

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

## 1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME-----> **Diocetyl Adipate**

PRODUCT NUMBER(S)-----> 139400, 139401

TRADE NAMES AND SYNONYMS > Bis(2-ethylhexyl) adipate, DOA,  
Di-2-ethylhexyl adipate

CAS No. 103-23-1                      Chemical Family: Adipate Ester

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

#### Identified uses

Industrial uses: Industrial uses: Blowing agents, Plasticizer for acrylate, PVC and Nitrocellulose and plastisols, Solvent and carrier, Use in binding and release agents, Use in Lubricants and lubricant additives, Rubber production, Formulation of DOA in compounds, Fuel additive, Intermediate, Use in Laboratories, Use in additives in coatings, inks and adhesives.

Recommended restrictions: For Manufacturing Use Only

USES ADVISED AGAINST: No information available.

### 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

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Not a hazardous substance or mixture.

### 2.2 GHS Label elements, including precautionary statements

Pictogram None

Signal word: None

Hazard statement(s)

Not a hazardous substance or mixture.

Precautionary statement(s)

Not a hazardous substance or mixture.

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
bis(2-ethylhexyl) Adipate	103-23-1 EC-No. 203-090-1 Reg.-No. 01-2119439699-19-XXXX	99	Not a hazardous substance or mixture.

No ingredients are hazardous according to OSHA criteria.

3.2 MIXTURE: Not applicable.

### 4. FIRST-AID MEASURES

#### 4.1 DESCRIPTION OF FIRST AID MEASURES

INHALATION: DIOCTYL ADIPATE

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

SKIN CONTACT: DIOCTYL ADIPATE

**\*\*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 if irritation persists.**

**EYE CONTACT: DIOCTYL ADIPATE**

**\*\*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: DIOCTYL ADIPATE**

**\*\*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:**

**Inhalation:** Due to its low vapor pressure, the inhalation exposure limit hazard potential is regarded as low. However if the product is heated the vapors may cause irritation to the mucous membrane and upper respiratory tract.

**Skin Contact:** Excessive contact may produce mild irritation. Low levels may be absorbed through the skin.

**Eye Contact:** Exposure to mist or liquid may cause mild irritation.

**Ingestion:** Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary. Seek medical advice.

**Chronic:** Chronic ingestion may cause liver damage. Reduced growth and increased liver weights were reported with long-term feeding of Dioctyl Adipate to rats for 2 years, while no adverse effects were noted in dogs after 1 year.

**Medical Conditions Aggravated by Exposure> No data available**

**4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED. Hazards: None known Treatment: Treat symptomatically.**

## **5. FIRE FIGHTING MEASURES**

**FLASH POINT: 196°C (385°F) TCC**  
**AUTO-IGNITION TEMP: 377°C (711°F)**

**LEL %:N.A.**  
**UEL %:N.A.**

### **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:**

**Keep containers tightly closed. Isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Isolate fire and deny unnecessary entry. Keep containers tightly closed. Isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Fine sprays/mists may be combustible at a temperature below flash point. Above the flash point, explosive vapor-air mixtures may be formed.**

**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: Avoid inhalation of fumes or vapors. Shut off source. 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. 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. Use full fire-fighting protective clothing. If protective equipment is not available or not used, fight fire from a protected location or safe distance. Material must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Isolate fire and deny unnecessary entry. Keep containers tightly closed. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Fine sprays/mists may be combustible at a temperature below flash point. Above the flash point, explosive vapor-air mixtures may be formed.**

## **6. ACCIDENTAL RELEASE MEASURES**

**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Immediately evacuate all nonessential people. Avoid contact with skin and inhalation of its vapors or smoke. Wear appropriate gloves to prevent skin exposure. Eliminate ignition sources in the vicinity of the spill or released vapor. 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, avoid release to the environment.

### **6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:**

Methods for cleanup and containment:

Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent such as clay or silica in spill area. For large spills dike and recover or use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Prevent runoff from entering drains.

Methods for disposal:

Remove contaminated soil to remove contaminated trace residues.

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. Keep all nonessential people away.

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

## **7. HANDLING AND STORAGE**

**7.1 PRECAUTIONS FOR SAFE HANDLING:** Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Do not take internally. Avoid prolonged or repeated contact with skin, eyes, and clothing. 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. Practice good hygiene when handling this product.

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.

**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. Do not store above 120°F. 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. Storage class (TRGS 510): 10: Combustible liquids

**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
Bis(2-ethylhexyl) Adipate	103-23-1 EC-No.203-090-1 Reg.-No. 01-2119439699-19-XXXX	99	N.E.

