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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME------ Dimethyl Phthalate

PRODUCT NUMBER(S)-----> 139300

TRADE NAMES AND SYNONYMS---> 1,2 benzenedicarboxylic acid, dimethyl ester, phthalic acid, dimethyl ester.

CAS-No: 131-11-3 Chemical Family: Phthalate Ester

1.2 <u>RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:</u>

RECOMMENDED USE: Industrial: Solvent, Use in paint, coatings, and inks,

Intermediate. Plasticizer used in the manufacture of substances.

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. <u>HAZARDS IDENTIFICATION</u>

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS) Acute aquatic toxicity (Category 3), H402

2.2 GHS Label elements, including precautionary statements

Pictogram None

Signal word: None

Hazard statement(s)
H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention:

P273 Avoid release to the environment.

Disposal:

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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS Rapidly absorbed through skin.

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by Rang		CLASSIFICATION
	131-11-3 EC-No.205-011-6 -No 607-318-00-4 437229-36-XXXX	 >99 	 Acut 	te aquatic toxicity (Category 3), H402

3.2 MIXTURE: Not applicable

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: DIETHYL 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: DIETHYL PHTHALATE

**<u>FIRST AID-</u> Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and

<u>large amounts or water until no evidence of chemical remains</u> (approximately 15-20 minutes). Get medical attention immediately.

EYE CONTACT: DIETHYL 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. Rest eyes for 30 minutes, if redness, burning, blurred vision or swelling, persist take to a physician.

INGESTION: DIETHYL PHTHALATE

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

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: Causes irritation, redness pain.

Skin: May cause irritation with redness, and pain.;

Inhalation: Toxic, Inhalation of vapors irritates the respiratory tract. Symptoms may include coughing, shortness of breath and chest pain. At room temperature the substance has such a low vapor pressure that inhalation of the vapor is unlikely.

<u>Ingestion</u>: May cause burning sensation of lips, tongue, mouth. May cause nausea, vomiting and diarrhea. Central nervous system effects, including coma, are possible.

<u>Chronic and Aggravated Medical Conditions by exposure</u>: Significant exposure to this chemical may adversely affect people with chronic disease of the respiratory system.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: Specific details on antidote: No recommendation given.

<u>5. FIRE FIGHTING MEASURES</u>

Flash Point: 146°C (294.8°F) CC LEL %:0.94 Auto-ignition Temp.: 490°C (914°F) UEL %:8.03

UNIFORM FIRE CODE: Combustible Liquid Class IIIB

5.1 <u>SUITABLE EXTINGUISHING MEDIA</u>: Foam-->x CO2--> x Dry Chemical--> x Water-fog-->x Other--> Aqueous film forming foam for large fires.

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR

<u>MIXTURE:</u> Keep containers tightly closed. Combustible liquid; 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 <u>ADVICE FOR FIREFIGHTERS:</u> Shut off source. Isolate fire and deny unnecessary entry. 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 <u>PERSONAL PRECAUTIONS</u>, <u>PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</u>: 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 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 use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

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 reside.

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.

REPORTABLE QUANTITY (RQ): 5000 POUNDS

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 <u>REFERENCE TO OTHER SECTIONS</u>: See Sections 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. Avoid contact with eyes, skin 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.

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. 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): Combustible liquids

<u>CONTAINER WARNINGS:</u> 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 reconditioner.

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

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.

<u>ENGINEERING CONTROLS:</u> 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.

<u>RESPIRATORY PROTECTION:</u> 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):

For known vapor concentrations use a NIOSH/MSHA air purifying respirator with full face-piece and organic vapor cartridge and particulate filter for exposures >1 <10 times ACGIH TWA. For exposures greater than 10 times ACGIH TWA of for unknown vapor concentrations use positive pressure self contained breathing apparatus with full face-piece.

<u>BODY CLOTHING</u>: 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.

<u>SKIN PROTECTION</u>: Employee must wear appropriate protective gloves to prevent contact with this substance.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 120

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 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:

Dimethyl Phthalate 131-11-3

APPEARANCE: Oily liquid COLOR: Colorless

ODOR: Slight aromatic odor ODOR THRESHOLD: No Data Available pH: No Data Available

MOLECULAR WEIGHT: 194.18 amu
MELTING POINT: 2°C (36°F)
BOILING POINT: 282°C (540°F)
SPECIFIC GRAVITY: 1.19@25°C

DENSITY (25°C): 1.19 g/ml @25°C

VAPOR PRESSURE: 0.0015 mmHg @ 20°C (68°F)

1.0 mmHg @ 100°C (212°F)

VAPOR DENSITY: 6.7

WATER SOLUBILITY: 0.43%@20°C PARTITION COEFFICIENT N- log Pow: 1.47

OCTANOL/WATER

FLASH POINT: 146.0°C (294.8°F) - closed cup

EVAPORATION RATE (BUTYL ACETATE=1): Negligible UPPER FLAMMABILITY LIMIT: 8.03% (V) LOWER FLAMMABILITY LIMIT: 0.94% (V)

AUTO INGNITION TEMPERATURE: 490.0°C (914.0°F)
DECOMPOSITION TEMPERATURE: No data available
VISCOSITY: 14.6cSt @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 <u>REACTIVITY</u>: No data available.

- 10.2 CHEMICAL STABILITY: Unstable () Stable (X)
- 10.3 POSSIBILITY OF HAZARDOUS REACTIONS: No Data Available

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

- 10.4 CONDITIONS TO AVOID: No Data Available
- 10.5 <u>INCOMPATIBLE MATERIALS:</u> Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide. This product reacts violently with oxidizing agents. On contact with acids and strong bases it hydrolyzes to form methyl alcohol and phthalic acid.
- 10.6 <u>HAZARDOUS DECOMPOSITION PRODUCTS</u>: Fumes, Smoke, Carbon oxides 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> Causes irritation, redness pain.

