## SAFETY DATA SHEET

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1. PRODUCT AND COMPANY IDENTIF	ICATION				
	1,3-Dichlorobenzene				
	GL Sciences Inc.				
	22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan				
	International Sales Section				
	+81-3-5323-6620				
	+81-3-5323-6621				
	1021-21003				
	1021-21003				
Research use only.	1021-21003				
2. HAZARDS IDENTIFICATION					
	Elemmoble liquid	· Cata	aon 1		
GHS CLASSIFICATION :	Flammable liquid		gory 4		
	Acute toxicity - oral	: Cate			
	Acute toxicity - inhalation	: Cate			
	Skin corrosion/irritation	: Cate			
	Serious eye damage/eye irrita		gory 2A		
	Specific target organ toxicity (				
		: Cate	gory 1 <liver></liver>		
	Specific target organ toxicity (	repeated expos	ure)		
		: Cate	gory 1 <liver></liver>		
	Hazardous to the aquatic envi	ironment –acute	hazard		
		: Cate	gory 2		
	Hazardous to the aquatic envi	ironment –chron	ic hazard		
		: Cate	gory 2		
HAZARDS SYMBOL :		2			
SIGNAL WORD :	Danger				
HAZARD STATEMENT :	Danger				
H227	Combustible liquid				
H302	Hrmful if swallowed				
H331	Toxic if inhaled				
H315	Cause skin irritation				
H319					
H370	Cause serious eye irritaion	, divor kidnovs			
H372	Causes damage to the organs Causes damage to organs <	· •	liver reeniratory	organa blood	
	system > through prolonged o			organs, bioou	
H401	Toxic to aquatic life.				
H411	Toxic to aquatic life with long	lasting effects.			
PRECAUTIONARY STATEMENTS :					
P202	Do not handle until all safety p				
P210	Keep away from heat, hot s sources. No smoking.	surface, sparks,	open flames and	other ignition	
P280	Wear protective gloves/eye pr	otection.			
P264	Wash hands thoroughly after I	handling.			
P270	Do not eat, drink or smoke wh	-	oduct.		
P260	Do not breathing gas/mist/vap	• •			
P271	Use only outdoors or in a well				
P273	Avoid release to the environm		-		
P370+P378	In case of fire: Use appropriat		nauish		
P301+P312	IF SWALLOWED: Call a POIS		•	unwell	
	II SWALLOWED. Call a POIS	ON CENTER OF	doctor il you leel		

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P330	Rinse mouth.		
P304+P340	IF INHALED: Remove person to fresh air and akeep comfortable.		
P302+P352	IF ON SKIN: wash with plenty water.		
P332+P313	If skin irritation occurs: Get medical attention.		
P362+P364	Take off contaminated clothing and wash it before reuse.		
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact		
	lenses, if present and easy to do. Continue rinsing.		
P337+P313	If eye irritation persists: Get medical attention.		
P308+P311	IF exposed or concerned: Call a POISON CENTER or doctor.		
P314	Get medical attention if you feel unwell.		
P403+P233	Store in a well-ventilated place. Keep container tightly closed.		
P405	Store locked up.		
P501	Dispose of contents/container in accordance with all applicable regulations.		
3. COMPOSITION/INFORMATION ON I	NGREDIENTS		
CHEMICAL IDENTITY :	1,3-Dichlorobenzene		
SYNONYMS :	o-Dichlorobenzene		
CHEMICAL FOMULA :	C6H4Cl2		
CONTENT :	> 99 %		
MOLECULAR WEIGHT :	147.0		
CAS No. :	541-73-1		
TSCA INVENTRY :	Listed		
EINECS No. :	208-792-1		
EC INDEX No. :	602-067-00-7		
4. FIRST AID MEASURES			
	Wash off immediately with soap and plenty of water. In the case of respirable		
	dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment. Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.		
SKIN CONTACT :	Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a		
EYE CONTACT :	physician. Remove any contact lenses at once. Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, consult a physician.		
INGESTION :	Rinse mouth. Never give anything by mouth to an unconscious person.		
	Consult a physician immediately.		
5. FIRE FIGHTING MEASURES			
	Carbon dioxide, dry chemical powder, foam, water spray		
FIRE & EXPLOSION HAZARDS :	Combustible. Toxic, irritating fumes or smoke may be emitted. Above 66°C		
SPECIAL PROTECTIVE EQUIPMENT	explosive vapour/air mixtures may be formed.		
	For Fireman should wear normal protective equipment(full bunker gear) and		
	positive-pressure self-contained breathing apparatus.		
6. ACCIDENTAL RELEASE MEASURES			
	Remove ignition sources and ventilate the area.		
	In case of insufficient ventilation, wear suitable respiratory equipment. Avoid		
	raising dust and avoid contact with skin and eyes.		
ENVIROMENTAL PRECATIONS :	Prevent spills from entering sewers, watercourses or low areas.		
METHODS FOR CLEAN UP :	Do not touch spilled material without suitable protection. After material is		
	completely picked up, wash the spill site with soap and water and ventilate the area. Pull all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.		
7. HANDLING AND STORAGE	-		
	Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection. After this product, dispose of contents/container in accordance with all applicable regulations and appropriate ways.		

