

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME -----> **Di-n-Butyl Phthalate**
PRODUCT NUMBER(S)-----> 134600,134640

TRADE NAMES AND SYNONYMS -----> 1,2 benzenedicarboxylic acid,
dibutyl ester

CAS-No: 84-74-2

CHEMICAL FAMILY: Phthalate Ester

1.2 RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

RECOMMENDED USE: Industrial: Plasticization of vinyl resins and other polymers in production of cable flexible PVC, artificial leather, rubber products, polymeric building materials, linoleum, film and sheet/plate materials, packing films, PVC gaskets etc.

USES ADVISED AGAINST: Uses by consumers advised against Use advised against name Use descriptors Use as substances or in mixtures, in concentrations greater than 0,1 % by weight of the plasticized material, in toys and childcare articles.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

1.4 Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Proof of Classification: in accordance with WHIMS 2015 Hazardous Products regulation and US OSHA 29CFR 1910.1200 (Hazard Communication)

Reproductive toxicity (Category 1B), H360 Health Hazards not otherwise classified- Category 1.

Acute aquatic toxicity: (Category 1), H400

2.2 GHS Label elements, including precautionary statements

cc



Pictogram

GHS08

GHS09

Signal word: DANGER

Hazard statement(s)

H360 May damage fertility or the unborn child.

H400 Very toxic to aquatic life.

Precautionary statement(s)

Prevention:

P201 Obtain special instructions before use.

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

P273 Avoid release to the environment.

P281 Use personal protective equipment as required.

Response:

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

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Di-n-Butyl Phthalate	84-74-2 EC-No.201-557-4 Index-No.607-318-00-4 Reg.-No. 01-2119493042-44-XXXX	>99	Reproductive toxicity (Category 1B), H360 Acute aquatic toxicity (Category 1), H400

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: DIBUTYL PHTHALATE

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

SKIN CONTACT: DIBUTYL PHTHALATE

****FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

EYE CONTACT: DIBUTYL PHTHALATE

****FIRST AID- Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Consult a physician if irritation persists.**

INGESTION: DIBUTYL PHTHALATE

****FIRST AID- Do not induce vomiting. Never give anything by mouth to an unconscious person. Have patient drink several glasses of water. Consult a physician or poison control center, treat symptomatically.**

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: Mildly irritating;

Skin: Mildly irritating;

Inhalation: Due to its low vapor pressure the inhalation potential is regarded as low. However if this product is heated, misted or sprayed, it may be irritating to the mucous membranes and upper respiratory tract.

Ingestion: May cause nausea, vomiting and diarrhea.

Chronic: Occupational exposure to this material has not been reported to cause any significant adverse human effects. On the basis of available information, exposure to Di-n-Butyl Phthalate is not expected to produce any significant adverse human health effects when recommended safety precautions are followed.

Medical Conditions Aggravated by Exposure: No skin allergy was observed in humans following repeated exposure in controlled skin contact studies.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Specific details on antidote: No recommendation given.

5. FIRE FIGHTING MEASURES

FLASH POINT: 171°C (339.8°F) TCC

LEL %:0.47 (V)

AUTO-IGNITION TEMP.: 402°C (755.6°F)

UEL %: No data available

Flammability Classification: Not classified OSHA 29CFR1910.106

5.1 EXTINGUISHING MEDIA:

Suitable extinguishing media: Foam--> x CO2--> x Dry Chemical--> x Water-fog-->
x Other-->

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Liquid floats on water Keep containers tightly closed. Isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Water or foam may cause frothing.

CONDITIONS OF FLAMMABILITY: Not Flammable or Combustible

HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS: Shut off source. Isolate fire and deny unnecessary entry. Material must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Water or foam may cause frothing. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Wear NIOSH/MSHA approved self-contained breathing apparatus (SCBA) for confined spaces and where there is exposure to vapors. Use full fire-fighting protective clothing. If protective equipment is not available or not used, fight fire from a protected

location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for Containment:

Use explosion proof equipment. Shut off valves, contain spill, for small spills add non-flammable absorbent such as clay or silica in spill area in spill area.

For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Methods for Disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Flush with water to remove trace residue. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

REPORTABLE QUANTITY (RQ): 10lbs.

The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local emergency planning committee and the state emergency response commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the national response center must be notified immediately at (800) 424-8882 or (202) 426-2675 in the metropolitan Washington, D. C. area (40 CFR 302.6).

6.4 REFERENCE TO OTHER SECTIONS: See Section 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: Keep away from food, drink and animal feeding stuffs. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not take internally. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.