Skin> May cause irritation with redness, and pain.;

Inhalation> Toxic: Inhalation of vapors irritates the respiratory tract. Symptoms may include coughing, shortness of breath and chest pain. At room temperature the substance has such a low vapor pressure that inhalation of the vapor is unlikely.

Ingestion> May cause burning sensation of lips, tongue, mouth. May cause nausea, vomiting and diarrhea. Central nervous system effects, including coma, are possible.

Chronic and Aggravated Medical Conditions by exposure: Significant exposure to this chemical may adversely affect people with chronic disease of the respiratory system.

ACUTE TOXICITY:

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

Dimethyl Phthalate	8200mg/kg	 >12000mg/kg 	 N.D. 	
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SKIN CORROSION/IRRITATION: Skin - Rabbit Result: No skin irritation - 24 h Draize Test.

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No Eye irritation 24 h (OECD Test Guideline 405)

RESPIRATORY OR SKIN SENSITIZATION: No data available

MUTAGENIC EFFECTS: In vitro tests: not mutagenic in chromasomal aberration and cell transformation assays with mammalian cells. Mixed results with bacteria (Ames Test); positive in the SCE assay. Ames test S. typhimurium Result: negative

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.

REPRODUCTIVE TOXICITY: Reproductive toxicity - Rat - female - Oral No adverse effect has been observed in chronic toxicity tests. Developmental Toxicity - Rat - Oral No adverse effect has been observed in chronic toxicity tests Developmental toxicity was not seen when pregnant mice were exposed orally to 3.5g/kg DMP per day during gestation or when pregnant rats were exposed orally to 3.6g/kg/day.

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: No data available

11.2 ADDITIONAL INFORMATION: Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Central nervous system depression, Gastrointestinal disturbance, Kidney injury may occur.

Kidney toxicity was seen in rats fed a high level of DMP in their diet. (8000ppm) for 2 years, but not at 4000 or 2000ppm levels. Kidney toxicity was reported in rabbits exposed dermally to high doses of DMP (2 or 4 ml per day) for 90 days but not at doses of 0.5 or 1ml/day.

RTECS: TI1575000

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) - 39 mg/l - 96 h flow through test

LC50 - Oncorhynchus mykiss (rainbow trout) - 56.00 mg/l - 96 h

LC50 - Lepomis macrochirus (Bluegill) - 50.00 mg/l - 96 h

LC50 - Cyprinodon variegatus (sheepshead minnow) - 29.00 mg/l - 96 h

NOEC - Oncorhynchus mykiss (rainbow trout) - 38 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 46.00 mg/l - 48 h

Toxicity to algae:

EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - 204 mg/l - 72 h`

12.2 <u>PERSISTANCE AND DEGRADABILITY:</u> When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material may leach into ground water. When released into water, this material may biodegrade to moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photo-chemically produced hydroxyl radicals.

Biological Oxygen Demand (BOD): No Data Available

12.3 <u>BIOACCUMULATIVE POTENTIAL</u>: The octanol/water partition coefficient is: log Pow 1.47

Bio-concentration Factor (BCF): 57, (OECD Test Guideline 305)

Lepomis macrochirus (Bluegill sunfish) - 21 d

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB:

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

12.6 OTHER ADVERSE EFFECTS: This material is expected to be harmful to aquatic life.

13. <u>DISPOSAL CONSIDERATIONS</u>

13.1 <u>WASTE TREATMENT METHODS:</u> 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: U102
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. (Dimethyl Phthalate)
14.3 USDOT Hazard Classification> 9 (Miscellaneous Hazard)
USDOT Label Codes> 9
14.4 USDOT Package Code> III
14.5 Environmental hazard> No
14.6 Special precautions for user> Yes
ERG Guide> 171
Reportable Quantity> 5000lbs. single container.
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 i	ansport (IATA)
14.1	JN Number:> N/A
14.2	Proper Shipping Name:> Not Dangerous goods
14.3	lazard Class:> N/A
	SDOT 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) - Listed - Dimethyl

Phthalate CAS 131-11-3

SECTION 311/312: Hazard Categorization (40 CFR 370) - Chronic health hazard

<u>CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)</u>

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed Dimethyl Phthalate CAS 131-11-3 Reportable Quantity – 5000lbs. SECTION 101(14) Reportable Quantity: 5000lbs.

Massachusetts Right to Know Components Dimethyl phthalate CAS-No.131-11-3 Pennsylvania Right to Know Components Dimethyl phthalate CAS-No.131-11-3 New Jersey Right to Know Components Dimethyl phthalate CAS-No.131-11-3

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)

Dimethyl Phthalate CAS 131-11-3 is listed on the TSCA Inventory.

International Inventories:

Country or Region Inventory Name On inventory yes/no

<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	Yes
	Substances (EINECS)	
<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
New Zealand	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
United States &	Toxic Substances Control Act Inventory	Yes
Puerto Rico		

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

Hazard statement(s) from Section 2 and 3:

H402 Harmful to aquatic life.

Date of preparation-----> November 10, 2008

Revision Number----> 1.5

Revision Content-----> Updated sections: 1, 3, 6, 7, 8, 10, 11, 12, and 16.

Revision Date----> January 21, 2019

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

Acronyms:

ACGIH - American Conference of Governmental Industrial Hygenists

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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