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STORAGE	: Store away from sunlight in well-ventilated dry place at 2 - 10°C.			
OTOTALOE	Keep container tightly closed.			
INCOMOPATIBLE PRODUCTS : Strong oxidizers and acids, aluminum, chlorides 8. EXPOSURE CONTROL/PERSONAL PROTECTION				
ENGINEERING MEASURES	: Use exhaust ventilation to keep airborne concentrations below exposure limits.			
	Use only with adequate ventilation.			
VENTILATION	: Local Exhaust ; Necessary, Mechanical(General) ; Recommended			
PERSONAL PROTECTION				
RESPIRATORY PROTECTION	: Use respirators approved under appropriate government standards and follow all regulations.			
HAND PROTECTION	: Chemical resistant gloves			
EYE PROTECTION	: Safety glasses(goggles)			
SKIN PROTECTION	: Protective clothing			
CONTROL PARAMETERS				
OSHA	: Not established			
NIOSH REL	: Not established			
ACGIH	: Not established			
9. PHYSICAL AND CHEMICAL PROF				
APPEARANCE	: Clear			
SHAPE	: Liquid			
ODOR	: Aromatic odor			
рН	: No data available			
BOILING POINT	: 173℃			
MELTING POINT	: -24.76°C			
FLASH POINT	: 62°C			
FLAMMABILITY	: lower: 1.8% upper: 7.8%			
AUTOIGNITION TEMPERATURE	: No data available			
VAPOR PRESSURE	: 0.286kPa(25°C)			
VAPOR DENCITY	: 5.1(air=1)			
DENCITY	: No data available			
SPECIFIC GRAVITY	: 1.291g/cm <sup>3</sup>			
SOLUBILITY IN	. 1.2019/011			
WATER	· · · · · · · · · · · · · · · · · · ·			
	: slightly soluble			
Organic solvent	: soluble			
PARTITION COEFFICIENT: n-octa				
	: 3.72			
DECOMPOSITION TEMPERATUR				
	: No data available			
10. STABILITY AND REACTIVITY				
REACTIVITY	: Decomposes on burning.			
CHEMICAL STABILITY	: Reacts with strong oxidants. Reacts violently with aluminium.			
CONDITION TO AVOID	: Heat, contact with incompatible materials.			
INCOMPATIBILE MATERIALS	: Strong oxidizers and acids, aluminum, chlorides			
HAZARDOUS DECOMPOSITION F				
	: CO, CO <sub>2</sub> , Hydrogen chloride, Hydrogen bromide			
11. TOXICOLOGICAL INFORMATION				
	· Dat I DE0- E80ma// (Ministry of the environment initial environment initial			
ACUTE TOXICITY (oral)	: Rat LD50= 580mg/L(Ministry of the environment initial environment risk assessment of chemicals, vol.6,2008)			
ACUTE TOXICITY (inhalation)	: Rat LC50> 10.8mg/L((Ministry of the environment initial environment risk			
	assessment of chemicals, vol.6,2008)			
SKIN CORROSION/IRRITATION	: rabbit – marked irritation (DFGOT vol.1,1991)			
EYE DAMAGE/EYE IRRITATION	<ul> <li>rabbit – marked initiation (DFGOT vol.1, 1991)</li> <li>rabbit – mild to marked (DFGOT vol.1(1991), IUCLID(2000), BUA No.8(1987)).</li> </ul>			
	: Not classified			
	: Classified at IARC: 3(1999).			
REPRODUCTIVE TOXICITY	: Lack of data			

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SPECIFIC TARGET ORGAN TOXICITY-single exposure	
: Mouse: damage to liver(IARC vol.73,1999).	
SPECIFIC TARGET ORGAN TOXICITY-repeated exposure	
: Rat: damage to liver (BUA No.133,1994).	
ASPIRATION TOXICITY : No data available	
12. ECOLOGICAL INFORMATION	
ECOTOXICITY : Crustacea: EC50=1.2mg/L/48hr	
BIODEGRADABILITY : BOD=0%	
BIOACCUMULATION POTENTIAL : No data available	
MOBILITY IN SOIL : No data available	
OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol list.	
13. DISPOSAL INFORMATION	
Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice	
compliance with country, local, state, and federal laws and regulations (contact country, local or state agency for specific rules).	environment
14. TRANSPORT INFORMATION	
ΙΑΤΑ	
UN NUMBER : UN 2810	
UN PROPER SHIPPING NAME : Toxic, liquid, organic, N.O.S. (1,3-Dichlorobenzene)	
CLASS or DIVISION : Toxic and infectious substances (Class 6.1)	
PACKING GROUP : III	
DOT	
IDENTIFICATION NUMBER : UN 2810	
PROPER SHIPPING NAME : Toxic, liquid, organic, N.O.S. (1,3-Dichlorobenzene)	
HAZARD CLASS : Toxic and infectious substances (Class 6.1)	
MARINE POLLUTANT : Yes	
15. REGULATORY INFORMATION	
US REGULATIONS : Labeling according to US regulations; See section 2	
EU REGURATIONS : Labeling according to EC Directives; See section 2	

## 16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.