Advice on general occupational hygiene:

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

STATIC HAZARD: Electrostatic charge may accumulate and create a hazardous

condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 “Flammable and Combustible Liquids” and National Fire Protection Association (NFPA 77) “Recommended Practice on Static Electricity”.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally. Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

CONTAINER WARNINGS > Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Di-n-Butyl Phthalate	84-74-2 EC-No.201-557-4 Index-No.607-318-00-4 Reg.-No. 01-2119493042-44-XXXX	>99	5mg/m3 TWA (OSHA) 5mg/m3 TWA (ACGIH) 5mg/m3 TWA (NIOSH) 4000mg/m3 (IDLH)

Key: (PEL) = Permissible Exposure Limit OSHA
 (TLV) = Threshold Limit Value OSHA & ACGIH
 (STEL) = Short Term Exposure Limit ACGIH
 (WEEL) = USA. Workplace Environmental Exposure Levels
 (TWA) = Time Weighted Average

CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

GENERAL GUIDELINES> Consider the potential hazards of this material (Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS> Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION> The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator. For known vapor concentrations use a NIOSH/MSHA.

Air purifying respirator with full face-piece and organic vapor cartridge for exposures >1 <10 times ACGIH TWA. For exposures greater than 10 times ACGIH TWA or for unknown vapor concentrations use NIOSH/MSHA approved positive pressure self-contained breathing apparatus (SCBA) with full face-piece.

BODY CLOTHING:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance. Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

SKIN PROTECTION:

Employee must wear appropriate protective gloves to prevent contact with this substance.

Full contact Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Splash contact Material: Nature latex/chloroprene

Minimum layer thickness: 0.6 mm

Break through time: 120 min

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EYE/FACE PROTECTION: Use safety eyewear with splash guards or face shield.

Shower and eyewash should be located in an easily accessible location to the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Di-n-Butyl Phthalate 84-74-2

APPEARANCE:	Oily liquid
COLOR:	Colorless to faint yellow
ODOR:	Slight aromatic odor
ODOR THRESHOLD:	No Data Available
pH:	No Data Available
MOLECULAR WEIGHT:	278.34 amu
MELTING POINT:	-35°C (-31 °F)
BOILING POINT:	340°C (644°F)
SPECIFIC GRAVITY:	1.043@25°C
DENSITY (25°C):	1.043 g/ml @25°C
VAPOR PRESSURE:	1.0 mm Hg @ 150°C
VAPOR DENSITY:	9.6
WATER SOLUBILITY:	0.0114g/L@20°C
PARTITION COEFFICIENT N-OCTANOL/WATER	log Pow: 4.57-5.38
FLASH POINT:	171.0°C (339.8°F) - closed cup
EVAPORATION RATE (BUTYL ACETATE=1):	Negligible
UPPER FLAMMABILITY LIMIT:	No data available
LOWER FLAMMABILITY LIMIT:	0.47% (V)
AUTO IGNITION TEMPERATURE:	402.0°C (755.6°F)
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	20.5cps@20°C
EXPLOSIVE PROPERTIES:	No data available
OXIDIZING PROPERTIES:	No data available

9.2 OTHER INFORMATION: No data available

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: Vapors may form flammable mixtures with air.

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

10.4 CONDITIONS TO AVOID: --> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame.

10.5 INCOMPATIBLE MATERIALS --> Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid,

hydrogen peroxide, nitrates, strong bases. This product reacts violently with oxidizing agents. On contact with acids and strong bases it hydrolyzes to form butyl alcohol and phthalic acid.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS --> Fumes, Smoke, Carbon Monoxide, Aldehydes and other decomposition products where combustion is not complete.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Eye> Mildly irritating;

Skin> Mildly irritating;

Inhalation> Due to its low vapor pressure the inhalation potential is regarded as low. However if this product is heated, misted or sprayed, it may be irritating to the mucous membranes and upper respiratory tract.

Ingestion> May cause nausea, vomiting and diarrhea.

Chronic: Occupational exposure to this material has not been reported to cause any significant adverse human effects. On the basis of available information, exposure to Di-n-Butyl Phthalate is not expected to produce any significant adverse human health effects when recommended safety precautions are followed.

Medical Conditions Aggravated by Exposure> No skin allergy was observed in humans following repeated exposure in controlled skin contact studies.

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	 Oral LD50 (Rat) 	Skin LD50 (Rabbit 	Inhalation LC50(Rat)
-			

Di-n-Butyl Phthalate	8000mg/kg	20860mg/kg	15.68mg/L
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SKIN CORROSION/IRRITATION: Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)

RESPIRATORY OR SKIN SENSITIZATION: Maximization Test - Guinea pig Result: Does not cause skin sensitization. (OECD Test Guideline 406)

MUTAGENIC EFFECTS: No data available.

CARCINOGEN STATUS:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Not listed in Proposition 65

REPRODUCTIVE TOXICITY: Presumed a human reproductive toxicant.

High doses of DBP administered in the diet to mice throughout gestation have been associated with embryotoxic and possibly teratogenic effects in this species. Shiota, K., Nishimura, N., Environmental Health Perspective, 45, 65 1982). The dietary administration of DBP has produced severe testicular atrophy in rats. (Olsbi,S. and Hiraga, K., Toxicology and Applied Pharmacology 53,36, 1980). The majority of scientific literature indicated DBP is negative in a variety of genotoxicity assays. The Chemical Manufacturers Association reported that DBP was positive in the mouse forward mutation assay system only in the presence of metabolic activation. This product contains a substance which is listed on Proposition 65 reproductively toxic.

