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

### 1. PRODUCT IDENTIFIER

## 1.1 PRODUCT NAME------ MASTERWASH 2000

PRODUCT NUMBER(S)-----> 191500

TRADE NAMES/SYNONYMS-----> Blend

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

RECOMMENDED USE: Industrial: Printing Press wash. 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)

Flammable Liquids (Category 3), H226

Eye irritation (Category 2B), H319

Skin corrosion/irritation (Category 2), H315

Specific target organ toxicity (single exposure) (Category 3), Narcotic effects H336

Specific target organ toxicity (single exposure) (Category 3). Respiratory irritation, H335

Specific target organ toxicity (single exposure) (Category 1), Lung, H370

Aspiration hazard (Category 1), H304

Carcinogenicity (Category 1A), H351

Acute aquatic toxicity (Category 1), H400

#### 2.2 GHS Label elements, including precautionary statements



Signal Words

**Pictogram** 

**DANGER** 

**Hazard statement(s)** 

**H226 Flammable liquid and vapor** 

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H351 Suspected of causing cancer.

H370 Causes damage to organs.

H400 Very toxic to aquatic life.

Precautionary statement(s)

**Prevention:** 

P280 Wear protective gloves and eye and face protection.

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

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

P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

P331 Do NOT induce vomiting.

P243 Take precautionary measures against static discharge.

P273 Avoid release to the environment.

Response:

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical

P391 Collect spillage.

Storage:

attention.

P403 + P235 Store in a well-ventilated place. Keep cool.

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 - Product can accumulate electrostatic charges that may cause fire by electrical discharges. Repeated exposure may cause skin dryness or cracking.

## 3. INGREDIENTS

3.1 SUBSTANCE: Not applicable

3.2 MIXTURE:

Ingredient	CAS No.	% by V Range	
	C-No.265-199-0 o. 649-356-00-4	 	Flammable Liquids (Category 3), H226   Eye irritation (Category 1), H319   Skin corrosion/irritation (Category 2), H315   STOT-SE (Category 3), Narcotic effects,   H336   STOT-SE (Category 3), Respiratory irritation   H335   STOT-SE & RE (Category 1), Lung, H370   Carcinogenicity (Category 1A), H351   Aspiration hazard (Category 1), H304   Acute aquatic toxicity (Category 1), H400
	C-No.232-489-3 o. 649-345-00-4	j I	   Flammable Liquids, (Category 4), H226   Acute toxicity, Inhalation (Category 4), H332   Skin corrosion/irritation (Category 2), H313   Eye irritation (Category 2B), H320   STOT-SE (Category 3) Narcotic Effects,   H336   Aspiration hazard (Category 1), H304
Dipropylene Glycol Methyl Ether EC RegNo. 01-21194	34590-94-0 -No. 252-104-2 50011-60-XXXX	  13-15   	   Flammable Liquids (Category 4), H227   
Nonylphenol Ethoxylate EC RegNo.01-211994	9016-45-9 C-No.500-024-6 46371-39-XXXX	  1.8-3     	   Acute toxicity, Oral (Category 4), H302   Skin corrosion/irritation (Category 2), H315   Serious eye damage (Category 1), H318   Chronic aquatic toxicity (Category 1), H411
	5989-27-5 C-No.227-815-6 C-601-029-00-7 C9223-47-XXXX	     	  Flammable liquids (Category 3), H226  Skin irritation (Category 2), H315  Skin sensitization (Category 1), H317  Acute aquatic toxicity (Category 1), H400  Chronic aquatic toxicity (Category 1), H410
Butylate Hydroxytoluene	128-37-0	  0.2-0.3	   Acute aquatic toxicity (Category 1), H400

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## 4. FIRST-AID MEASURES

#### 4.1 DESCRIPTION OF FIRST AID MEASURES:

**INHALATION: Masterwash 2000** 

\*\*FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. If breathing is difficult, 100% humidified oxygen should be administered. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

SKIN CONTACT: Masterwash 2000

\*\*FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts or water until no evidence of chemical remains (approximately 15-20 minutes). Do not use ointments. Get medical attention immediately.

**EYE CONTACT: Masterwash 2000** 

\*\*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. Get medical attention immediately.

