## SAFETY DATA SHEET

## GHEMSERVIGE .....

### 1. Identification

Product identifier	PCB Mixture - 525.1		
Other means of identification			
ltem	M-PCB5251B1		
Recommended use	For Laboratory Use Only		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/	Distributor information		
Manufacturer			
Company name Address	Chem Service, Inc. 660 Tower Lane West Chester, PA 19380 United States		
Telephone	Toll Free Direct	800-452-9994 610-692-3020	
Website E-mail Emergency phone number	www.chemservice.com info@chemservice.com Chemtrec US Chemtrec outside US	800-424-9300 +1 703-527-3	)
		-1700-027-0	007
2. Hazard(s) identification			
Physical hazards	Flammable liquids		Category 2
Health hazards	Serious eye damage/eye irritati	ion	Category 2A
	Specific target organ toxicity, si	ingle exposure	Category 3 narcotic effects
	Specific target organ toxicity, re exposure	epeated	Category 2
Environmental hazards	Hazardous to the aquatic environ hazard	onment, acute	Category 2
	Hazardous to the aquatic enviro long-term hazard	onment,	Category 3
OSHA defined hazards	Not classified.		
Label elements			



Signal word Danger Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or **Hazard statement** dizziness. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Harmful to aquatic life with long lasting effects. **Precautionary statement** Prevention 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 eye protection/face protection. Wear protective gloves/eye protection/face protection. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Response 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. Call a poison center/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	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.
Supplemental information	99.92% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 99.92% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

## 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	99 - 100
2,2',3,3',4,4',6-Heptachlorobiphenyl		52663-71-5	0.01
2,2',3,3',4,5',6,6'-Octachlorobipheny		40186-71-8	0.01
2,2',3',4,6-Pentachlorobiphenyl		60233-25-2	0.01
2,2',4,4',5,6'-Hexachlorobiphenyl		60145-22-4	0.01
2,2',4,4'-Tetrachlorobiphenyl		2437-79-8	0.01
2,3-Dichlorobiphenyl		16605-91-7	0.01
2,4,5-Trichlorobiphenyl		15862-07-4	0.01
2-Chlorobiphenyl		2051-60-7	0.01
Other components below reportable leve	els		< 1

## 4. First-aid measures

Inhalation	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.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	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.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	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.
General information	Take off all contaminated clothing immediately. 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. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	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.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor.
6. Accidental release mea	sures
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. 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.
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.
	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. Prevent product from entering drains. 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.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	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. Do not breathe mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
	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/pers	onal protection
Occupational exposure limits	

