

**SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION**

**Product ID:** 518-13653  
**Product Name:** Polyurea, B-Side  
**Revision Date:** Oct 15, 2020  
**Version:** 1.0  
**Manufacturer's Name:** Advanced Resins  
**Address: Emergency** 11530 Chairman Dr, Dallas, TX 75243  
**Phone:** (972) 293.4444  
**Information Phone Number:** (972) 293.4444  
**Fax:**  
**Product/Recommended Uses:** For Further Information, Refer to the Product Technical Data Sheet.

**Date Printed:** Oct 15, 2020  
**Supersedes Date:** N.A.

**SECTION 2) HAZARDS IDENTIFICATION****Classification**

Acute toxicity Oral - Category 4  
Carcinogenicity - Category 2  
Eye Irritation - Category 2  
Flammable Liquids - Category 4  
Reproductive Toxicity - Category 2  
Respiratory Sensitizer (Solid/Liquid) - Category 1  
Skin Irritation - Category 2  
Skin Sensitizer - Category 1  
Specific Target Organ Toxicity - Repeated Exposure - Category 2  
Specific Target Organ Toxicity -Single Exposure (Respiratory Tract Irritation) - Category 3

**Pictograms****Signal Word**

Danger

**Hazardous Statements - Physical**

H227 - Combustible Liquid

**Hazardous Statements - Health**

H302 - Harmful if swallowed  
H351 - Suspected of causing cancer.  
H319 - Causes serious eye irritation  
H361 - Suspected of damaging fertility or the unborn child

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure.

H335 - May cause respiratory irritation

#### **Precautionary Statements - General**

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

#### **Precautionary Statements - Prevention**

P264 - Wash thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P201 - Obtain special instructions before use.

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

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P284 - [In case of inadequate ventilation] wear respiratory protection.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P271 - Use only outdoors or in a well-ventilated area.

P233 - Keep container tightly closed.

#### **Precautionary Statements - Response**

P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 - Rinse mouth.

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

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

P337 + P313 - If eye irritation persists: Get medical advice/attention.

P370 + P378 - In case of fire: Use dry chemical, carbon dioxide, foam to extinguish.  
For detailed information, see Section-5 (Fire Fighting Measures)

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

P321 - Specific treatment (see section 4 on this SDS).

P362 + P364 - Take off contaminated clothing. And wash it before reuse.

P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.

P314 - Get Medical advice/attention if you feel unwell.

#### **Precautionary Statements - Storage**

P405 - Store locked up.

P403 - Store in a well-ventilated place.

P403 + P405 - Store in a well-ventilated place. Store locked up.

#### **Precautionary Statements - Disposal**

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

## SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000101-68-8	4,4'-METHYLENEDIPHENYL DIISOCYANATE	56% - 100%
0001330-20-7	XYLENE	3% - 6%
0026447-40-5	MDI (MONOMER)	1.5% - 3%
0000100-41-4	ETHYLBENZENE	0.9% - 1.4%
0000071-43-2	BENZENE	Trace

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

## SECTION 4) FIRST-AID MEASURES

### Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

Eliminate all ignition sources if safe to do so.

### Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use or discard.

IF exposed or concerned: Get medical advice/attention.

### Eye Contact

Avoid direct contact. Wear chemical protective gloves, if necessary.

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

### Ingestion

IF exposed or concerned: Get medical advice/attention.

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

## SECTION 5) FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

### Unsuitable Extinguishing Media

If water is used, use very large quantities of cold water. The reaction between water and hot isocyanate may be vigorous.

### Specific Hazards in Case of Fire

Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can occur.

Excessive pressure or temperature may cause explosive rupture of containers.

Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.

### Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### Special Protective Actions

Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required.

Care should always be exercised in dust/mist areas.

## SECTION 6) ACCIDENTAL RELEASE MEASURES

### Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

### Recommended Equipment

Appropriate dust or face mask to eliminate breathing foam dust particulates.

### Personal Precautions

Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

### Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

### Methods and Materials for Containment and Cleaning up

Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 2.0% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Follow the precautions on the supplier's safety data sheets.

Treat the spill area with the decontamination solution, using about 10 parts of the solution for each part of the spill, and allow it to react for at least 15 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. Residues from spill cleanup, even when treated as described may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste.