**INGESTION: Masterwash 2000** 

\*\*FIRST AID- ASPIRATION HAZARD. Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. If victim is drowsy or unconscious, place on the left side with head down. If swallowed, vomiting may occur spontaneously. If vomiting occurs place victims head below knees.

Immediately consult a physician or poison control center, treat symptomatically.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: <u>Eye</u>: Mildly irritating with short term contact; Symptoms include stinging, watering, redness and swelling.

<u>Skin</u>: Mildly irritating with short term exposure; The degree of irritation depends on the amount of material applied to the skin and for how long. Symptoms include; redness, itching, and burning of the skin.

<u>Inhalation</u>: Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma;

Ingestion: This material may irritate the mucous membranes of the mouth, throat and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium. There is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

<u>Chronic</u>: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Typical symptoms are cardiovascular disorders, sweetish taste in the mouth, nausea, vomiting, loss of appetite, strong thirst, burning of eyes and bleeding from the nose. Damage may occur to the kidney or liver.

<u>Medical Conditions Aggravated by Exposure</u>: Skin contact may aggravate an existing dermatitis. Disorders of the skin, respiratory system, liver, kidneys, and central nervous system.

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

Note to physicians: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. Administer supplemental oxygen with assisted ventilation, as required. This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

## **5. FIRE FIGHTING MEASURES**

Flash Point: 40°C (104°F) TCC LEL %:1 (V) Auto-ignition Temp. N.D. UEL %:7 (V)

**UNIFORM FIRE CODE: Combustible Liquid Class II** 

## 5.1 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: FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. Keep containers tightly closed. Combustible liquid; isolate from all sources of ignition. Above flash point, vapor-air mixtures are explosive within flammable limits. Closed containers may explode when exposed to extreme heat. Liquid floats on water.

<u>CONDITIONS OF FLAMMABILITY</u>: Flammable in the presence of a source of ignition when the temperature is above the flash point.

<u>HAZARDOUS COMBUSTION PRODUCTS:</u> 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: Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Do not enter fire area without structural fire fighter's protective equipment including NIOSH approved self contained breathing apparatus in positive pressure mode. Use water spray to knock down vapors. Use halon, carbon dioxide extinguisher or dry powder for small fires. Large fires are best controlled by alcohol foam, fog, and water spray. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire (1990 Emergency Response Guidebook, DOT P 1800.5, guide page 26). Extinguish only if fire can be stopped. Use flooding amounts of water as a fog; solid streams may be ineffective. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors; keep upwind. If fire is uncontrollable or containers are exposed to direct flame, water may be ineffective (NFPA 325M, Fire Hazard Properties of Flammable Liquids, Gases, and Volatile Solids, 1991). Fire fighters should wear full protective clothing and NIOSH approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures. Do Not Use: Water in straight hose stream will scatter and spread fire and should not be used.

## **6. ACCIDENTAL RELEASE MEASURES**

6.1 <u>PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</u>: Combustible Liquid! Eliminate ignition sources in the vicinity of the spill or released vapor. 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, basements and sewers, for smaller spills add non-flammable absorbent in spill area. For large spills use vapor suppressing 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. This material will float on water and its runoff may create an explosion or fire hazard. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

REPORTABLE QUANTITY (RQ): Xylenes - 100 lbs., Cumene - 5000lbs. as components of Light Aromatic Solvent Naphtha.

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) 424-8802 or (202) 426-2675 in the metropolitan Washington, D.C. area (40 CFR 302.6).

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

## **7. HANDLING AND STORAGE**

7.1 PRECAUTIONS FOR SAFE HANDLING: This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes), which can catch fire and burn. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. 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.