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

components	Туре	value
2,3-Dichlorobiphenyl (CAS 16605-91-7)	PEL	1 mg/m3

	Тур	s (29 CFR 19 9			alue	
2,4,5-Trichlorobiphenyl (CAS 15862-07-4)	PEL			1	mg/m3	
2-Chlorobiphenyl (CAS 2051-60-7)	PEL			1	mg/m3	
Acetone (CAS 67-64-1)	PEL				400 mg/m3 000 ppm	
US. ACGIH Threshold Lin Components	nit Values Type	Ð		v	alue	
2,3-Dichlorobiphenyl (CAS 16605-91-7)	TWA	A		1	mg/m3	
2,4,5-Trichlorobiphenyl (CAS 15862-07-4)	TWA	A		1	mg/m3	
2-Chlorobiphenyl (CAS 2051-60-7)	TWA	A		1	mg/m3	
Acetone (CAS 67-64-1)	STE	L		7	50 ppm	
· · · ·	TWA	A			00 ppm	
US. NIOSH: Pocket Guide	to Chemical Hazards					
Components	Тур	e		V	alue	
2,2',3,3',4,4',6-Heptachlorol iphenyl (CAS 52663-71-5)	b TWA	A		0.	001 mg/m3	
2,2',3,3',4,5',6,6'-Octachlord biphenyl (CAS 40186-71-8)		A		0.	001 mg/m3	
2,2',3',4,6-Pentachlorobiphe nyl (CAS 60233-25-2)	e TWA	A		0.	001 mg/m3	
2,2',4,4',5,6'-Hexachlorobip henyl (CAS 60145-22-4)		A			001 mg/m3	
2,2',4,4'-Tetrachlorobipheny I (CAS 2437-79-8)					001 mg/m3	
Acetone (CAS 67-64-1)	TWA	A			90 mg/m3 50 ppm	
ogical limit values						
ogical limit values ACGIH Biological Exposu Components	re Indices Value	Determina	ant	Specimen	Sampling Time	
ACGIH Biological Exposu Components		Determina Acetone	ant	Specimen Urine	Sampling Time	
ACGIH Biological Exposu Components Acetone (CAS 67-64-1)	Value 50 mg/l	Acetone	ant	-		
ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple	Value 50 mg/l	Acetone	ant	-		
ACGIH Biological Exposu Components Acetone (CAS 67-64-1)	Value 50 mg/l ase see the source doo	Acetone	ant	-		
ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple osure guidelines	Value 50 mg/l base see the source door n designation CAS 16605-91-7) l (CAS 15862-07-4) S 2051-60-7)	Acetone sument.	Can be a Can be a	-	* ugh the skin. ugh the skin.	
ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple osure guidelines US - California OELs: Skin 2,3-Dichlorobiphenyl (CAS 2-Chlorobiphenyl (CAS	Value 50 mg/l ase see the source door n designation CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) : Skin designation app CAS 16605-91-7) I (CAS 15862-07-4)	Acetone sument.	Can be a Can be a Can be a Skin des Skin des	Urine bsorbed thro bsorbed thro	* ugh the skin. ugh the skin. ugh the skin. es. es.	
ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple osure guidelines US - California OELs: Skin 2,3-Dichlorobiphenyl (C 2,4,5-Trichlorobiphenyl 2-Chlorobiphenyl (CAS US - Minnesota Haz Subs 2,3-Dichlorobiphenyl (C 2,4,5-Trichlorobiphenyl (C	Value 50 mg/l ase see the source door n designation CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) : Skin designation app CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7)	Acetone sument.	Can be a Can be a Can be a Skin des Skin des	Urine absorbed thro absorbed thro absorbed thro ignation appli ignation appli	* ugh the skin. ugh the skin. ugh the skin. es. es.	
ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple osure guidelines US - California OELs: Skin 2,3-Dichlorobiphenyl (C 2,4,5-Trichlorobiphenyl 2-Chlorobiphenyl (C 2,4,5-Trichlorobiphenyl (C 2,4,5-Trichlorobiphenyl (C 2,4,5-Trichlorobiphenyl (C 2,4,5-Trichlorobiphenyl (CAS	Value 50 mg/l base see the source door n designation CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) : Skin designation app CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) cin designation CAS 16605-91-7)	Acetone sument.	Can be a Can be a Can be a Skin des Skin des Skin des Can be a	Urine absorbed thro absorbed thro absorbed thro ignation appli ignation appli	* ugh the skin. ugh the skin. es. es. es. ugh the skin.	
ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple osure guidelines US - California OELs: Skin 2,3-Dichlorobiphenyl (CAS US - Minnesota Haz Subs 2,3-Dichlorobiphenyl (CAS US - Minnesota Haz Subs 2,3-Dichlorobiphenyl (CAS US - Tennessee OELs: Sk 2,3-Dichlorobiphenyl (CAS US - Tennessee OELs: Sk 2,3-Dichlorobiphenyl (CAS	Value 50 mg/l ase see the source door n designation CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) : Skin designation app CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7)	Acetone sument.	Can be a Can be a Can be a Skin des Skin des Skin des Can be a Can be a	Urine absorbed thro absorbed thro absorbed thro ignation appli ignation appli ignation appli	* ugh the skin. ugh the skin. ugh the skin. es. es. es. ugh the skin. ugh the skin.	
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ACGIH Biological Exposu Components Acetone (CAS 67-64-1) * - For sampling details, ple osure guidelines US - California OELs: Skin 2,3-Dichlorobiphenyl (C 2,4,5-Trichlorobiphenyl (C 2,5,5))	Value 50 mg/l ase see the source door n designation CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) : Skin designation app CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) tin designation CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) it Values: Skin design CAS 16605-91-7) I (CAS 15862-07-4) S 2051-60-7) I (CAS 15862-07-4) S 2051-60-7)	Acetone sument.	Can be a Can be a Can be a Skin des Skin des Skin des Can be a Can be a Can be a Can be a Can be a Can be a Can be a	Urine Urine absorbed thro absorbed thro absorbed thro ignation appli ignation appli absorbed thro absorbed thro absorbed thro absorbed thro absorbed thro absorbed thro absorbed thro absorbed thro absorbed thro	* ugh the skin. ugh the skin. es. es. es. ugh the skin. ugh the skin. ugh the skin. ugh the skin.	