Slowly stir the isocyanate waste into the decontamination solution described above. Let stand for 48 hours, allowing the evolved carbon dioxide to vent away, residues may still be subject to RCRA storage and disposal requirements. Dispose off in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

## SECTION 7) HANDLING AND STORAGE

### General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

### Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

### Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Ground and bond containers and receiving equipment. Avoid static electricity by grounding.

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them. Ground all structures, transfer containers and equipment to conform to the national electrical code. Use procedures that prevent static electrical sparks. Static electricity may accumulate and create a fire hazard.

## SECTION8) EXPOSURE CONTROLS/PERSONAL PROTECTION

### Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing.

### Respiratory Protection

If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied pressure supplied air respiratory with a full face piece or an air supplied hood. For emergencies, use a positive pressure self-contained breathing apparatus. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)
4,4'-METHYLENEDI PHENYL DIISOCYANATE	0.02 ceiling	0.2 ceiling			1			0.005
BENZENE	1 (a) / 25ceiling		50(a)/ 10minutes.		1	1		0.1c
ETHYLBENZENE	100	435			1			100
XYLENE	100	435			1			100

Chemical Name	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
4,4'-METHYLENEDI PHENYL DIISOCYANATE	0.050				0.005			
BENZENE		1c		1	0.5		2.5	
ETHYLBENZENE	435	125	545		20			
XYLENE	435	150	655		100		150	

## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Density	9.91 lb/gal
Specific Gravity	1.19
VOC Regulatory	0.00 lb/gal
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VOC Part A & B Combined	0.54 lb/gal

Appearance	Liquid
Odor Threshold	N.A.
Odor Description	Aromatic
pH	N.A.
Water Solubility	N.A.
Flammability	N/A
Flash Point Symbol	N.A.
Flash Point	61 °C
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	Heavier than air
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	140 °C
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	N.A.
Evaporation Rate	Slower than ether
Coefficient Water/Oil	N.A.

## SECTION 10) STABILITY AND REACTIVITY

### Stability

Material is stable at standard temperature and pressure.

### Conditions to Avoid

Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause liberation of carbon dioxide and buildup of pressure.

### Hazardous Reactions/Polymerization

Will not occur under normal conditions but under high temperatures in the presence of alkalis, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers.

### Incompatible Materials

This product will react with any material containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids, the reaction with water is slow under 50°C, but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds. Some reactions can be violent. Material can react with strong oxidizing agents.

### Hazardous Decomposition Products

Carbon dioxide, carbon monoxide, nitrogen oxides, trace amounts of hydrogen cyanide and unidentified organic compounds may be formed during combustion.

## SECTION 11) TOXICOLOGICAL INFORMATION

### Skin Corrosion/Irritation

Isocyanates react with skin protein and moisture and can cause irritation. Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and, in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor.

Causes skin irritation

### Serious Eye Damage/Irritation

Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. Prolonged vapor contact may cause conjunctivitis. Any level of contact should not be left untreated.

Causes serious eye irritation

### Respiratory/Skin Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

### **Carcinogenicity**

Suspected of causing cancer.

### **Germ Cell Mutagenicity**

No data available.

### **Reproductive Toxicity**

Suspected of damaging fertility or the unborn child

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

May cause respiratory irritation

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

May cause damage to organs through prolonged or repeated exposure.

### **Aspiration Hazard**

No data available.

### **Acute Toxicity**

Harmful if swallowed

### **Likely Routes of Exposure**

Inhalation, Ingestion, Skin contact, Eye contact

### **Chronic Exposure**

0000100-41-4 ETHYLBENZENE

CARCINOGENIC EFFECTS: Ethyl Benzene has been listed by IARC as Group 2B, Possibly Carcinogenic to Humans.

TERATOGENIC EFFECTS: Ethyl Benzene has been Classified as POSSIBLE for humans.

0001330-20-7 XYLENE

High exposure to Xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus.

Xylene in high concentrations has caused embryotoxic effects in laboratory animals.

### **Potential Health Effects - Miscellaneous**

0000100-41-4 ETHYLBENZENE

Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. WARNING: This chemical is known to the State of California to cause cancer.

0001330-20-7 XYLENE

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: bone marrow, cardiovascular system, central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin.

