SECTION 1. IDENTIFICATION

Product name : Eastman(TM) Chlorinated Polyolefin 343-1 (25% Solids in Xylene)

Product code : S0636203

Manufacturer or supplier’s details
Company name of supplier : Eastman Chemical Company
Address : 200 South Wilcox Drive
Kingsport TN 37660-5280

Telephone : (423) 229-2000
Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use
Recommended use : Adhesion promoter
Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 3
Acute toxicity (Inhalation) : Category 4
Acute toxicity (Dermal) : Category 4
Skin irritation : Category 2
Eye irritation : Category 2A
Specific target organ systemic toxicity - repeated exposure : Category 2 (hearing organs)

GHS label elements
Hazard pictograms

Signal Word : Warning
Hazard Statements:  
H226 Flammable liquid and vapor.  
H312 + H332 Harmful in contact with skin or if inhaled.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure.

Precautionary Statements:  
Prevention:  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/eye protection/face protection.

Response:  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P314 Get medical advice/attention if you feel unwell.  
P332 + P313 IF skin irritation occurs: Get medical advice/attention.  
P337 + P313 IF eye irritation persists: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 IN CASE OF FIRE: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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

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

Other hazards:  
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients
SECTION 4. FIRST AID MEASURES

If inhaled: Move to fresh air. Treat symptomatically. If symptoms persist, call a physician.

In case of skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. Get medical attention. Thoroughly clean shoes before reuse.

In case of eye contact: Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If swallowed: Seek medical advice. Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. Hold person's head low, to prevent aspiration.

Most important symptoms and effects, both acute and delayed: Harmful in contact with skin or if inhaled. Causes skin irritation. Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure.

Notes to physician: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray Carbon dioxide (CO2) Dry chemical Foam

Unsuitable extinguishing media: None known.

Specific hazards during fire fighting: Water may be ineffective. The product will float on water and can be reignited on surface water.
Hazardous combustion products: No hazardous combustion products are known

Further information: Flammable liquid and vapor. Use water spray to cool unopened containers.

Special protective equipment for fire-fighters: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment. Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions: Avoid release to the environment.

Methods and materials for containment and cleaning up: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). After cleaning, flush away traces with water. Eliminate all ignition sources if safe to do so.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: None known.

Advice on safe handling: Avoid inhalation of vapor or mist. Do not get on skin or clothing. Do not get in eyes. Avoid contact with skin, eyes and clothing. Do not swallow. Ensure adequate ventilation. Wash thoroughly after handling. Keep away from fire (No Smoking). Keep away from fire, sparks and heated surfaces. Do not use sparking tools.

Conditions for safe storage: Keep container closed when not in use. Store locked up.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene</td>
<td>1330-20-7</td>
<td>TWA</td>
<td>100 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
## Chemical Name and Identification

**Chemical Name:** Ethylbenzene (100-41-4)

**Chemical Formula:** C<sub>8</sub>H<sub>10</sub>

**CAS Number:** 100-41-4

### Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molar Mass</td>
<td>118.16 g/mol</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>136.3 °C (273.3 K)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>10.5 °C (283.8 K)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Slightly soluble</td>
</tr>
</tbody>
</table>

### Exposure Limits

<table>
<thead>
<tr>
<th>Standard</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>150 ppm, 655 mg/m³ OSHA Z-1</td>
</tr>
<tr>
<td>TWA</td>
<td>100 ppm, 435 mg/m³ ACGIH</td>
</tr>
<tr>
<td>STEL</td>
<td>150 ppm, 655 mg/m³ OSHA Z-1</td>
</tr>
<tr>
<td>TWA</td>
<td>100 ppm, 435 mg/m³ ACGIH</td>
</tr>
<tr>
<td>STEL</td>
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<tr>
<td>STEL</td>
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</tr>
<tr>
<td>TWA</td>
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</tr>
<tr>
<td>STEL</td>
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</tr>
<tr>
<td>TWA</td>
<td>100 ppm, 435 mg/m³ ACGIH</td>
</tr>
</tbody>
</table>

### Engineering Measures

Ensure adequate ventilation.