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**

**EXPOSURE 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 and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

Respiratory protection is not required. For nuisance exposures use a NIOSH/MSHA approved respirator with full face-piece and organic vapor cartridges. For higher concentrations and in confined areas use a NIOSH/MSHA approved positive pressure full face-piece supplied air respirator (SCBA).

**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: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 30 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. Emergency eyewash stations and deluge safety showers should be available in the work area.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

Bis(2-ethylhexyl) Adipate 103-23-1

<b>APPEARANCE:</b>	Clear oily liquid
<b>COLOR:</b>	Colorless
<b>ODOR:</b>	Slight amine to odorless
<b>ODOR THRESHOLD:</b>	No Data Available
<b>pH:</b>	No Data Available
<b>MOLECULAR WEIGHT:</b>	370.57 amu
<b>MELTING POINT:</b>	< -67.8°C (< -90°F)

<b>BOILING POINT:</b>	<b>175°C (347°F) at 3 hPa (2 mmHg)</b>
<b>SPECIFIC GRAVITY:</b>	<b>0.9249 at 20°C</b>
<b>DENSITY (20°C):</b>	<b>0.9249 g/ml @20°C (68°F)</b>
<b>VAPOR PRESSURE:</b>	<b>Negligible</b>
<b>VAPOR DENSITY:</b>	<b>12.8</b>
<b>WATER SOLUBILITY:</b>	<b>0.00078 g/l at 22°C (72°F)</b>
<b>PARTITION COEFFICIENT N-OCTANOL/WATER</b>	<b>log Pow: 8.94 at 25°C (77°F)</b>
<b>FLASH POINT:</b>	<b>196°C (385°F) - closed cup</b>
<b>EVAPORATION RATE (BUTYL ACETATE=1):</b>	<b>No data available</b>
<b>UPPER FLAMMABILITY LIMIT:</b>	<b>No data available</b>
<b>LOWER FLAMMABILITY LIMIT:</b>	<b>No data available</b>
<b>AUTO IGNITION TEMPERATURE:</b>	<b>377°C (711°F)</b>
<b>DECOMPOSITION TEMPERATURE:</b>	<b>No data available</b>
<b>VISCOSITY:</b>	<b>100cps</b>
<b>EXPLOSIVE PROPERTIES:</b>	<b>No data available</b>
<b>OXIDIZING PROPERTIES:</b>	<b>No data available</b>

**9.2 OTHER INFORMATION:** No data available

## **10. STABILITY AND REACTIVITY INFORMATION**

**10.1 REACTIVITY:**

**10.2 CHEMICAL STABILITY:** Unstable ( ) Stable (X)

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS:** None known

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

**10.4 CONDITIONS TO AVOID:** None at ambient temperatures.

**10.5 INCOMPATIBLE MATERIALS:** Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid, hydrogen peroxide.

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS:** Fumes, Smoke, Carbon Monoxide, Carbon Dioxide.

## **11. TOXICOLOGICAL INFORMATION**

**11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:**

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

**ACUTE HEALTH EFFECTS:**

**Effects of overexposure:**



**Inhalation:** Due to its low vapor pressure, the inhalation exposure limit hazard potential is regarded as low. However if the product is heated the vapors may cause irritation to the mucous membrane and upper respiratory tract.

**Skin Contact:** Excessive contact may produce mild irritation. Low levels may be absorbed through the skin.

**Eye Contact:** Exposure to mist or liquid may cause mild irritation.

**Ingestion:** May cause nausea, vomiting, and diarrhea.

**Chronic:** Chronic ingestion may cause liver damage. Reduced growth and increased liver weights were reported with long-term feeding of Dioctyl Adipate to rats for 2 years, while no adverse effects were noted in dogs after 1 year.

**Medical Conditions Aggravated by Exposure**> No data available

#### 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
Bis-(2-ethylhexyl) Adipate	24600mg/kg (Female) 45000mg/kg (Male) (OECD Test 401)	14800mg/kg >2000mg/kg (Rat)	5.7mg/L/4hr (Rat) (OECD Test 403)

**Skin corrosion/irritation:** Based on available data, the classification criteria are not met. (Rabbit, 24 h): none

**Serious eye damage/eye irritation:** Based on available data, the classification criteria are not met

#### Respiratory or Skin sensitization:

**Respiratory:** Based on available data, the classification criteria are not met

**Skin:** Based on available data, the classification criteria are not met (Guinea Pig): Not a skin sensitizer.

**MUTAGENIC EFFECTS:** No data available.

**CARCINOGEN STATUS:** IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Bis(2-ethylhexyl) adipate)

**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.

Bis (2-ethylhexyl) Adipate was administered to rats and mice in a lifetime bioassay sponsored by NTP. Extremely high feed concentrations caused an increased incidence of liver tumors in female mice only. Further studies have shown that the liver tumors observed in mice probably arose from DOA's effect on liver biochemistry; these changes may not occur in humans. Therefore, in the absence of these liver effects, and since DOA is not genotoxic, DOA probably presents a negligible carcinogenic risk to humans at exposure levels of occupational or consumer use.