Specific target organ toxicity - single exposure (Globally Harmonized System) no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System) no data available

ASPIRATION: No Data Available

11.2 ADDITIONAL DATA: Nausea, Dizziness, Headache,

RTECS: TI0875000

12. ECOLOGICAL INFORMATION

DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS

May be dangerous if it enters water intakes.

Notify local health and pollution control officials.

Notify operators of nearby water intakes.

12.1 AQUATIC TOXICITY: (acute)

Toxicity to fish:

LC50 - Pimephales promelas (fathead minnow) - 0.85 mg/l - 96.0 h

NOEC - Pimephales promelas (fathead minnow) - 0.32 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates:

LC50 - Daphnia magna (Water flea) - 3.7 mg/l - 48 h

EC50 - Pseudokirchneriella subcapita (green algae) 0.39mg/l 10 d static test

NOEC

12.2 PERSISTENCE AND DEGRADABILITY: Result: 81 % - Readily biodegradable

12.3 BIOACCUMULATIVE POTENTIAL: Does not bio-accumulate.

The n-octanol water partition coefficient: log Pow is 4.57 to 5.38.

Bio-concentration factor (BCF): 2165

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Very toxic to aquatic life.

Do not allow this material to enter streams, sewers and other waterways.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment, and or disposal methodologies for spent materials and residues at time of disposition. Dispose in accordance with all applicable disposal regulations. . Recommended methods are incineration or biological treatment at a permitted disposal facility.

CONTAMINATED PACKAGING: Dispose of as unused product.

The information offered here is for the product as shipped. Use and/or alterations

to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: U069

DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

Land Transport (DOT)

- 14.1 USDOT ID Number-----> UN3082
- 14.2 USDOT Shipping Name-----> Environmentally Hazardous Substance,
Liquid, n.o.s. (Dibutyl Phthalate)
- 14.3 USDOT Hazard Classification-----> 9
USDOT Label Codes-----> 9
- 14.4 USDOT Package Code-----> III
- 14.5 Marine Pollutant-----> Yes
- 14.6 Special precautions for user-----> None
Emergency Response Guide-----> 171
Reportable quantity-----> 10lbs.

Sea Transport (IMDG)

- 14.1 ID Number-----> UN3082
- 14.2 Proper shipping name-----> ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S.
(Dibutyl Phthalate)
- 14.3 Hazard Classification-----> 9
Label Codes-----> 9
- 14.4 Package Code-----> III
- 14.5 Marine Pollutant-----> Yes
- 14.6 Special precautions for user-----> N/A
EMS-Number-----> F-A, S-F

Air Transport (IATA)

- 14.1 ID Number-----> UN3082
- 14.2 Proper shipping name-----> Environmentally hazardous substance,
liquid, n.o.s. (Dibutyl Phthalate)
- 14.3 Hazard Classification-----> 9
Label Codes-----> 9
- 14.4 Package Code-----> III
- 14.5 Environmental hazard-----> None
- 14.6 Special precautions for user-----> None

15. REGULATORY INFORMATION

**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION
SPECIFIC FOR THE SUBSTANCE OR MIXTURE**

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed Dibutyl Phthalate CAS 84-74-2

SECTION 311/312: Hazard Categorization (40 CFR 370) - Chronic Health Hazard.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed

Dibutyl Phthalate CAS 84-74-2

Reportable Quantity – 10lbs.

SECTION 101(14) Reportable Quantity: 10lbs.

Massachusetts Right to Know Components

Dibutyl phthalate CAS-No.84-74-2

Pennsylvania Right to Know Components

Dibutyl phthalate CAS-No.84-74-2

New Jersey Right to Know Components

Dibutyl phthalate CAS-No.84-74-2

California Prop. 65 Components

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

Dibutyl phthalate CAS-No.84-74-2

TSCA (Toxic Substance Control Act)

Dibutyl Phthalate CAS 84-74-2 is listed on the TSCA Inventory.

International Inventories:

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemicals Substances (EINECS)	Yes
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes

<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

HMIS (Hazardous Materials Identification System)

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=2 Fire=1 Reactivity=0
HMIS RATINGS (SCALE 0-4): Health=1 Fire=1 Reactivity=0 PPE=B

Text of hazard statement codes in Section 2 and 3:

H360 May damage fertility or the unborn child.

H400 Very toxic to aquatic life.

Date of preparation-----> July 28, 2005

Revision Number-----> 1.9

Revision Content-----> Updated Sections 3, 5, 6, 8, 10 and 12

Revision Date-----> October 25, 2018

Prepared by-----> T. G. Fenstermaker, Jr.

Revision Number-----> 2.0

Revision Content-----> Updated Sections 2, 5, 11 and 12

Revision Date-----> February 24, 2025

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygienists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American Nation Standards Institute
API	-	American Petroleum Institute
CERCLA	-	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation
EC-50	-	Effective Concentration
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer

LD-50	-	Lethal Dose
MAK	-	Germany Maximum Concentration Values
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)
NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)
RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System

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