2,4,5-Trichlorobiphenyl (( 2-Chlorobiphenyl (CAS 2		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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.	
Individual protection measures,	such as personal protective e	quipment
Eye/face protection	Chemical respirator with organ	nic vapor cartridge and full facepiece.
Skin protection Hand protection	Wear appropriate chemical res	sistant gloves. Suitable gloves can be recommended by the glove
Other	Wear suitable protective clothi	ing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organ	nic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal prot	ective clothing, when necessary.
General hygiene considerations		ways observe good personal hygiene measures, such as washing before eating, drinking, and/or smoking. Routinely wash work nent to remove contaminants.

## 9. Physical and chemical properties

	-
Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	-138.46 °F (-94.7 °C) estimated
Initial boiling point and boiling range	132.89 °F (56.05 °C) estimated
Flash point	-4.0 °F (-20.0 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	308.63 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	869 °F (465 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.79013 g/cm3 estimated

Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	99 % estimated
Specific gravity	0.79 estimated
VOC (Weight %)	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	Acids.
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	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

## Information on toxicological effects

Acute toxicity	Narcotic effects.	
Components	Species	Test Results
2,3-Dichlorobiphenyl (CA	S 16605-91-7)	
Acute		
Dermal		
LD50	Rabbit	8.65 g/kg
Oral		
LD50	Rat	0.794 g/kg
2,4,5-Trichlorobiphenyl (C	CAS 15862-07-4)	
<u>Acute</u>		
Dermal		
LD50	Rabbit	8.65 g/kg
Oral		
LD50	Rat	0.794 g/kg
2-Chlorobiphenyl (CAS 2	051-60-7)	
<u>Acute</u>		
Dermal		
LD50	Rabbit	8.65 g/kg
Oral		
LD50	Rat	0.794 g/kg
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours

Components	Species	Test Results
		> 9.4 ml/kg, 24 Hours
	Rabbit	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
Inhalation		
Vapor LC50	Rat	55700 ppm, 3 Hours
2000	Ναι	132 mg/l, 3 Hours
LC50	Rat	76 mg/l, 4 Hours
Vapor	Nat	ro ligh, 4 rious
LC50	Rat	50.1 mg/l
LC50	Rat	50.1 mg/l, 8 Hours
Oral		
LD50	Mouse	5.2 g/kg
	Rat	5800 mg/kg
		2.2 ml/kg
* Entimaton for product move	o boood on additional company	at data pat abour
Skin corrosion/irritation	e based on additional componer Prolonged skin contact may ca	
Serious eye damage/eye	Causes serious eye irritation.	
rritation		
Respiratory or skin sensitization	ı	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to	
Germ cell mutagenicity	mutagenic or genotoxic.	roduct or any components present at greater than 0.1% are
Carcinogenicity		to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall	Evaluation of Carcinogenicity	
2,2',3,3',4,5',6,6'-Octachlo 2,2',3',4,6-Pentachlorobip 2,2',4,4',5,6'-Hexachlorobip 2,2',4,4'-Tetrachlorobiphe 2,3-Dichlorobiphenyl (CA 2,4,5-Trichlorobiphenyl (CAS 2 US. National Toxicology Pro	ophenyl (CAS 60145-22-4) enyl (CAS 2437-79-8) S 16605-91-7) CAS 15862-07-4) 051-60-7) ogram (NTP) Report on Carcin	-
2,2',3,3',4,5',6,6'-Octachlo 2,2',3',4,6-Pentachlorobip 2,2',4,4',5,6'-Hexachlorobi 2,2',4,4'-Tetrachlorobiphe 2,3-Dichlorobiphenyl (CA 2,4,5-Trichlorobiphenyl (CAS 2	oiphenyl (CAS 60145-22-4) enyl (CAS 2437-79-8) S 16605-91-7) CAS 15862-07-4)	Reasonably Anticipated to be a Human Carcinogen. Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	This product is not expected to	o cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause drowsiness and dia	zziness.
Specific target organ toxicity - repeated exposure	May cause damage to organs	through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	May cause damage to organs be harmful.	through prolonged or repeated exposure. Prolonged inhalation ma

