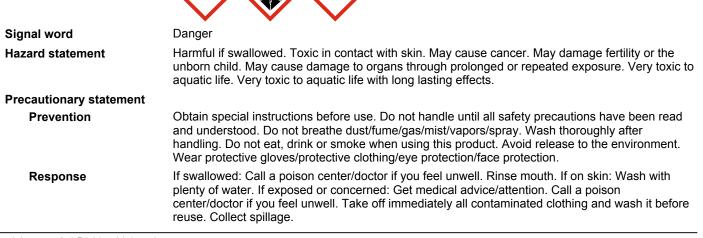
# SAFETY DATA SHEET

#### GHEMSERVICE ....

#### 1. Identification

Product identifier	3,5-Dichlorobiphenyl		
Other means of identification			
Item	BZ-14		
CAS number	34883-41-5		
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	
l'olophone	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			
Physical hazards	Not classified.		
Health hazards	Acute toxicity, oral		Category 4
	Acute toxicity, dermal		Category 3
	Carcinogenicity		Category 1
	Reproductive toxicity		Category 1
	Specific target organ toxicity exposure	, repeated	Category 2
Environmental hazards	Hazardous to the aquatic er hazard	nvironment, acute	Category 1
	Hazardous to the aquatic er long-term hazard	nvironment,	Category 1
OSHA defined hazards	Not classified.		
Label elements			
		¥	



Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

#### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
3,5-Dichlorobiphenyl		34883-41-5	100
4. First-aid measures			
Inhalation	Move to fresh air. Call a physician if symptom	is develop or persist.	
Skin contact	Take off immediately all contaminated clothing advice/attention if you feel unwell. Get medica contaminated clothing before reuse.		
Eye contact	Immediately flush eyes with plenty of water fo present and easy to do. Continue rinsing. Get		
Ingestion	Rinse mouth. If vomiting occurs, keep head lo Get medical advice/attention if you feel unwel		sn't get into the lungs
Most important symptoms/effects, acute and delayed	Prolonged exposure may cause chronic effec	ts.	
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treaunder observation. Symptoms may be delaye		warm. Keep victim
General information	Take off immediately all contaminated clothing advice/attention. If you feel unwell, seek medi that medical personnel are aware of the mate themselves. Show this safety data sheet to th	ical advice (show the label whe rial(s) involved, and take preca	re possible). Ensure
5. Fire-fighting measures			
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carb	on dioxide (CO2).	
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as th	is will spread the fire.	
Specific hazards arising from the chemical	During fire, gases hazardous to health may be	e formed.	
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full pr	rotective clothing must be worn	in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers		
Specific methods	Use standard firefighting procedures and cons	sider the hazards of other involvent	ved materials.
General fire hazards	No unusual fire or explosion hazards noted.		
6. Accidental release meas	sures		

#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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	The product is immiscible with water and will spread on the water surface. 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. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: 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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
Environmental precautions	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.
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 taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. 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 Material	for Air Contaminants (29 ) Type	CFR 1910.1000) Value
3,5-Dichlorobiphenyl (CAS 34883-41-5)	PEL	1 mg/m3
US. ACGIH Threshold Limit Material	t Values Type	Value
3,5-Dichlorobiphenyl (CAS 34883-41-5)	TWA	1 mg/m3
Biological limit values	No biological exposure lir	nits noted for the ingredient(s).
Exposure guidelines		
US - California OELs: Skin	designation	
3,5-Dichlorobiphenyl (CA US - Minnesota Haz Subs: \$		Can be absorbed through the skin.
3,5-Dichlorobiphenyl (CA US - Tennessee OELs: Skir	,	Skin designation applies.
3,5-Dichlorobiphenyl (CA US ACGIH Threshold Limit		Can be absorbed through the skin.
3,5-Dichlorobiphenyl (CA US. OSHA Table Z-1 Limits	/	Can be absorbed through the skin. CFR 1910.1000)
3,5-Dichlorobiphenyl (CA	AS 34883-41-5)	Can be absorbed through the skin.
Appropriate engineering controls	should be matched to cor or other engineering cont	(typically 10 air changes per hour) should be used. Ventilation rates nditions. If applicable, use process enclosures, local exhaust ventilation, rols to maintain airborne levels below recommended exposure limits. If been established, maintain airborne levels to an acceptable level.
ndividual protection measures	, such as personal protect	ive equipment
Eye/face protection		side shields (or goggles).
Skin protection Hand protection	Wear appropriate chemic	al resistant gloves.

Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection Thermal hazards	In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. Keep away from food and drink. 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	Solid.
Form	Crystalline.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	143.6 °F (62 °C)
Initial boiling point and boiling range	614.66 °F (323.7 °C) estimated
Flash point	348.8 - 356.0 °F (176.0 - 180.0 °C) Cleveland open cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
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	0.00003 kPa (77 °F (25 °C))
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	4.11
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.249 g/cm <sup>3</sup> estimated
Explosive properties	Not explosive.
Molecular formula	C12H8Cl2
Molecular weight	223.1
Oxidizing properties	Not oxidizing.
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	Hazardous polymerization does not occur.

#### 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Toxic in contact with skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

Information on toxicological eff	ects		
Acute toxicity	Toxic in contact with skin.	Harmful if swallowed.	
Product	Species Test Results		
3,5-Dichlorobiphenyl (CAS 34883	-41-5)		
Acute			
Oral			
LD50	Rat	0.794 g/kg	
* Estimates for product may b	be based on additional comp	onent data not shown.	
Skin corrosion/irritation	Prolonged skin contact m	ay cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes n	nay cause temporary irritation.	
Respiratory or skin sensitizatio	n		
<b>Respiratory sensitization</b>	Not a respiratory sensitize	er.	
Skin sensitization	This product is not expect	ted to cause skin sensitization.	
Germ cell mutagenicity	No data available to indic mutagenic or genotoxic.	ate product or any components present at greater than 0.1% are	
Carcinogenicity	May cause cancer.		
IARC Monographs. Overall	Evaluation of Carcinogeni	city	
3,5-Dichlorobiphenyl (CA OSHA Specifically Regulate Not regulated. US. National Toxicology Pre	ed Substances (29 CFR 19		
3,5-Dichlorobiphenyl (CA	AS 34883-41-5)	Reasonably Anticipated to be a Human Carcinogen.	
Reproductive toxicity	May damage fertility or th	e unborn child.	
Specific target organ toxicity - single exposure	Not classified.		
Specific target organ toxicity - repeated exposure	May cause damage to ore	gans through prolonged or repeated exposure.	
Aspiration hazard	Not an aspiration hazard.		
Chronic effects		gans through prolonged or repeated exposure. Prolonged inhalation may posure may cause chronic effects.	
12. Ecological information	n		
Ecotoxicity	Very toxic to aquatic life v	vith long lasting effects.	
Persistence and degradability			
Bioaccumulative potential			
Partition coefficient n-octar 4.11	nol / water (log Kow)		
Mobility in soil	No data available.		
Other adverse effects		mental effects (e.g. ozone depletion, photochemical ozone creation ption, 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	UN3432
UN proper shipping name	Polychlorinated biphenyls, solid
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	ll
Special precautions for user	· Read safety instructions, SDS and emergency procedures before handling.
Special provisions	9, 81, 140, IB8, IP2, IP4, T3, TP33
Packaging exceptions	155
Packaging non bulk	212
Packaging bulk	240
ΙΑΤΑ	
UN number	UN3432
UN proper shipping name	Polychlorinated biphenyls, solid
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	
Environmental hazards	No.
ERG Code	9L
· ·	· Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo	Allowed with restrictions.
aircraft Cargo aircraft only	Allowed with restrictions.
IMDG	
UN number	UN3432
UN proper shipping name	POLYCHLORINATED BIPHENYLS, SOLID
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	II.
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-A
	• Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not applicable.
Annex II of MARPOL 73/78 and	
the IBC Code	