0001330-20-7 XYLENE

LC50 (rat): 6350 ppm (4-hour exposure) (unspecified isomers and ethylbenzene) (1)LC50 (rat): 6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) ethylbenzene) (1)

LC50 (rat): 6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene)(2)

LD50 (oral, rat): 5400 mg/kg (52% m-, 19% o-, 24% p-) (1)LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)

LD50 (oral, male mouse): 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)

LD50 (dermal, rabbit): 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes - undefined composition) (3)

LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)

LD50 (oral, male mouse): 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)

LD50 (dermal, rabbit): 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes - undefined composition) (3)

0000071-43-2 BENZENE

LC50 (rat): 13,700 ppm (4 hour exposure) (26); 9,980 ppm (7 hour exposure) (13,200 ppm - equivalent 4 hour exposure) (18)

LD50 (oral, rat): 930 mg/kg (19); 5,600 mg/kg (2); 11.4 ml/kg (10,032 mg/kg) (21)

LD50 (oral, mouse): 4,700 mg/kg (11; unconfirmed)

LD50 (skin, rabbit and guinea pig): Greater than 9,400 mg/kg (20)

0000100-41-4 ETHYLBENZENE

LC50 (inhalation, rat): 4000 ppm; 4-hour exposure (3)

LD50 (oral, rat): 3.5 g/kg (1,3,5,10)

LD50 (oral, rat): 4.72 g/kg (3,5,7,8)

LD50 (dermal, rabbit): 17.8 g/kg (1)

0000101-68-8 4,4'-METHYLENEDIPHENYL DIISOCYANATE

LC50 (rat): 369-490 mg/m<sup>3</sup> (aerosol) (4-hour exposure) (1)

LC50 (rat): 178 mg/m<sup>3</sup> (17.4 ppm) (duration of exposure not reported) (2)

LD50 (oral, rat): greater than 10,000 mg/kg (1,2)

LD50 (dermal, rabbit): greater than 10,000 mg/kg (1)

LD50 (oral, mouse): 2,200 mg/kg (3)

## SECTION 12) ECOLOGICAL INFORMATION

### Toxicity

No data available.

### Mobility in Soil

No data available.

### Other Adverse Effects

No data available.

### Bio-accumulative Potential

No data available.

### Persistence and Degradability

0001330-20-7 XYLENE

50% of applied radiolabelled o-xylene was mineralised in 23 days, and 50% p-xylene was mineralised in 13 days.

## SECTION 13) DISPOSAL CONSIDERATIONS

### Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

## SECTION 14) TRANSPORT INFORMATION

### U.S. DOT Information

Not regulated

### IMDG Information

Not regulated.

### IATA Information

Not regulated.

## SECTION 15) REGULATORY INFORMATION



CAS	Chemical Name	% By Weight	Regulation List
0000101-68-8	4,4'-METHYLENEDIPHENYL DIISOCYANATE	56% - 100%	SARA313, DSL, CERCLA, HAPS, SARA312, VHA PS, VOC, TSCA
0001330-20-7	XYLENE	3% - 6%	SARA313, DSL, CERCLA, HAPS, SARA312, VHA PS, VOC, TSCA, RCRA
0026447-40-5	MDI (MONOMER)	1.5% - 3%	DSL, SARA312, VOC, TSCA
0000100-41-4	ETHYLBENZENE	0.9% - 1.4%	SARA313, DSL, CERCLA, HAPS, SARA312, VHA PS, VOC, TSCA, CA_Prop65 - California Proposition 65
0000071-43-2	BENZENE	Trace	SARA313, DSL, CERCLA, HAPS, SARA312, VHA PS, VOC, TSCA, RCRA, CA_Prop65 - California Proposition 65

## SECTION 16) OTHER INFORMATION

### OTHER INFORMATION

Note: As per GHS, category 1 is the greatest level of hazard within each class.

### GLOSSARY

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; CA Prop65- California Proposition 65; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service ; Chemtrec - Chemical Transportation Emergency Center; DSL - Domestic Substances List; ESL- Effects screening levels; GHS - "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations; HMIS - Hazardous Material Information Service; IATA - Dangerous Goods Regulations (DGR) for the air transport (IATA); IMDG - International Maritime Dangerous Goods Code; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OEL - Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL - Permissible Exposure Limit; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self Contained Breathing Apparatus; ppm - parts per million; STEL - Short-term exposure limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-weighted average; US DOT- US Department of Transportation.

### Version 1.0:

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