SAFETY DATA SHEET

SDS No.1021-34029 Revised Date May 30, 2014 1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Heptachlor

NAME OF MANUFACTURER : GL Sciences Inc.

ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan

CHARGE SECTION : International Sales Section

TELEPHONE No. : +81-3-5323-6620 FACSIMILE No. : +81-3-5323-6621 PRODUCT No. : 1021-34029 SDS No. : 1021-34029

Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Acute toxicity - oral : Category 3

Acute toxicity – dermal : Category 2
Carcinogenicity : Category 2
Reproductive toxicity : Category 1B
Specific target organ toxicity (single exposure)

: Category 1 < liver, nervous system>

Specific target organ toxicity (repeated exposure)

: Category 1 < liver, nervous system,

kidney>

Hazardous to the aquatic environment –acute hazard

: Category 1

Hazardous to the aquatic environment -chronic hazard

: Category 1

HAZARDS SYMBOL





SIGNAL WORD : Danger

HAZARD STATEMENT

H301 Toxic if swallowed
H310 Fatal in contact with skin
H351 Suspected of causing cancer

H360 May damage fertility or the unborn child

H370 Causes damage to organs<liver, nervous system>

H372 Causes damage to organs through prolonged or repeated exposureexposureexposureexposureexposureexposureexposure

nervous system, kidney>

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS :

P202 Do not handle until all safety precautions have been read and understood.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/eye protection.
P260 Do not breathing gas/mist/vapours.
P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical attention if you feel unwell.

PRODUCT NAME : Heptachlor

persists, consult a physic SKIN CONTACT : Remove contaminated of		May 30, 2014 with all applicable	2/4 page
P405 P501 Dispose of contents/cont 3. COMPOSITION/INFORMATION ON INGREDIENTS CHEMICAL IDENTITY SYNONYMS CHEMICAL FOMULA CONTENT CAS NO. TSCA INVENTRY EINECS NO. EC INDEX NO. 4. FIRST AID MEASURES GENERAL ADVICE INHALATION SKIN CONTACT EYE CONTACT EYE CONTACT Remove contaminated of shower. Use soap to from physician. EYE CONTACT Rinse mouth. Give plent mouth to an unconscious		with all applicable	regulations.
P501 Dispose of contents/cont 3. COMPOSITION/INFORMATION ON INGREDIENTS CHEMICAL IDENTITY : Heptachlor SYNONYMS : 1,4,5,6,7,8,8-Heptachlor- CHEMICAL FOMULA : C10H5Cl7 CONTENT :> 98 % CAS No. : 76-44-8 TSCA INVENTRY : Listed EINECS No. : 200-962-3 EC INDEX No. : 602-046-00-2 4. FIRST AID MEASURES GENERAL ADVICE : Wash off immediately widust and/or fumes, unimpervious protective sure impervious p		with all applicable	regulations.
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shower. Use soap to he physician. EYE CONTACT : Remove any contact le amounts of running wate separating the eyelids physician. INGESTION : Rinse mouth. Give plent mouth to an unconscious	Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.		
EYE CONTACT : Remove any contact le amounts of running wate separating the eyelids physician. INGESTION : Rinse mouth. Give plent mouth to an unconscious	Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.		
INGESTION : Rinse mouth. Give plent mouth to an unconscious	r for at least 15 min	utes. Assure adequ	uate flushing by
5. FIRE FIGHTING MEASURES			
EXTINGUISHING MEDIA : Carbon dioxide, dry cher			
FIRE & EXPLOSION HAZARDS : Toxic, irritating dust, fum	ies or smoke may be	e emitted.	
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS : Fireman should wear positive-pressure self-co			ker gear) and
6. ACCIDENTAL RELEASE MEASURES			
PERSONAL PRECAUTIONS : Remove ignition sources	and ventilate the ar	ea.	
In case of insufficient versions and avoid co			uipment. Avoid
ENVIROMENTAL PRECATIONS : Prevent spills from enter	ing sewers, waterco	urses or low areas.	
METHODS FOR CLEAN UP : Do not touch spilled m completely picked up, wa area. Pull all wastes in a clean, or dispose contam	ash the spill site with a plastic bag for dis	n soap and water a	nd ventilate the
7. HANDLING AND STORAGE			
HANDLING : Avoid contact with eye exposure. Handle materi			ed or repeated
After this product, dis applicable regulations ar			dance with all
STORAGE : Store away from sunlight		ana at 2 10°C	

Keep container tightly closed.

