 2051-24-3)

Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.  
Can be absorbed through the skin.

**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. Eye wash facilities and emergency shower must be available when handling this product.

**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. Suitable gloves can be recommended by the glove supplier.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

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.

<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-161.41 °F (-107.45 °C) estimated
<b>Initial boiling point and boiling range</b>	210.63 °F (99.24 °C) estimated
<b>Flash point</b>	40.1 °F (4.5 °C) estimated
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	1.1 % estimated
<b>Flammability limit - upper (%)</b>	6 % estimated
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	65.73 hPa estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	784 °F (417.78 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.69865 g/cm3 estimated
<b>Explosive properties</b>	Not explosive.
<b>Flammability class</b>	Flammable IB estimated
<b>Oxidizing properties</b>	Not oxidizing.
<b>Specific gravity</b>	0.7 estimated

## 10. Stability and reactivity

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

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Headache. May cause drowsiness and dizziness. Nausea, vomiting. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

**Acute toxicity** Narcotic effects.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
Decachlorobiphenyl (CAS 2051-24-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	0.794 g/kg
Isooctane (CAS 540-84-1)		
<b>Acute</b>		
<b>Dermal</b>		
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.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

- 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7) 1 Carcinogenic to humans.
- 2,2',3,3',4,4',5-Heptachlorobiphenyl (CAS 35065-30-6) 1 Carcinogenic to humans.
- 2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3) 1 Carcinogenic to humans.

2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	1 Carcinogenic to humans.
2,2',3,4',5',6'-Hexachlorobiphenyl (CAS 38380-04-0)	1 Carcinogenic to humans.
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)	1 Carcinogenic to humans.
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	1 Carcinogenic to humans.
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	1 Carcinogenic to humans.
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)	1 Carcinogenic to humans.
2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)	1 Carcinogenic to humans.
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	1 Carcinogenic to humans.
2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)	1 Carcinogenic to humans.
2.4'.5-Trichlorobiphenyl (CAS 16606-02-3)	1 Carcinogenic to humans.
Decachlorobiphenyl (CAS 2051-24-3)	1 Carcinogenic to humans.

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

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

2,2',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7)	Reasonably Anticipated to be a Human Carcinogen.
2,2',3,3',4,4',5-Heptachlorobiphenyl (CAS 35065-30-6)	Reasonably Anticipated to be a Human Carcinogen.
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)	Reasonably Anticipated to be a Human Carcinogen.
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	Reasonably Anticipated to be a Human Carcinogen.
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2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	Reasonably Anticipated to be a Human Carcinogen.
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	Reasonably Anticipated to be a Human Carcinogen.
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)	Reasonably Anticipated to be a Human Carcinogen.
2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)	Reasonably Anticipated to be a Human Carcinogen.
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	Reasonably Anticipated to be a Human Carcinogen.
2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)	Reasonably Anticipated to be a Human Carcinogen.
2.4'.5-Trichlorobiphenyl (CAS 16606-02-3)	Reasonably Anticipated to be a Human Carcinogen.
Decachlorobiphenyl (CAS 2051-24-3)	Reasonably Anticipated to be a Human Carcinogen.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

**12. Ecological information**

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

Components	Species	Test Results
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) > 0.0002 mg/l, 96 hours
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) > 0.0013 mg/l, 96 hours
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) > 0.01 mg/l, 96 hours
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) > 0.03 mg/l, 96 hours
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) 0.0338 mg/l, 96 hours



Components	Species	Test Results
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) > 0.16 mg/l, 96 hours

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

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

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

2,2',3,4,4',5,5'-Heptachlorobiphenyl	4.11
2,2',3,4,4',5'-Hexachlorobiphenyl	4.11
2,2',4,5,5'-Pentachlorobiphenyl	4.11
2,2',5,5'-Tetrachlorobiphenyl	4.11
2,4,4'-Trichlorobiphenyl	4.11
2,4',5-Trichlorobiphenyl	4.11
Decachlorobiphenyl	4.11
Isooctane	5.18

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**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>	UN1262
<b>UN proper shipping name</b>	Octanes, solution (Isooctane RQ = 1000 LBS)
<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>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB2, T4, TP1
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN1262
<b>UN proper shipping name</b>	Octanes solution (Isooctane)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	3H
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Other information**

