

Material Name: MERCK DANVILLE N-ETHYL PYRROLIDONE SDS ID: 82931

### Section 1 - Identification \* \* \*

#### **Product Identifier**

MERCK DANVILLE N-ETHYL PYRROLIDONE

#### **Product Code**

1061602

### **Synonyms**

Not available

#### **Product Use**

Pharmaceutical production. If this chemical is used in combination with other products, refer to the Safety Data Sheet for those products.

#### **Restrictions on Use**

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating renewal.

#### **Manufacturer Information**

Safety-Kleen Systems, Inc.

42 Longwater Drive

Norwell, MA 02061-9149

**Issue Date** 

March 2, 2020

### **Supersedes Issue Date**

June 27, 2019

### **Original Issue Date**

June 11, 2003

Phone: 800-669-5740 www.safety-kleen.com Emergency # 1-800-468-1760

# Section 2 - Hazard(s) Identification \* \* \*

# Classification in Accordance with 29 CFR 1910.1200.

Flammable Liquids, Category 4

Acute Toxicity (Oral), Category 4

Eye Damage / Irritation, Category 2A

Carcinogenicity, Category 2

Toxic to Reproduction, Category 1B

Specific Target Organ Toxicity - Single Exposure, Category 1 (central nervous system)

Specific Target Organ Toxicity - Repeated Exposure, Category 1 (blood, bone marrow, central nervous system, kidneys, liver, and lung)

## **GHS LABEL ELEMENTS**

## Symbol(s)



### Signal Word

DANGER!

#### **Hazard Statement(s)**

Combustible Liquid

Harmful if swallowed

Causes serious eye irritation

Suspected of causing cancer

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May damage fertility or the unborn child

Causes damage to central nervous system.

Causes damage to blood, bone marrow, central nervous system, kidneys, liver, and lung through prolonged or repeated exposure.

#### **Precautionary Statement(s)**

#### Prevention

Keep away from flames and hot surfaces. - No smoking. Do not eat, drink or smoke when using this product. Do not breathe vapor or mist. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

### Response

In case of fire: Use carbon dioxide, alcohol resistant foam, regular dry chemical, water spray, and water fog for extinction. IF exposed or concerned: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

## Storage

Store in a well-ventilated place. Keep cool. Store locked up.

#### **Disposal**

Dispose of in accordance with all applicable federal, state and local regulations.

## Hazard(s) Not Otherwise Classified

None known.

# \* \* \* Section 3 - Composition / Information on Ingredients \* \* \*

CAS	Component	Percent
2687-91-4	2-Pyrrolidinone, 1-ethyl-	97-100
100-51-6	Benzyl alcohol	0-2.4
123-51-3	Isoamyl alcohol	0-2
75-09-2	Methylene chloride	0-0.5

# \* \* \* Section 4 - First Aid Measures \* \* \*

## **Description of Necessary Measures**

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

#### Skin

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

### **Ingestion**

IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. If vomiting occurs, keep head lower than hips to help prevent aspiration. Call a poison control center or doctor immediately for treatment advice.

# Most Important Symptoms/Effects

#### Acute

Harmful if swallowed, respiratory tract irritation, eye irritation, central nervous system depression, central nervous system damage

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#### **Delayed**

Reproductive effects, cancer, blood damage, bone marrow, central nervous system damage, kidney damage, liver damage, lung damage

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### Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

# \* \* \* Section 5 - Fire-Fighting Measures \* \* \*

### Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

### Unsuitable Extinguishing Media

Do not use high-pressure water streams.

# **Specific Hazards Arising from the Chemical**

Combustible liquid and vapor. Avoid friction, static electricity and sparks. Product may be sensitive to static discharge, which could result in fire or explosion. Vapors may form explosive mixture with air. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Fire may produce irritating, poisonous and/or corrosive fumes. Runoff may create fire or explosion hazard. Containers may rupture or explode. Empty containers may contain product residue.

#### **Hazardous Combustion Products**

Decomposition and combustion materials may be toxic. Burning may produce carbon dioxide, carbon monoxide, and unidentified organic compounds.

### **Special Protective Equipment and Precautions for Firefighters**

Wear full protective fire-fighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

## Fire Fighting Measures

Keep storage containers cool with water spray. Move container from fire area if it can be done without risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Stay upwind and keep out of low areas. Dike for later disposal.