# DOT; IATA; IMDG

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

#### 15. Regulatory information

**General information** 

15. Regulatory informatio	n			
US federal regulations	This product is a "Hazar Standard, 29 CFR 1910		fined by the OSHA Hazard Communication	
TSCA Section 12(b) Export	Notification (40 CFR 707,	, Subpt. D)		
3,5-Dichlorobiphenyl (CA CERCLA Hazardous Substa		0.00005 % An	nual Export Notification required.	
Not listed. SARA 304 Emergency relea	ase notification			
Not regulated. OSHA Specifically Regulated	ed Substances (29 CFR 1	910.1001-1050)		
Not regulated.				
Superfund Amendments and R				
Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No	3		
SARA 302 Extremely hazar Not listed.	dous substance			
SARA 311/312 Hazardous chemical	Yes			
SARA 313 (TRI reporting) Chemical name		CAS number	% by wt.	
3,5-Dichlorobiphenyl		34883-41-5	100	
Other federal regulations				
Clean Air Act (CAA) Sectio	n 112 Hazardous Air Pollu	utants (HAPs) List		
Not regulated.				
Clean Air Act (CAA) Sectio	n 112(r) Accidental Relea	se Prevention (40 CF	FR 68.130)	
Not regulated.				
Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)	Hazardous substance Priority pollutant Bioaccumulative chemic Toxic pollutant	cal of concern		
Safe Drinking Water Act (SDWA)	0 mg/l 0.0005 mg/l			
	•			
US state regulations	WARNING: This produc birth defects or other rep		known to the State of California to cause cancer a	nd
-		productive harm.		nd
US - California Proposi 3,5-Dichlorobipheny	birth defects or other rep tion 65 - CRT: Listed date	productive harm. e/ <b>Carcinogenic subs</b> t Listed: Octobe	<b>tance</b> er 1, 1989	nd
US - California Proposi 3,5-Dichlorobipheny	birth defects or other rep tion 65 - CRT: Listed date (CAS 34883-41-5) tion 65 - CRT: Listed date	productive harm. e/ <b>Carcinogenic subs</b> t Listed: Octobe	t <b>ance</b> er 1, 1989 <b>in</b>	nd
US - California Proposi 3,5-Dichlorobipheny US - California Proposi	birth defects or other rep tion 65 - CRT: Listed date (CAS 34883-41-5) tion 65 - CRT: Listed date	productive harm. e/ <b>Carcinogenic subs</b> Listed: Octobe e/ <b>Developmental toxi</b>	t <b>ance</b> er 1, 1989 <b>in</b>	nd
US - California Proposi 3,5-Dichlorobipheny US - California Proposi 3,5-Dichlorobipheny	birth defects or other rep tion 65 - CRT: Listed date (CAS 34883-41-5) tion 65 - CRT: Listed date	productive harm. e/ <b>Carcinogenic subs</b> Listed: Octobe e/ <b>Developmental toxi</b>	t <b>ance</b> er 1, 1989 <b>in</b>	
US - California Proposi 3,5-Dichlorobipheny US - California Proposi 3,5-Dichlorobipheny International Inventories	birth defects or other rep tion 65 - CRT: Listed date (CAS 34883-41-5) tion 65 - CRT: Listed date (CAS 34883-41-5)	productive harm. e/Carcinogenic subst Listed: Octobe e/Developmental toxi Listed: Januar	tance er 1, 1989 in ry 1, 1991 On inventory (yes/n	

Country(s) or region	Inventory name	On inventory (yes/no)*
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	05-22-2019
Version #	01
NFPA ratings	Health: 3 Flammability: 0 Instability: 0
Disclaimer	Chem Service, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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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