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 <u>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</u>: 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 this material in over 100F. Do not open containers unless contents are at room temperature 25°C (77°F) or below. 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): Flammable 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
===	64742-95-6 EC-No.265-199-0 dex-No. 649-356-00-4 2119486773-24-XXXX	52-54       	100ppm TWA (ACGIH)  100ppm TWA (OSHA)  500ppm PEL (OSHA) 
	8052-41-3 EC-No.232-489-3 dex-No. 649-345-00-4 2120261965-45-XXXX	   33-36     	  100ppm TWA (ACGIH)  500ppm PEL (OSHA)   
Dipropylene Glycol Methyl Ether RegNo. 01-2	34590-94-0 EC-No. 252-104-2 2119450011-60-XXXX		  100ppm TWA (ACGIH)  150ppm STEL (ACGIH)  100ppm TWA (OSHA)  100ppm TWA (NIOSH)  150ppm STEL (NIOSH)
Nonylphenol Ethoxylate  RegNo.01-	9016-45-9 EC-No.500-024-6 -2119946371-39-XXXX	1.8-3   	N.E.
	5989-27-5 EC-No.227-815-6 dex-No. 601-029-00-7 -2119529223-47-XXXX	0.8-1.4	  20ppm TWA (ACGIH)  30ppm TWA (AIHA)   
Butylated Hydroxytoluene  RegNo. 01-2	128-37-0 EC-No.204-881-4 2119555270-46-XXXX	0.2-0.3   	  2mg/m3 TWA (ACGIH)  10mg/m3 TWA (NIOSH)  10mg/m3 TWA (OSHA)

**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 AIHA = American Industrial Hygiene Association N.E. =None Established

#### **8.2 EXPOSURE CONTROLS**

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 3), 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.

<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 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 (SCBA) with full face-piece. Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

<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.

Glove Material: Butyl Rubber

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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

<u>EYE/FACE PROTECTION</u>: Use safety eyewear with splash-guards or face shield. Emergency shower and eyewash should be easily accessible to the work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Masterwash 2000 Blend APPEARANCE:

Clear mobile liquid

COLOR: Colorless

ODOR:
ODOR THRESHOLD:
PH:
No data available
MOLECULAR WEIGHT:
No data available
MELTING POINT:
No data available
No data available

BOILING POINT: 306-450°F

 SPECIFIC GRAVITY:
 0.887@20°C (68°F)

 DENSITY (25°C):
 0.887 g/ml 20°C (68°F)

 VAPOR PRESSURE:
 8mmHg @ 20°C (68.0°F)

VAPOR DENSITY: 4.4

WATER SOLUBILITY: Moderate

PARTITION COEFFICIENT N- No data available

OCTANOL/WATER

FLASH POINT: 40°C (104°F) - closed cup

EVAPORATION RATE (BUTYL ACETATE=1): 0.18
UPPER FLAMMABILITY LIMIT: 7.0% (V)
LOWER FLAMMABILITY LIMIT: 1.0% (V)

AUTO INGNITION TEMPERATURE:
DECOMPOSITION TEMPERATURE:
VISCOSITY:
No data available
EXPLOSIVE PROPERTIES:
No data available
No data available
No data available

9.2 OTHER INFORMATION:

Bulk Density 7.39lb/gal

### 10. STABILITY AND REACTIVITY INFORMATION

10.1 **REACTIVITY**: No data available.

10.2 CHEMICAL STABILITY: Unstable ( ) Stable (X)

10.3 <u>POSSIBILITY OF HAZARDOUS REACTIONS</u>: Vapors may form explosive mixtures with air.

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

- 10.4 <u>CONDITIONS TO AVOID</u>: Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame.
- 10.5 <u>INCOMPATIBLE MATERIALS</u>: Strong oxidants such as caustic soda, liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide. Copper or copper alloys.
- 10.6 <u>HAZARDOUS DECOMPOSITION PRODUCTS:</u> Fumes, Smoke, Carbon Monoxide and 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:

Eye> Mildly irritating with short term contact; Symptoms include stinging, watering, redness and swelling.

Skin> Mildly irritating with short term exposure; The degree of irritation depends on the amount of material applied to the skin and for how long. Symptoms include; Redness, itching, and burning of the skin.

Inhalation> Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma:

Ingestion>This material may irritate the mucous membranes of the mouth, throat and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium. There is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

Chronic: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Typical symptoms are cardiovascular disorders, sweetish taste in the mouth, nausea, vomiting, loss of appetite, strong thirst, burning of eyes and bleeding from the nose. Damage may occur to the kidney or liver.

It has been reported that female workers exposed to toluene and xylene in concentrations which periodically exceeded the exposure limits were also affected by pathological pregnancy conditions (toxicosis, miscarriage) and infertility.

Medical Conditions Aggravated by Exposure> Skin contact may aggravate an existing dermatitis. Disorders of the skin, respiratory system, liver, kidneys, and central nervous system.