# \* \* \* Section 6 - Accidental Release Measures \* \* \*

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

### Methods and Materials for Containment and Clean Up

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal. There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **Section 15.** 

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# \* \* \* Section 7 - Handling and Storage \* \* \*

# **Precautions for Safe Handling**

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product. Wash thoroughly after handling.

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### Conditions for Safe Storage, Including Any Incompatibilities

Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Keep container tightly closed. Keep cool. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Empty product containers may retain product residue and can be dangerous. Store in a well-ventilated place. Store locked up.

See Section 14 for packing group information.

## **Incompatibilities**

Peroxides, oxidizing materials, acids, alcohols, amines

\* \* \* Section 8 - Exposure Controls / Personal Protection \* \* \*

## **Component Exposure Limits**

ure Limits		
Isoamyl alcohol	123-51-3	
ACGIH:	100 ppm TWA; 125 ppm STEL	
NIOSH:	100 ppm TWA ; 360 mg/m3 TWA; 125 ppm STEL ; 450 mg/m3 STEL 500 ppm IDLH	
OSHA (US):	100 ppm TWA ; 360 mg/m3 TWA	
Methylene chloride	75-09-2	
ACGIH:	50 ppm TWA	
NIOSH:	2300 ppm IDLH	
OSHA (US):	25 ppm TWA 125 ppm STEL (See 29 CFR 1910.1052 ) 15 min ; 12.5 ppm Action Level (See 29 CFR 1910.1052 ); 25 ppm TWA (See 29 CFR 1910.1052 ) 125 ppm STEL (see 29 CFR 1910.1052 )	

# ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

# **2-Pyrrolidinone**, **1-ethyl-** (2687-91-4)

Medium: urine Time: end of shift Parameter: 5-Hydroxy-N-ethyl-2-pyrrolidone (5-HNEP) without hydrolysis (nonquantitative)

### Methylene chloride (75-09-2)

0.3 mg/l Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)

# **Engineering Controls**

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

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# Individual Protection Measures, such as Personal Protective Equipment

## Eye/face protection

Safety glasses with side shields should be worn at a minimum. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Contact lens use is not recommended.

#### **Skin Protection**

Where skin contact is likely, wear chemical impervious gloves; use of neoprene, natural rubber (latex) or equivalent gloves is not recommended. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

#### Respiratory Protection

Use NIOSH-certified, full-face respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

## **Glove Recommendations**

Where skin contact is likely, wear gloves impervious to product; use of natural rubber (latex) or equivalent gloves is not recommended. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, whole body suits or other protective clothing.

#### **Protective Materials**

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, Gloves, Lab coat or apron.

# \* \* \* Section 9 - Physical & Chemical Properties \* \* \*

Appearance/Odor: Clear, Colorless liquid pH: Not applicable

Odor:Not availableOdor Threshold:Not availableBoiling Point:Not availableMelting Point:Not availableSolubility (H2O):Not availableSpecific Gravity:0.99 (water =1)Density:Not availableOctanol/H2O Coeff.:Not available

Evaporation Rate: <1 (Butyl acetate=1) Molecular Weight: Not available

Auto Ignition Temperature: Not available

Flash Point: 169°F (76.1°C) UFL: Not available

Viscosity: Not available Vapor Pressure: 20 mm Hg at 96.5°C

Flammability Class: Combustible Vapor Density: 3.9 (air = 1)

Decomposition Temperature: Not available Freezing Point: Not available

Flammability (solid, gas): Not available

### **Other Property Information**

No information is available.

# \* \* \* Section 10 - Stability & Reactivity \* \* \*

## Reactivity

No reactivity hazard is expected.

## **Chemical Stability**

Stable at normal temperatures and pressure.

### **Possibility of Hazardous Reactions**

Will not polymerize under normal temperature and pressure conditions.

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## Material Name: MERCK DANVILLE N-ETHYL PYRROLIDONE

#### **Conditions To Avoid**

Avoid heat, sparks, flames, and other sources of ignition Avoid contact with incompatible materials.

### **Incompatible Materials**

Peroxides, oxidizing materials, acids, alcohols, amines

#### **Hazardous Decomposition Products**

Burning may produce carbon dioxide, carbon monoxide, and unidentified organic compounds.

