

E-12; E-12PM**Safety Data Sheet**According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 04/05/2021 Date of issue: 08/06/2015 Version: 2.0**SECTION 1: IDENTIFICATION****1.1. Product Identifier**

Product Form: Mixture

Product Name: E-12; E-12PM

Synonyms: Emulsion

1.2. Intended Use of the Product

Use of the substance/mixture: Cold Patch.

1.3. Name, Address, and Telephone of the Responsible Party

Company:

Russell Standard
285 Kappa Drive
Suite 300
Pittsburgh, PA 15238Directory: (800) 323-3053
Main: (412) 449-0700
Fax: (412) 449-0704

www.russellstandard.com

1.4. Emergency Telephone Number

Emergency Number: (800) 255-3924 (24 hours)

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the Substance or Mixture**

Classification (GHS-US):

| | |
|-------------------|------|
| Flam. Liq. 4 | H227 |
| Skin Irrit. 2 | H315 |
| Eye Irrit. 2A | H319 |
| Skin Sens. 1 | H317 |
| Carc. 2 | H351 |
| Repr. 1B | H360 |
| Aquatic Acute 3 | H402 |
| Aquatic Chronic 3 | H412 |

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US):



GHS07



GHS08

Signal Word (GHS-US): Danger

Hazard Statements (GHS-US):

- H227 - Combustible liquid.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H351 - Suspected of causing cancer.
- H360 - May damage fertility or the unborn child.
- H402 - Harmful to aquatic life.
- H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US):

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
- P261 - Avoid breathing vapors, gas, mist, or spray.
- P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
- P272 - Contaminated work clothing must not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, and eye protection.
- P302+P352 - If on skin: Wash with plenty of 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.
- P308+P313 - If exposed or concerned: Get medical advice/attention.
- P321 - Specific treatment (see section 4 on this SDS).
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
- P403+P235 - Store in a well-ventilated place. Keep cool.
- P405 - Store locked up.
- P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate individuals with pre-existing skin, kidney, liver, and pulmonary disorders. Asphalt may contain trace quantities of benzene (< 0.1%). Elevated temperature conditions may emit hydrogen sulfide, an asphalt decomposition product. If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition temperature. Hydrogen sulfide is a toxic gas that can be fatal. It also has a rotten egg smell that causes odor fatigue very quickly and shouldn't be used as an indicator for the presence of gas. Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substance**

Not applicable

3.2. Mixture

| Name | Product Identifier | % | Classification (GHS-US) |
|---------------------|----------------------|-------------|---|
| Asphalt | (CAS No) 8052-42-4 | 65 - 70 | Carc. 2, H351 |
| Water | (CAS No) 7732-18-5 | 30 - 35 | Not classified |
| Proprietary Fuel | (CAS No) Proprietary | 7 - 15 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Carc. 2, H351 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411 |
| Fatty Derivative #1 | (CAS No) Proprietary | 0.25 - 0.75 | Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360 STOT SE 3, H336 |
| Fatty Derivative #2 | (CAS No) Proprietary | 0.2 - 0.6 | Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 |
| Fatty Derivative #3 | (CAS No) Proprietary | 0.2 - 0.6 | Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| Hydrochloric acid | (CAS No) 7647-01-0 | 0.1 - 0.3 | Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 2, H401 |
| Fatty Derivative #4 | (CAS No) Proprietary | 0.1 - 0.3 | Not classified |

*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES**4.1. Description of First Aid Measures**

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Causes serious eye irritation. Causes skin irritation. Skin sensitization. Suspected of causing cancer. May damage fertility. May damage the unborn child. Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. Toxic fumes may be generated from heating asphalt and may be harmful if inhaled.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction. Removal of solidified molten material from skin requires medical assistance.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of causing cancer. May damage fertility or the unborn child.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Use of water on product above 100 °C (212 °F) can cause product to expand with explosive force.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible liquid.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, gas, mist or spray.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for Safe Handling**

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition temperature. Hydrogen sulfide is a toxic gas that can be fatal. It also has a rotten egg smell that causes odor fatigue very quickly and shouldn't be used as an indicator for the presence of gas.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Products: Strong acids, strong bases, strong oxidizers. Do not use water when molten material is involved, may react violently or explosively on contact with water.