#### **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	
Light Aromatic Solvent Naphtha	3492mg/kg   	>3400mg/kg   	6193ppm/m3/4h   
Petroleum Hydrocarbon Distillate	   N.D   	   >3000mg/kg   	5.5mg/L/8h           
Dipropylene Glyco methyl ether	    5152mg/kg   	   N.D. 	N.D.
Nonylphenol Ethoxylate	   960-3980mg/kg   	   2000-2990mg/kg   	1150mg/M3
d-Limonene	>4400mg/kg	   >5000mg/kg	N.D.
Butylated Hydroxytoluene	   >6000mg/kg 	   >2000mg/kg 	N.D.

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#### **Light Aromatic Solvent Naphtha**

SKIN CORROSION/IRRITATION: Mildly irritating to skin with prolonged exposure. Based on test data for the material.

SERIOUS EYE DAMAGE/EYE IRRITATION: May cause mild, short-lasting

discomfort to eyes. Based on test data for the material.

RESPIRATORY OR SKIN SENSITIZATION: Not a sensitizer in humans or animals.

**MUTAGENIC EFFECTS:** No data available

CARCINOGEN STATUS – IARC: Group 1, 2 and 2B: Possibly carcinogenic to

humans

ACGIH: Not classifiable as a human carcinogen.

NTP: Reasonably anticipated to be a human carcinogen

**OSHA: Suspected Carcinogen** 

REPRODUCTIVE TOXICITY: No data available

**TERATOGENICITY:** No data available

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized

System): May cause drowsiness and dizziness. May be irritating to the

respiratory system.

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): May cause damage to the Central Nervous System, Respiratory System, Liver, Kidneys through prolonged and repeated use. ASPIRATION HAZARD: All components may be fatal if swallowed and enters airways.

11.2 ADDITIONAL INFORMATION: No data available

#### Petroleum Hydrocarbon Distillate

SKIN CORROSION/IRRITATION: Causes mild skin irritation that is reversible with proper care.

SERIOUS EYE DAMAGE/EYE IRRITATION: Causes mild eye irritation that is reversible with proper care.

RESPIRATORY OR SKIN SENSITIZATION: Not expected to cause skin or

respiratory sensitization.

MUTAGENIC EFFECTS: A low carcinogenic potential is suggested by a lack of genotoxic potential identified in in vivo and in vitro genetic toxicity tests (with and without metabolic activation).

#### **CARCINOGEN STATUS:**

The National Toxicology Program (NTP) conducted two-year

carcinogenicity studies in rats and mice with Stoddard Solvent IIC (less than 2% aromatics). The studies indicated that there was some evidence of carcinogenic activity in male rats (adrenal medulla neoplasms and renal tubule adenoma) but no evidence of carcinogenic activity in female rats. Further, there was equivocal evidence of carcinogenic activity in female mice (hepatocellular adenoma) but no evidence of carcinogenic activity in male mice.

REPRODUCTIVE TOXICITY: No data available.

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: May be fatal if swallowed and enters airways.

11.2 ADDITIONAL DATA: No data available.

#### <u>Dipropylene Glycol Methyl Ether</u>

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Mild eye irritation

- 24 h Eyes - Rabbit Result: No eye irritation (Draize Test)

**RESPIRATORY OR SKIN SENSITIZATION: No data available** 

**MUTAGENIC EFFECTS: No data available** 

Chromosome aberration test in vitro Chinese hamster lung cells 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 on OSHA's list of regulated carcinogens.

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

**REPRODUCTIVE TOXICITY: No data available** 

**ASPIRATION HAZARD: No data available** 

ADDITIONAL DATA: Repeated dose toxicity Rat - male and female - Oral - NOAEL

: 1,000 mg/kg

RTECS: JM1575000

#### Nonylphenol Ethoxylate 9016-45-9

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Mild skin irritation SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Severe eye irritation

RESPIRATORY OR SKIN SENSITIZATION: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**MUTAGENIC EFFECTS:** No known effect on humans or animals 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. 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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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. 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. 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: No data available

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 DATA: Nausea, Headache, Vomiting

#### d-Limonene

SKIN CORROSION/IRRITATION: No data available

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

RESPIRATORY OR SKIN SENSITIZATION: Result: May cause sensitization by skin contact. (OECD Test Guideline 429)

MUTAGENIC EFFECTS: Mouse lymphocyte Result: negative Rat – male Result: negative

CARCINOGEN STATUS: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (D-Limonene)

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.