# \* \* \* Section 11 - Toxicological Information \* \* \*

#### **Information on Likely Routes of Exposure**

#### Inhalation

May cause irritation, central nervous system effects, nausea, headache, drowsiness, dizziness, Disorientation.

### **Skin Contact**

May cause skin irritation.

#### **Eve Contact**

Causes serious eye irritation.

#### Ingestion

May be harmful if swallowed. May cause throat irritation, nausea, vomiting, diarrhea.

### **Acute and Chronic Toxicity**

#### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

## 2-Pyrrolidinone, 1-ethyl- (2687-91-4)

Oral LD50 Rat 1350 mg/kg

## **Benzyl alcohol (100-51-6)**

Oral LD50 Rat 1230 mg/kg; Dermal LD50 Rabbit 2 g/kg; Inhalation LC50 Rat 8.8 mg/L 4 h

#### Isoamyl alcohol (123-51-3)

Oral LD50 Rat 1300 mg/kg; Dermal LD50 Rabbit 3250 mg/kg

## Methylene chloride (75-09-2)

Oral LD50 Rat 1600 mg/kg; Inhalation LC50 Rat 53 mg/L 6 h

# **Product Toxicity Data**

### **Acute Toxicity Estimate**

Dermal	> 2000 mg/kg		
Oral	1289.262 mg/kg		

#### **Immediate Effects**

Harmful if swallowed, severe eye irritation, respiratory tract irritation, central nervous system damage, central nervous system depression.

## **Delayed Effects**

Reproductive Effects, cancer, blood damage, bone marrow, central nervous system damage, kidney damage, liver damage, lung damage.

#### Irritation/Corrosivity Data

Causes serious eye irritation. May cause respiratory tract irritation, skin irritation.

## **Respiratory Sensitization**

No information available for the product.

#### **Dermal Sensitization**

No information available for the product.

### **Component Carcinogenicity**

Methylene chloride	75-09-2	
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	

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IARC:	Monograph 110 [2017]; Monograph 71 [1999] (Group 2A (probably carcinogenic to humans)	
NTP:	Reasonably Anticipated To Be A Human Carcinogen	
DFG:	Category 5 (low carcinogenic potency )	
OSHA:	Present	
OSHA:	see 29 CFR 1910.1052	
NIOSH:	potential occupational carcinogen	

No information available for the product.

# **Germ Cell Mutagenicity**

Methylene chloride has demonstrated experimental effects of mutagenicity.

# **Tumorigenic Data**

No data available

# **Reproductive Toxicity**

May damage fertility or the unborn child. Methylene chloride has demonstrated animal effects of reproductive toxicity.

# **Specific Target Organ Toxicity - Single Exposure**

Central nervous system

## **Specific Target Organ Toxicity - Repeated Exposure**

Blood, bone marrow, central nervous system, kidneys, liver, lungs

# **Aspiration hazard**

No information available for the product.

# **Medical Conditions Aggravated by Exposure**

Eye disorders, skin disorders, central nervous system disorders, respiratory disorders.

\* \* \* Section 12 - Ecological Information \* \* \*

## **Ecotoxicity**

May be harmful to aquatic life.

# Component Analysis - Aquatic Toxicity

Benzyl alcohol	100-51-6		
Fish:	LC50 96 h Pimephales promelas 460 mg/L [static ]; LC50 96 h Lepomis macrochirus 10 mg/L [static ]		
Invertebrate:	EC50 48 h water flea 23 mg/L		
Isoamyl alcohol	123-51-3		
Algae:	EC50 72 h Desmodesmus subspicatus 493 mg/L IUCLID ; EC50 96 h Desmodesmus subspicatus 181 mg/L IUCLID		
Invertebrate:	EC50 48 h Daphnia magna 260 mg/L IUCLID		
Methylene chloride	75-09-2		
Fish:	LC50 96 h Pimephales promelas 140.8 - 277.8 mg/L [flow-through ]; LC50 96 h Pimephales promelas 262 - 855 mg/L [static ]; LC50 96 h Lepomis macrochirus 193 mg/L [static ]; LC50 96 h Lepomis macrochirus 193 mg/L [flow-through ]		

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II Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA ; EC50 72 h Pseudokirchneriella subcapitata >500 mg/L EPA	
Il Invertebrate:	EC50 48 h Daphnia magna 1532 - 1847 mg/L [Static ] EPA ; EC50 48 h Daphnia magna 190 mg/L IUCLID	

## **Invertebrate Toxicity**

No additional information is available.