**Passenger and cargo aircraft** Allowed with restrictions.  
**Cargo aircraft only** Allowed with restrictions.

**IMDG**

**UN number** UN1262  
**UN proper shipping name** OCTANES SOLUTION (Isooctane)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-E, S-E  
**Special precautions for user** 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**

**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',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7)	0.00005 % Annual Export Notification required.
2,2',3,3',4,4',5-Heptachlorobiphenyl (CAS 35065-30-6)	0.00005 % Annual Export Notification required.
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)	0.00005 % Annual Export Notification required.
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	0.00005 % Annual Export Notification required.
2,2',3,4',5',6'-Hexachlorobiphenyl (CAS 38380-04-0)	0.00005 % Annual Export Notification required.
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)	0.00005 % Annual Export Notification required.
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	0.00005 % Annual Export Notification required.
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	0.00005 % Annual Export Notification required.
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)	0.00005 % Annual Export Notification required.
2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)	0.00005 % Annual Export Notification required.
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	0.00005 % Annual Export Notification required.
2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)	0.00005 % Annual Export Notification required.
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)	0.00005 % Annual Export Notification required.
Decachlorobiphenyl (CAS 2051-24-3)	0.00005 % Annual Export Notification required.

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

Isooctane (CAS 540-84-1)

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)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
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)**

Not regulated.

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

Isooctane (CAS 540-84-1)

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

Not regulated.

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

**US state regulations****US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	Listed: October 1, 1989
2,2',3,4',5',6'-Hexachlorobiphenyl (CAS 38380-04-0)	Listed: October 1, 1989
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)	Listed: October 1, 1989
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	Listed: October 1, 1989
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	Listed: October 1, 1989
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)	Listed: October 1, 1989
2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)	Listed: October 1, 1989
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	Listed: October 1, 1989
2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)	Listed: October 1, 1989
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)	Listed: October 1, 1989

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

2,2',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7)	Listed: January 1, 1991
2,2',3,3',4,4',5-Heptachlorobiphenyl (CAS 35065-30-6)	Listed: January 1, 1991
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)	Listed: January 1, 1991
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)	Listed: January 1, 1991
2,2',3,4',5',6'-Hexachlorobiphenyl (CAS 38380-04-0)	Listed: January 1, 1991
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)	Listed: January 1, 1991
2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)	Listed: January 1, 1991
2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)	Listed: January 1, 1991
2,2',5-Trichlorobiphenyl (CAS 37680-65-2)	Listed: January 1, 1991
2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)	Listed: January 1, 1991
2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)	Listed: January 1, 1991
2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)	Listed: January 1, 1991
2,4'.5-Trichlorobiphenyl (CAS 16606-02-3)	Listed: January 1, 1991
Decachlorobiphenyl (CAS 2051-24-3)	Listed: January 1, 1991

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

2,2',3,3',4,4',5,5'-Octachlorobiphenyl (CAS 35694-08-7)
2,2',3,3',4,4',5-Heptachlorobiphenyl (CAS 35065-30-6)
2,2',3,4,4',5,5'-Heptachlorobiphenyl (CAS 35065-29-3)
2,2',3,4,4',5'-Hexachlorobiphenyl (CAS 35065-28-2)
2,2',3,4',5',6'-Hexachlorobiphenyl (CAS 38380-04-0)
2,2',4,4',5,5'-Hexachlorobiphenyl (CAS 35065-27-1)

2,2',4,5,5'-Pentachlorobiphenyl (CAS 37680-73-2)  
 2,2',5,5'-Tetrachlorobiphenyl (CAS 35693-99-3)  
 2,2',5-Trichlorobiphenyl (CAS 37680-65-2)  
 2,3',4,4',5-Pentachlorobiphenyl (CAS 31508-00-6)  
 2,4,4'-Trichlorobiphenyl (CAS 7012-37-5)  
 2,2'.3.5'-Tetrachlorobiphenyl (CAS 41464-39-5)  
 Decachlorobiphenyl (CAS 2051-24-3)  
 Isooctane (CAS 540-84-1)

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
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	Yes

\*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

<b>Issue date</b>	06-08-2016
<b>Revision date</b>	10-23-2019
<b>Version #</b>	03
<b>NFPA ratings</b>	Health: 2 Flammability: 3 Instability: 0

#### Disclaimer

The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

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**Revision information**

Hazard(s) identification: Prevention  
Composition / Information on Ingredients: Ingredients