### Personal Protective Equipment

**Respiratory Protection:** Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

**Hand Protection:** Wear suitable gloves.

**Eye Protection:** Wear safety glasses with side shields (or goggles). Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

**Protective Measures:** Remove respiratory and skin/eye protection only after vapors have been cleared from the area. Ensure that eye flushing systems and safety showers are located close to the working place. Use personal protective equipment as required.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: viscous liquid
Color: amber
Odor: aromatic
Odor Threshold: not determined
pH: not determined
Melting point/range:
Boiling point/boiling range: 280 - 284 °F / 138 - 140 °C
Flash point: 81 °F / 27 °C
Method: Tag closed cup
Evaporation rate: not determined
Vapor pressure: not determined
Relative vapor density: 3.7
Relative density: 0.90 (77 °F / 25 °C)
Solubility(ies)
Water solubility: negligible
Partition coefficient: n-octanol/water: No data available
Autoignition temperature: 905 °F / 485 °C
Method: ASTM D2155
Decomposition temperature: Method: DSC
No exotherm to 450°C
Viscosity
Viscosity, dynamic: 100 - 200 mPa.s (77 °F / 25 °C)
Viscosity, kinematic: not determined
Explosive properties: No data available
Oxidizing properties: No data available
## SECTION 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Properties</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Stable</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Stable</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Heat, flames and sparks.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidizing agents</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Carbon monoxide</td>
</tr>
<tr>
<td></td>
<td>Carbon dioxide (CO₂)</td>
</tr>
<tr>
<td></td>
<td>Hydrogen chloride</td>
</tr>
<tr>
<td></td>
<td>Chlorine compounds</td>
</tr>
</tbody>
</table>

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Harmful in contact with skin or if inhaled.

**Ingredients:**

**xylene:**

- **Acute oral toxicity**: LD50 Oral (Rat, male): 3,523 mg/kg

**ethylbenzene:**

- **Acute oral toxicity**: LD50 Oral (Rat): 3,500 mg/kg
- **Acute inhalation toxicity**: LC50 (Rat): 17 mg/l  
  Exposure time: 4 h

**chlorobenzene:**

- **Acute oral toxicity**: LD50 Oral (Rat): 2,262 mg/kg
- **Acute inhalation toxicity**: LC50 (Rat): 29.7 mg/l  
  Exposure time: 4 h
- **Acute dermal toxicity**: LD50 Dermal (Guinea pig): > 20,000 mg/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Ingredients:**

**xylene:**

---
Serious eye damage/eye irritation
Causes serious eye irritation.

**Ingredients:**

**xylene:**
Species: Rabbit  
Result: Severe irritation  
Exposure time: 24 h  
Remarks: Causes serious eye irritation.

**ethylbenzene:**
Species: Rabbit  
Result: moderate to strong

**chlorobenzene:**
Species: Rabbit  
Result: slight

**Respiratory or skin sensitization**

**Skin sensitization**
Not classified based on available information.

**Respiratory sensitization**
Not classified based on available information.

**Product:**
Remarks: No data available

**Ingredients:**

**xylene:**
Test Type: OECD 429: LLNA  
Species: Mouse
ethybenzene:
Test Type: Skin Sensitization
Result: non-sensitizing

clorobenzene:
Test Type: Skin Sensitization
Species: Guinea pig
Result: non-sensitizing

Germ cell mutagenicity
Not classified based on available information.

Ingredients:

**xylene:**
Genotoxicity in vitro
Test Type: Salmonella typhimurium assay (Ames test)
Metabolic activation: +/- activation
Method: Bacterial Reverse Mutation Assay
Result: negative

Genotoxicity in vivo
Species: Rat
Application Route: intraperitoneal injection
Method: Genetic Toxicology: Rodent Dominant Lethal Test
Result: negative

**chlorobenzene:**
Genotoxicity in vitro
Test Type: Mutagenicity - Bacterial
Metabolic activation: +/- activation
Method: Bacterial Reverse Mutation Assay
Result: negative
Remarks: Published study

Test Type: Mutagenicity - Mammalian
Metabolic activation: +/- activation
Method: In vitro Mammalian Chromosome Aberration Test
Result: negative
Remarks: Published study

Test Type: Mutagenicity - Mammalian
Metabolic activation: +/- activation
Method: Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells
Result: negative
Remarks: Published study

Genotoxicity in vivo
Species: Drosophila melanogaster
Method: Genetic Toxicology: Sex-Linked Recessive Lethal Test in Drosophila melanogaster
Result: negative
Remarks: Published study

Carcinogenicity
Not classified based on available information.