Carcinogenicity - Rat - Oral: Tumorigenic:Carcinogenic by RTECS criteria.

Kidney, Ureter, Bladder: Kidney tumors. Tumorigenic Effects: Testicular tumors.

Carcinogenicity - Mouse - Oral: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Gastrointestinal: Tumors.

**REPRODUCTIVE TOXICITY: No Data Available** 

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:** May be fatal if swallowed and enters airways.

11.2 ADDITIONAL INFORMATION: Repeated dose toxicity - Mouse - male and

female - No observed adverse effect level - 1,650 mg/kg - Lowest observed

adverse effect level - 3,300 mg/kg

RTECS: GW6360000

#### **Butylated Hydroxytoluene**

SKIN CORROSION/IRRITATION: No data available.

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No eye irritation

RESPIRATORY OR SKIN SENSITIZATION: No data available.

**MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for** 

bacteria and/or yeast. Ames test S. typhimurium Result: negative

CARCINOGEN STATUS: IARC: 3 - Group 3: Not classifiable as to its

carcinogenicity to humans (2,6-di-tert-Butyl-p-cresol)

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 on OSHA's list of regulated carcinogens.

REPRODUCTIVE TOXICITY: No data available

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 HAZARD: No data available** 

ADDITIONAL DATA: Repeated dose toxicity - Rat - male and female - Oral - No

observed adverse effect level - 25 mg/kg

RTECS: G07875000

## 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.

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

#### **Light Aromatic Solvent Naphtha**

#### 12.1 AQUATIC TOXICITY (Acute):

**Toxicity to Fish:** 

LC50 Pimephales promelas (fathead minnow) - 41mg/L - 96 h

Toxicity to daphnia and other aquatic crustaceans:

EC50 Daphnia magna (water flea)- 0.95mg/L - 48 h

**Toxicity to Algae:** 

EC50 Skeletonema costatum - <1mg/L

#### 12.2 PERSISTANCE AND DEGRADABILITY:

Expected to biodegrade over time.

12.3 <u>BIOACCUMULATIVE POTENTIAL</u>: Light Aromatic Naphtha has the potential to bio-accumulate.

1, 2, 4-Trimethylbenzene Log Pow 3.63 low potential

Xylenes, mixed isomers Log Pow 3.12 low potential

**Cumene Log Pow 3.55 low potential** 

#### **Bioconcentration Factor:**

1, 2, 4-Trimethylbenzene 243

Xylenes, mixed isomers 8.1-25.9

**Cumene 94.69** 

12.4 <u>MOBILITY IN SOIL</u>: This material is highly volatile and will rapidly partition to air. It is not expected to partition to soil or wastewater solids.

12.5 <u>RESULTS OF PBT AND vPvB</u>: PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Do not allow this material to run into surface waters, wastewater or soil.

#### **Petroleum Hydrocarbon Distillate**

LC50 Oncorhyncus mykiss (rainbow trout) - 8.2mg/L - 96 h

Toxicity to daphnia and other aquatic crustaceans:

EC50 Daphnia magna (water flea) - 10mg/L - 48 h

#### **Aromatic 100:**

**Toxicity to Fish:** 

LC50 Pimephales promelas (fathead minnow) - 41mg/L - 96 h

Toxicity to daphnia and other aquatic crustaceans:

EC50 Daphnia magna (water flea) - 0.95mg/L - 48 h

**Toxicity to Algae:** 

EC50/ Skeletonema costatum - <1mg/L

12.2 <u>PERSISTANCE AND DEGRADABILITY</u>: This mixture will normally float on water with its lighter components evaporating rapidly. In stagnant or slow-flowing waterways a hydrocarbon layer can cover a large surface area. As a result, this covering layer might limit or eliminate natural atmospheric oxygen transport into the water. This coating action can be harmful or fatal to plankton, algae, aquatic life, and water birds.

When released into the soil, this material may leach into groundwater. When released into water, this material may biodegrade to a moderate extent.

12.3 <u>BIOACCUMULATIVE POTENTIAL</u>: Has the potential to bioaccumulate.