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

cotoxicity	l oxic to aquatic life. Harmful to aquatic life with long lasting effects.		
Components	Species Test Results		
2,2',3,3',4,4',6-Heptac	hlorobiphenyl (CAS	52663-71-5)	
Aquatic			
Fish	LC50	Fathead minnow (Pimephales prome	elas) > 0.002 mg/l, 96 hours
2,2',4,4'-Tetrachlorobi	phenyl (CAS 2437-	79-8)	
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	0.08 - 0.16 mg/l, 96 hours
2-Chlorobiphenyl (CA	S 2051-60-7)		
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.34 - 1.85 mg/l, 96 hours
Acetone (CAS 67-64-	1)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
* Estimates for produc	t may be based on	additional component data not shown.	
ersistence and degrada	<b>bility</b> No data i	s available on the degradability of this prod	luct.
oaccumulative potentia	al		
Partition coefficient	n-octanol / water (	log Kow)	
2,3-Dichlorobiphenyl		4.11	
2 1 5 Trichlorohinhon	1	1 11	

2,4,5-Trichlorobiphenyl	4.11
2-Chlorobiphenyl	4.11
Acetone	-0.24
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	
UN number	UN1090
UN proper shipping name	Acetone, solution
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	· Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T4, TP1

Packaging exceptions Packaging non bulk Packaging bulk IATA	150 202 242
UN number	UN1090
UN proper shipping name Transport hazard class(es)	Acetone solution
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user Other information	Read safety instructions, SDS and emergency procedures before handling.
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.
IMDG	
UN number	UN1090
UN proper shipping name	ACETONE (ACETONE SOLUTIONS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	П
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
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	







### 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',6-Heptachlorobiphenyl (CAS 52663-71-5)0.00005 % Annual Export Notification required.2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8)0.00005 % Annual Export Notification required.

2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2) 2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4) 2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8) 2,3-Dichlorobiphenyl (CAS 16605-91-7) 2,4,5-Trichlorobiphenyl (CAS 15862-07-4) 2-Chlorobiphenyl (CAS 2051-60-7) <b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>		<ul> <li>0.00005 % Annual Export Notification required.</li> </ul>
	ance List (40 CFR 302.4)	
Acetone (CAS 67-64-1) SARA 304 Emergency relea	and notification	Listed.
Not regulated.	ase nouncation	
	ulated Substances (29 CFR 19 <sup>.</sup>	10.1001-1050)
Superfund Amendments and R	eauthorization Act of 1986 (SA	RA)
Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	
SARA 302 Extremely haza	rdous substance	
Not listed.		
SARA 311/312 Hazardous chemical	No	
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
•	n 112 Hazardous Air Pollutants	(HAPs) List
Not regulated.	on 112(r) Accidental Release Pre	
Not regulated.		
Safe Drinking Water Act (SDWA)	Not regulated.	
Drug Enforcement Adr Chemical Code Numbe		ntial Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and
Acetone (CAS 67-6		6532
-		cempt Chemical Mixtures (21 CFR 1310.12(c))
Acetone (CAS 67-6		35 %WV
•	Mixtures Code Number	0500
Acetone (CAS 67-6	4-1)	6532
US state regulations		
2,2',3,3',4,4',6-Heptachlo 2,2',3,3',4,5',6,6'-Octach 2,2',3',4,6-Pentachlorobi 2,2',4,4',5,6'-Hexachlorobi 2,2',4,4'-Tetrachlorobiphe 2,3-Dichlorobiphenyl (CA 2,4,5-Trichlorobiphenyl (CA 2,4,5-Trichlorobiphenyl (CAS Acetone (CAS 67-64-1) <b>US - Pennsylvania RTK - H</b> 2,2',3,3',4,4',6-Heptachlo 2,2',3',4,6-Pentachlorobi	AS 16605-91-7) (CAS 15862-07-4) 2051-60-7) azardous Substances: Special probiphenyl (CAS 52663-71-5) lorobiphenyl (CAS 40186-71-8) iphenyl (CAS 60233-25-2) ibiphenyl (CAS 60145-22-4) ienyl (CAS 2437-79-8) AS 16605-91-7) (CAS 15862-07-4)	hazard