INCOMOPATIBLE PRODUCTS : Oxidizers, acids, bases

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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
 : 0.5mg/m3(skin)

 NIOSH REL
 : 0.5mg/m3(skin)

 ACGIH
 : 0.05mg/m3(skin)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Colorless or white

SHAPE : Solid

ODOR : Characteristics odor pH : No data available

BOILING POINT : 95~96°C **MELTING POINT** : 134∼135°C **FLASH POINT** No data available **FLAMMABILITY** No data available **AUTOIGNITION TEMPERATURE** : No data available VAPOR PRESSURE 0.05Pa (25°C) VAPOR DENCITY : No data available DENCITY : 1.66g/cm3

SOLUBILITY IN

WATER : Practically insoluble

Organic solvent : Very soluble

DECOMPOSITION TEMPERATURE

: No data available

10. STABILITY AND REACTIVITY

REACTIVITY : Stable under recommended storage conditions.

CHEMICAL STABILITY: Very toxic and corrosive gases are emitted by heating. Reacts with oxidants,

acids, bases.

CONDITION TO AVOID : Heat, contact with incompatible materials.

INCOMPATIBILE MATERIALS : Oxidizers, acids, bases

HAZARDOUS DECOMPOSITION PRODUCTS

: CO, CO2, Hydrogen chloride, Chlorine

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (oral) : Rat LD50= 59.7 mg/kg (calculated)(PATTY 4th(1994),EHC 38(1984),IARC 79

(2001),ATSDR(2005))

ACUTE TOXICITY (dermal) : Rabbit LD50= 119 mg/kg (minimum)(PATTY 4th(1994),EHC 38(1984), ATSDR

(2005)

SKIN CORROSION/IRRITATION : Negative (PATTY(4th,1994))

EYE DAMAGE/EYE IRRITATION : No data available

GERM CELL MUTAGENICITY : Negative (IARC 79(2001), ACGIH(7th, 2001), ATSDR(2005))

CARCINOGENICITY : Classified at EPA: B2(1993), IARC: 2B(2001), ACGIH: A3(2001), EU: 3(2006). REPRODUCTIVE TOXICITY : rat, mouse: effect to such as increasing death rate. (ACGIH(7th,2001),EHC 38

(1984), IARC 79(2001), ATSDR(2005), PATTY(4th, 1994)).

SPECIFIC TARGET ORGAN TOXICITY-single exposure

: Effect to nervous system, damage to liver (PATTY(4th,1994),ATSDR(2005)).

SPECIFIC TARGET ORGAN TOXICITY-repeated exposure

: Effect to liver, kidney. (ACGIH(7th,2001),ATSDR(2005),EHC 38(1984),PATTY

(4th, 1994))

ASPIRATION TOXICITY : No data available

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12. ECOLOGICAL INFORMATION

ECOTOXICITY : Crustacean (shrimp pink): EC50=0.03µg/L/96hr

BIODEGRADABILITY : BOD = 0%

BIOACCUMULATION POTENTIAL : log Pow=5.50, BCF = 17,300

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 must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

ΙΔΤΔ

UN NUMBER : UN 2761

UN PROPER SHIPPING NAME : Organochlorine pesticides, solid, toxic. (Heptachlor)

CLASS or DIVISION : Toxic (Class 6.1)

PACKING GROUP : II

DOT

IDENTIFICATION NUMBER : UN 2761

PROPER SHIPPING NAME : Organochlorine pesticides, solid, toxic. (Heptachlor)

HAZARD CLASS : Toxic (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.