1, 2, 4-Trimethylbenzene- log Pow 3.63 low potential

**Xylenes, mixed isomers- log Pow 3.12 low potential** 

Cumene log Pow -3.55 low potential

Tetrachloroethylene – log Pow 3.4 low potential

Biological Oxygen Demand (BOD): No data available

#### **Bio-concentration Factor:**

1, 2, 4-Trimethylbenzene 243

Xylenes, mixed isomers 8.1-25.9

**Cumene 94.69** 

Tetrachloroethylene - 49

#### **12.4 MOBILITY IN SOIL:**

Aromatic 100: This material is not expected to partition to soil or wastewater solids. Tetrachloroethylene: When released into the soil, this material may leach into groundwater.

12.5 <u>RESULTS OF PBT AND vPvB</u>: PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Do not allow this material to run into surface waters, wastewater or soil.

#### **Dipropylene Glycol Methyl Ether**

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

This material is highly soluble in water. This material should exhibit low toxicity to aquatic organisms and to rats.

Toxicity to fish

LC50 - Poecilia reticulata (guppy) - > 1,000 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 1,919 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae:

EC50 - Pseudokirchneriella subcapitata - > 969 mg/l - 72 h Growth inhibition (OECD Test Guideline 201)

12.2 PERSISTANCE AND DEGRADABILITY:

12.3 <u>BIOACCUMULATIVE POTENTIAL</u>: This material is highly soluble in water and should not bio-accumulate in aquatic or terrestrial organisms. The noctanol/water coefficient is log Pow: -0.06 at 20 °C (68 °F).

Biological Oxygen Demand (BOD): No data available

Bio-concentration Factor (BCF): no data available

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: No data available.

#### Nonylphenol Ethoxylate

#### 12.1 AQUATIC TOXICITY;

Toxicity to Fish:

data below for nonylphenol ethoxylates with various degrees of ethoxylation

LC50 Pimephales promelas, (fathead minnow) - 3.87.7mg/L - 96 h

LC50 Lepomis macrochirus (Bluegill) - 1.0 mg/l - 96 h

Toxicity to daphnia and other invertebrates:

LC50 Daphnia magna, (water flea) - 12.2mg/L - 17mg/L - 48 h

**Toxicity to Algae:** 

EC50 (Algae) Scenedesmus quadricauda, (Green algae), 17mg/L

12.2 PERSISTANCE AND DEGRADABILITY: degrades readily but slowly in unacclimated waters, rapidly in acclimated waters, in the presence of oxygen; ½life between 369days depending on temperature, chain length, & other conditions; biodegradation *tends to be* incomplete, *leaving* nonylphenol, monoand diethoxylates which have biological activity (The structural formula of branched nonylphenol (unethoxylated) bears a striking resemblance to

17βoestradiol 3 –a potent oestrogen.)

Biological Oxygen Demand (BOD): No data available

12.3 <u>BIOACCUMULATIVE POTENTIAL</u>: Not a bioaccumulator, but biodegradation products (nonylphenol with one, two, or no ethylene oxide) bioaccumulate & mimic hormones, causing sexual dysfunction in shore birds, amphibians & fish *at* very low doses

Bio-concentration Factor (BCF): no data available

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: Toxic to aquatic organisms, may cause longterm adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

#### d-Limonene

#### 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) - 0.72 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 0.36 mg/l - 48 h, Immobilization

Toxicity to bacteria:

EC50 - Sludge Treatment - 3.94 mg/l

12.2 PERSISTENCE AND DEGRADABILITY: Result: 71 % - Readily biodegradable

12.3 BIOACCUMULATIVE POTENTIAL: The log-n octanol/water partition

coefficient was determined to be 4.2.

Bio-concentration Factor (BCF): No data available

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: Very toxic to aquatic life with long lasting effects.

#### **Butylated Hydroxytoluene**

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:** 

**Toxicity to fish:** 

LC50 - Oryzias latipes - 5.3 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia pulex (Water flea) - 1.44 mg/l - 48 h

Toxicity to bacteria:

EC50 - Protozoa - 1.7 mg/l - 24 h Growth inhibition

#### 12.2 PERSISTANCE AND DEGRADABILITY:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the products of Biodegradation: The products of biodegradation are less toxic than the product itself.