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100) Not listed.

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

2,2',3,3',4,4',6-Heptachlorobiphenyl (CAS 52663-71-5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8) 2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2) 2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4) 2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8) 2,3-Dichlorobiphenyl (CAS 16605-91-7) 2,4,5-Trichlorobiphenyl (CAS 15862-07-4) 2-Chlorobiphenyl (CAS 2051-60-7) Acetone (CAS 67-64-1)

## US. Massachusetts RTK - Substance List

2,2',3,3',4,4',6-Heptachlorobiphenyl (CAS 52663-71-5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8) 2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2) 2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4) 2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8) Acetone (CAS 67-64-1)

## US. New Jersey Worker and Community Right-to-Know Act

2,2',3,3',4,4',6-Heptachlorobiphenyl (CAS 52663-71-5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8) 2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2) 2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4) 2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8) 2,3-Dichlorobiphenyl (CAS 16605-91-7) 2,4,5-Trichlorobiphenyl (CAS 15862-07-4) 2-Chlorobiphenyl (CAS 2051-60-7)

### US. Pennsylvania RTK - Hazardous Substances

2,2',3,3',4,4',6-Heptachlorobiphenyl (CAS 52663-71-5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8) 2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2) 2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4) 2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8) Acetone (CAS 67-64-1)

## US. Pennsylvania Worker and Community Right-to-Know Law

2,2',3,3',4,4',6-Heptachlorobiphenyl (CAS 52663-71-5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8) 2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2) 2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4) 2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8) 2,3-Dichlorobiphenyl (CAS 16605-91-7) 2,4,5-Trichlorobiphenyl (CAS 15862-07-4) 2-Chlorobiphenyl (CAS 2051-60-7) Acetone (CAS 67-64-1)

### US. Rhode Island RTK

US

Acetone (CAS 67-64-1)

### US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2)	Listed: October 1, 1989
2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4)	Listed: October 1, 1989
2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8)	Listed: October 1, 1989
2,3-Dichlorobiphenyl (CAS 16605-91-7)	Listed: October 1, 1989
2,4,5-Trichlorobiphenyl (CAS 15862-07-4)	Listed: October 1, 1989
2-Chlorobiphenyl (CAS 2051-60-7)	Listed: October 1, 1989
- California Proposition 65 - CRT: Listed date/Deve	elopmental toxin
2.2'.3.3'.4.4'.6-Heptachlorobiphenvl (CAS	Listed: January 1, 1991

2,2',3,3',4,5',6,6'-Octachlorobiphenyl (CAS 40186-71-8)	Listed: January 1, 1991
2,2',3',4,6-Pentachlorobiphenyl (CAS 60233-25-2)	Listed: January 1, 1991
2,2',4,4',5,6'-Hexachlorobiphenyl (CAS 60145-22-4)	Listed: January 1, 1991
2,2',4,4'-Tetrachlorobiphenyl (CAS 2437-79-8)	Listed: January 1, 1991
2,3-Dichlorobiphenyl (CAS 16605-91-7)	Listed: January 1, 1991
2,4,5-Trichlorobiphenyl (CAS 15862-07-4)	Listed: January 1, 1991
2-Chlorobiphenyl (CAS 2051-60-7)	Listed: January 1, 1991

#### 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

Issue date	09-09-2014
Revision date	09-03-2016
Version #	02
NFPA ratings	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.
	Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.
	This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.
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	This product is furnished FOR LABORATORY USE ONLY.
<b>Revision Information</b>	This document has undergone significant changes and should be reviewed in its entirety.