**Product:**
Remarks: This information is not available.

**IARC**
Group 2B: Possibly carcinogenic to humans
ethylbenzene 100-41-4

**OSHA**
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**NTP**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

**Product:**
Effects on fertility: Remarks: No data available

**STOT-single exposure**
Not classified based on available information.

**Product:**
Remarks: No data available

**Ingredients:**

**xylene:**
Target Organs: respiratory tract irritation

**ethylbenzene:**
Routes of exposure: Inhalation
Target Organs: Narcotic effects

**chlorobenzene:**
Routes of exposure: Inhalation
Target Organs: Narcotic effects

**STOT-repeated exposure**
May cause damage to organs (hearing organs) through prolonged or repeated exposure.

**Product:**
Remarks: No data available
Ingredients:

xylene:
Target Organs: Auditory system

chlorobenzene:
Routes of exposure: Oral
Assessment: Based on available data, the classification criteria are not met.

Repeated dose toxicity

xylene:
Species: Rat, Male and Female
NOAEL: 250 mg/kg
Application Route: Oral Study

Species: Rat, male
Application Route: Inhalation

NOAEL: 3515 mg/m³

chlorobenzene:
Species: Rat, Male and Female
NOAEL: 120 mg/kg
Method: OECD Test No. 451: Carcinogenicity Studies
Remarks: Published study

Species: Rat, Male and Female
Method: OECD Test No. 416: Two-Generation Reproduction Toxicity Study
Remarks: Published study

Aspiration toxicity
Not classified based on available information.

Product:
No aspiration toxicity classification

Ingredients:

xylene:
May be fatal if swallowed and enters airways.

ethylbenzene:
May be fatal if swallowed and enters airways.
**chlorobenzene:**
May be harmful if swallowed and enters airways.

**Information on likely routes of exposure**

**Product:**

<table>
<thead>
<tr>
<th>Route</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Remarks: None known.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Remarks: Causes skin irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Remarks: None known.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Remarks: May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

**Further information**

**Product:**

<table>
<thead>
<tr>
<th>Remarks</th>
<th>None known.</th>
</tr>
</thead>
</table>

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ingredients:**

**xylene:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>96 h</td>
</tr>
<tr>
<td>Remarks</td>
<td>Read-across from a similar material</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>EC50 (Daphnia magna (Water flea)): &gt; 3.4 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>24 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae</th>
<th>EC50 (Selenastrum capricornutum): 2.2 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>72 h</td>
</tr>
<tr>
<td>NOEC</td>
<td>(Selenastrum capricornutum): 0.44 mg/l</td>
</tr>
<tr>
<td>Exposure time</td>
<td>72 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to fish (Chronic toxicity)</th>
<th>NOEC (Oncorhynchus mykiss (rainbow trout)): &gt; 1.3 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>56 d</td>
</tr>
<tr>
<td>GLP</td>
<td>no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
<th>NOEC (Daphnia magna (Water flea)): 0.96 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>7 d</td>
</tr>
</tbody>
</table>

**ethylbenzene:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 (Cyprinodon variegatus (sheepshead minnow)): 275</th>
</tr>
</thead>
</table>
Exposure time: 96 h

LC50 (Pimephales promelas (fathead minnow)): 42.3 - 48.5 mg/l

Exposure time: 96 h

LC50 (Poecilia reticulata (guppy)): 97.1 mg/l
Exposure time: 96 h

chlorobenzene:
Toxicity to fish
: LC50 (goldfish): 73.03 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates
: EC50 (daphnid): 4.3 mg/l
Exposure time: 48 h

Toxicity to fish (Chronic toxicity)
: NOEC (Danio rerio (zebra fish)): 4.8 mg/l
Exposure time: 28 d
Remarks: Published study