12.3 BIOACCUMULATIVE POTENTIAL: log Pow 5.1

Biological Oxygen Demand (BOD): No data available

**12.4 MOBILITY IN SOIL:** 

12.5 RESULTS OF PBT AND vPvB:

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

12.6 OTHER ADVERSE EFFECTS: Very toxic to aquatic life with long lasting effects.

### 13. **DISPOSAL CONSIDERATIONS**

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. Incinerate under controlled conditions in a permitted 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 numbers are: Flammable - D001, Xylene - U239.

If the waste is a spent solvent, the appropriate spent solvent code should be used.

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> NA1993
14.2 USDOT Shipping Name> Combustible Liquid n.o.s. HM X
14.3 USDOT Hazard Classification> CL
USDOT Label Codes> None
14.4 USDOT Package Code> III
14.5 Marine Pollutant> Yes
14.6 Special precautions for user> None

<b>Emergency Response Guide&gt;</b>	128
Reportable quantity>	Xylenes - 100 lbs., Cumene - 5000lbs. as
	components of Light Aromatic solvent.

Sea Transport (IMDG)
14.1 ID Number> NA1993
14.2 Proper shipping name> COMBUSTIBLE LIQUID N.O.S. HMX
14.3 Hazard Classification> CL
Label Codes> None
14.4 Package Code> III
14.5 Marine Pollutant> Yes
14.6 Special precautions for user> N/A
EMS Number> F-E, S-E
Air Transport (IATA)
14.1 ID Number> NA1993
14.2 Proper shipping name> Combustible Liquid n.o.s. HM X
14.3 Hazard Classification> CL
Label Codes> None
14.4 Package Code> III
14.5 Environmental hazard> Yes
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) - Components Listed: 1,2,4 Trimethylbenzene CAS 95-63-6, Cumene CAS 98-82-8,

Ethylbenzene CAS 100-41-4

SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Chronic Health Hazard, Fire Hazard

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

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Components of Light aromatic Solvent Naphtha Listed:

Xylene CAS1330-20-7 Reportable Quantity - 100lbs Cumene CAS 98-82-8 Reportable Quantity - 5000lbs

Pennsylvania Right to Know Components
Light Aromatic solvent Naphtha CAS-No.64742-95-6
Stoddard Solvent CAS-No.8052-41-3
(2-Methoxymethylethoxy) propanol CAS-No.34590-94-8
Nonylphenol Ethoxylate CAS-No.9016-45-9
D-Limonene CAS-No.5989-27-5
2, 6-di-tert-Butyl-p-cresol CAS-No.128-37-0

New Jersey Right to Know Components
Light Aromatic solvent Naphtha CAS-No.64742-95-6
Stoddard Solvent CAS-No.8052-41-3
(2-Methoxymethylethoxy) propanol CAS-No.34590-94-8
Nonylphenol Ethoxylate CAS-No.9016-45-9
D-Limonene CAS-No.5989-27-5
2, 6-di-tert-Butyl-p-cresol CAS-No.128-37-0

Massachusetts Right to Know Components
Light Aromatic solvent Naphtha CAS-No.64742-95-6
Stoddard Solvent CAS-No.8052-41-3
(2-Methoxymethylethoxy) propanol CAS-No.34590-94-8
Nonylphenol Ethoxylate CAS-No.9016-45-9
2, 6-di-tert-Butyl-p-cresol CAS-No.128-37-0

#### **California Prop. 65 Components**

This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Ethylbenzene: <0.2% Naphthalene: <0.05% Toluene: <0.01% Benzene: <0.0005%

#### **TSCA (Toxic Substance Control Act)**

Light Aromatic solvent Naphtha CAS-64742-95-6, Stoddard Solvent CAS-8052-41-3, (2-Methoxymethylethoxy)propanol CAS-No.34590-94-8, Nonylphenol Ethoxylate 9016-45-9, D-Limonene CAS-No. 5989-27-5, 2,6-di-tert-Butyl-p-cresol CAS-No.128-37-0 are listed on the TSCA Inventory.

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has not 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=1 Fire=2 Reactivity=0

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

Hazard statement(s) from Section 2 and 3:

**H226 Flammable liquid and vapor** 

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H351 Suspected of causing cancer.

H370 Causes damage to organs.

H400 Very toxic to aquatic life.

Date of preparation-----> July 12, 1990

Revision Number---->2.5

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

Revision Date----> October 9, 2018

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
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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