**REPRODUCTIVE TOXICITY:** Based on available data, the classification criteria are not met.

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

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

**ASPIRATION HAZARD:** Based on available data, the classification criteria are not met.

**11.2 ADDITIONAL INFORMATION:** No data available

## **12. ECOLOGICAL INFORMATION**

### **12.1 ACUTE AQUATIC TOXICITY:**

Toxicity to Fish:

LC50 Pimephales promelas (Fathead Minnow):	>1000mg/L – 96 h
LC50 Oncorhynchus mykiss (Rainbow Trout):	>1000mg/L – 96 h
LC50 Lepomis macrochirus (Bluegill/Sunfish):	>100mg/L – 96 h
NOEC Leuciscus idus (Golden Orfe)	>10000mg/l – 48 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea): (OECD Test Guideline 202)	> 500 mg/l - 48 h`
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Toxicity to algae:

EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - >500 mg/l - 72 h

Toxicity to bacteria:

EC50 - Sludge Treatment - > 350 mg/l - 3 h

### **12.2 PERSISTANCE AND DEGRADABILITY:**

Aerobic - Exposure time 28 d

Result: 90 - 100 % - (Readily biodegradability, Manometric Respirometry Test.)

Biodegradable (OECD Test Guideline 301F)

Biological Oxygen Demand (BOD): No data available.

Chemical Oxygen Demand (COD): No data available.

BOD/COD ratio: No data available

**12.3 BIOACCUMULATIVE POTENTIAL:** Dioctyl Adipate has a low potential to bioaccumulate in fish.

Octanol/Water Partition Coefficient: log Pow: 8.94 at 25 °C (77 °F)

Lepomis macrochirus - 250 µg/l – 28 days

Bio-concentration Factor (BCF): 27

**12.4 MOBILITY IN SOIL:** Known or predicted distribution to environmental compartments.

**12.5 RESULTS OF PBT AND vPvB:**

PBT assessment results: This substance is not classified as PBT or vPvB.

**12.6 OTHER ADVERSE EFFECTS:** No data available.

### **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.

**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.

### **14. TRANSPORT INFORMATION**

**Land Transport (DOT)**

14.1 USDOT ID Number-----> N/A

14.2 USDOT Shipping Name-----> Not DOT Regulated

14.3 USDOT Hazard Classification-----> N/A

USDOT Label Codes-----> N/A

14.4 USDOT Package Code-----> N/A

14.5 Environmental hazard-----> No

14.6 Special precautions for user-----> None

**Sea Transport (IMDG)**

14.1 UN Number:-----> N/A

14.2 Proper Shipping Name-----> Not Dangerous Goods

14.3 Hazard Class:-----> N/A  
    USDOT Label Codes-----> N/A  
14.4 Packing Group:-----> N/A  
14.5 Environmental hazard-----> No

**Air Transport (IATA)**

14.1 UN Number:-----> N/A  
14.2 Proper Shipping Name:-----> Not Dangerous goods  
14.3 Hazard Class:-----> N/A  
    USDOT Label Codes-----> N/A  
14.4 Packing Group:-----> N/A  
14.5 Environmental hazard-----> No

**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) - Not Listed  
SECTION 311/312: Hazard Categorization (40 CFR 370 - None

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

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed  
Reportable Quantity – None  
SECTION 101(14) Reportable Quantity: None

**Massachusetts Right to Know Components  
Bis(2-ethylhexyl) adipate CAS-No.103-23-1**

**Pennsylvania Right to Know Components  
Bis(2-ethylhexyl) adipate CAS-No.103-23-1**

**New Jersey Right to Know Components  
Bis(2-ethylhexyl) adipate CAS-No.103-23-1**

**California Prop. 65 Components**

**This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.**

## TSCA (Toxic Substance Control Act)

Bis(2-ethylhexyl) adipate CAS-No.103-23-1 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 Chemical 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 &amp; 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=0 Fire=1 Reactivity=0  
**HMIS RATINGS (SCALE 0-4):** Health=0 Fire=1 Reactivity=0 PPE=B

**Text of hazard statement codes in Section 2 and 3:**  
Not a hazardous substance or mixture.

**Date of preparation-----> February 12, 2010**

**Revision Number-----> 1.5**

**Revision Content-----> General update all sections**

**Revision Date-----> January 22, 2019**

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

**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
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
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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