## Persistence and Degradability

No information available for the product.

#### **Bioaccumulative Potential**

This material is believed not to bioaccumulate.

### **Mobility**

No information available for the product.

# \* \* \* Section 13 - Disposal Considerations \* \* \*

# **Disposal Methods**

Dispose of in accordance with all applicable federal, state and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

Hazardous Waste Number(s): U080. Subject to disposal regulations: U.S. EPA 40 CFR 262. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

# \* \* \* Section 14 - Transport Information \* \* \*

## **US DOT Information:**

Shipping Name: COMBUSTIBLE LIQUID, N.O.S., (Contains: 2-Pyrrolidinone, 1-ethyl-)

Hazard Class: Combustible liquid

UN/NA #: NA1993 Packing Group: III

Required Label(s): Combustible liquid

**IATA Information:** Not regulated for transport. **IMDG Information:** Not regulated for transport. **TDG Information:** Not regulated for transport.

UN#: No classification assigned

## **International Bulk Chemical Code**

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Benzyl alcohol	100-51-6		
IBC Code:	Category Y		
Isoamyl alcohol 123-51-3			
IBC Code:	Category Z		
Methylene chloride	75-09-2		
IBC Code:	Category Y		

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# \* \* \* Section 15 - Regulatory Information \* \* \*

### U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

2-Pyrrolidinone, 1-ethyl-	2687-91-4		
TSCA 12b:	Section 5 , 1 % de minimis concentration		
Methylene chloride	75-09-2		
SARA 313:	0.1 % de minimis concentration		
CERCLA:	1000 lb final RQ ; 454 kg final RQ		

Chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

CAS-No.	Name	Percent by Weight
75-09-2	Methylene chloride	0-0.5

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

### SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories

Flammable; Carcinogenicity; Acute toxicity; Reproductive Toxicity; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity

### **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Benzyl alcohol	100-51-6	No	Yes	Yes	No	Yes
Isoamyl alcohol	123-51-3	Yes	Yes	Yes	Yes	Yes
Methylene chloride	75-09-2	Yes	Yes	Yes	Yes	Yes

## California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

WARNING! This product can expose you to chemicals including Methylene chloride, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Methylene chloride	75-09-2			
Carc:	carcinogen, 4/1/1988			

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## Component Analysis - Inventory 2-Pyrrolidinone, 1-ethyl- (2687-91-4)

US	CA	AU	CN	N EU		JP - ENCS	JP - ISHL		KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	No	Yes	E	IN	Yes	Yes		No	Yes
KR -	KR - REACH CCA			MX	NZ	PH	TH-TECI	TW	VN (Draft)	
No			7	Yes	Yes	Yes	Yes	Yes	Yes	

## Benzyl alcohol (100-51-6)

US	CA	AU	CN	N EU		JP - ENCS	JP - ISHL		KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Ye	es EIN		Yes	Yes		Yes	No
KR -	KR - REACH CCA				NZ	PH	TH-TECI	TW	VN (Draft)	
No				Yes	Yes	Yes	Yes	Yes	Yes	

## Isoamyl alcohol (123-51-3)

US	CA	AU	CN	EU		JP - ENCS	JP - ISHL		KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Ye	Yes EIN		Yes	Yes		Yes	No
KR -	KR - REACH CCA			MX	NZ	PH	TH-TECI	TW	VN (Draft)	
No				Yes	Yes	Yes	Yes	Yes	Yes	

# Methylene chloride (75-09-2)

US	CA	AU	CN	E	U	JP - ENCS	JP - ISHL		KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	El	IN	Yes	Yes		Yes	No
KR -	KR - REACH CCA			MX	NZ	РН	TH-TECI	TW	VN (Draft)	
No			٦.	Yes	Yes	Yes	Yes Yes		Yes	

# **Canadian Regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

# \* \* \* Section 16 - Other Information \* \* \*

NFPA Ratings: Health: 2 Fire: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Summary of Changes** 

2022-01: Addition to Section 15.

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#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD -Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR -Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN -European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union: F - Fahrenheit: F - Background (for Venezuela Biological Exposure Indices): IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL -Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow -Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts<sup>TM</sup> -ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program: NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL-Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative: STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

### **Other Information**

### Disclaimer:

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Clean Harbors assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplied to the user.

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