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
: NOEC (Daphnia magna (Water flea)): 0.32 mg/l
Exposure time: 16 d
Remarks: Published study

Persistence and degradability

Ingredients:

taxylene:
Biodegradability
: Result: Readily biodegradable.

ethylbenzene:
Biodegradability
: Result: Readily biodegradable.

chlorobenzene:
Biochemical Oxygen Demand (BOD)
: BOD-5:
30 mg/g

Chemical Oxygen Demand (COD)
: 410 mg/g

BOD/COD
: BOD/COD: 7.32 %

ThOD
: 2,060 mg/g
Bioaccumulative potential

**Ingredients:**

xylene:
- Bioaccumulation : Bioconcentration factor (BCF): 7.4 - 18.5

ethylbenzene:
- Partition coefficient: n-octanol/water : log Pow: 3.15

Mobility in soil

**Ingredients:**

ethylbenzene:
- Distribution among environmental compartments : log Koc: 3.12

chlorobenzene:
- Distribution among environmental compartments : log Koc: 2.4

Other adverse effects
No data available

### SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**
- Waste from residues : Dispose of in accordance with local regulations.

### SECTION 14. TRANSPORT INFORMATION

**International Regulations**

**IATA-DGR**
- UN/ID No. : UN 1139
- Proper shipping name : Coating solution
- Class : 3
- Packing group : III
- Labels : Flammable Liquids
- Packing instruction (cargo aircraft) : 366
- Packing instruction (passenger aircraft) : 355

**IMDG-Code**
- UN number : UN 1139
- Proper shipping name : COATING SOLUTION
SAFETY DATA SHEET

Eastman(TM) Chlorinated Polyolefin 343-1 (25% Solids in Xylene)

PO00082685

Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

 Domestic regulation
49 CFR
UN/ID/NA number : UN 1139
Proper shipping name : Coating solution

Class : 3
Packing group : III
Labels : Class 3 - Flammable Liquid
ERG Code : 127
Marine pollutant : no

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylenes</td>
<td>1330-20-7</td>
<td>100</td>
<td>133</td>
</tr>
</tbody>
</table>

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

xylene 1330-20-7
ethylbenzene 100-41-4
California Prop. 65
WARNING: This product can expose you to chemicals including ethylbenzene, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

- **DSL**: All components of this product are on the Canadian DSL
- **AICS**: On the inventory, or in compliance with the inventory
- **ISHL**: On the inventory, or in compliance with the inventory
- **KECI**: On the inventory, or in compliance with the inventory
- **PICCS**: On the inventory, or in compliance with the inventory
- **IECSC**: On the inventory, or in compliance with the inventory
- **TCSI**: On the inventory, or in compliance with the inventory
- **TSCA**: On the inventory, or in compliance with the inventory

**TSCA list**
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.
SECTION 16. OTHER INFORMATION

Further information

**NFPA 704:**

- **Health:** 2
- **Flammability:** 3
- **Instability:** 0

**HMIS® IV:**

- **HEALTH:** *
- **FLAMMABILITY:** 3
- **PHYSICAL HAZARD:** 0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

- **ACGIH:** US. ACGIH Threshold Limit Values
- **ACGIH:** USA. ACGIH Threshold Limit Values (TLV)
- **NIOSH REL:** USA. NIOSH Recommended Exposure Limits
- **OSHA P0:** USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
- **OSHA Z-1:** USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- **ACGIH / STEL:** short-term exposure limit
- **ACGIH / TWA:** 8-hour, time-weighted average
- **ACGIH / TWA:** 8-hour, time-weighted average
- **ACGIH / STEL:** Short-term exposure limit
- **NIOSH REL / TWA:** Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
- **NIOSH REL / ST:** STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
- **OSHA P0 / TWA:** 8-hour time weighted average
- **OSHA P0 / STEL:** Short-term exposure limit
- **OSHA Z-1 / TWA:** 8-hour time weighted average
- **OSHA Z-1 / STEL:** 15-minute occupational exposure limit

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC
Revision Date: 11/11/2018

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8