7.3. Specific End Use(s)

Cold Patch.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

| Asphalt (8052-42-4) | | |
|---------------------|--|--|
| USA ACGIH | ACGIH TWA (mg/m ³) | 0.5 mg/m ³ (fume, inhalable fraction) |
| USA ACGIH | ACGIH chemical category | Not Classifiable as a Human Carcinogen fume, coal tar-free |
| USA NIOSH | NIOSH REL (ceiling) (mg/m ³) | 5 mg/m ³ (fume) |

| Hydrochloric acid (7647-01-0) | | |
|-------------------------------|--|--|
| USA ACGIH | ACGIH Ceiling (ppm) | 2 ppm |
| USA ACGIH | ACGIH chemical category | Not Classifiable as a Human Carcinogen |
| USA NIOSH | NIOSH REL (ceiling) (mg/m ³) | 7 mg/m ³ |
| USA NIOSH | NIOSH REL (ceiling) (ppm) | 5 ppm |
| USA IDLH | US IDLH (ppm) | 50 ppm |
| USA OSHA | OSHA PEL (Ceiling) (mg/m ³) | 7 mg/m ³ |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 5 ppm |

| Hydrogen sulfide (7783-06-4) | | |
|------------------------------|--|----------------------|
| USA ACGIH | ACGIH TWA (ppm) | 1 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 5 ppm |
| USA NIOSH | NIOSH REL (ceiling) (mg/m ³) | 15 mg/m ³ |
| USA NIOSH | NIOSH REL (ceiling) (ppm) | 10 ppm |
| USA IDLH | US IDLH (ppm) | 100 ppm |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 20 ppm |

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when toxic gases may be released. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Thermal Hazard Protection: If material is hot, wear thermally resistant protective gloves.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State: Liquid

Appearance: Black / Brown

Odor: Asphalt

Odor Threshold: No data available

pH: 2 - 5

Evaporation Rate: No data available

Melting Point: No data available

Freezing Point: No data available

Boiling Point: 212 °F (100 °C)

Flash Point: No data available

Auto-ignition Temperature: No data available

Decomposition Temperature: No data available

Flammability (solid, gas): No data available

Vapor Pressure: No data available

Relative Vapor Density at 20 °C: No data available

Relative Density: No data available

Specific Gravity: 0.9-1.1

Specific gravity / density: 7.5-9.2 (lbs / gal)

Solubility: No data available

Partition Coefficient: N-Octanol/Water: No data available

Viscosity: 100 - 450 SFS

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability

Combustible liquid. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

10.4. Conditions to Avoid

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames,

incompatible materials, and other ignition sources.

10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products

Carbon oxides (CO, CO₂). May release flammable gases. Hydrogen sulfide. Nitrogen oxides. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

| Asphalt (8052-42-4) | |
|---------------------|--------------------------|
| LD50 Oral Rat | > 5000 mg/kg |
| LD50 Dermal Rabbit | > 2000 mg/kg |
| LC50 Inhalation Rat | > 94.4 mg/m ³ |

| Fatty Derivative #1 | |
|---------------------|--------------------------|
| ATE (Oral) | 100.00 mg/kg body weight |
| ATE (Dermal) | 300.00 mg/kg body weight |
| ATE (Gases) | 700.00 ppmV/4h |
| ATE (Vapors) | 3.00 mg/l/4h |
| ATE (Dust/Mist) | 0.50 mg/l/4h |

| Fatty Derivative #3 | |
|---------------------|--------------------------|
| ATE (Oral) | 500.00 mg/kg body weight |

| Hydrochloric acid (7647-01-0) | |
|-------------------------------|--------------|
| LD50 Dermal Rabbit | > 5010 mg/kg |

Skin Corrosion/Irritation: Causes skin irritation.

pH: 2 - 5

Serious Eye Damage/Irritation: Causes serious eye irritation.

pH: 2 - 5

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

| Asphalt (8052-42-4) | |
|---|---|
| IARC group | 2B |
| National Toxicology Program (NTP) Status | Twelfth Report - Items under consideration. |
| OSHA Hazard Communication Carcinogen List | In OSHA Hazard Communication Carcinogen list. |

| Hydrochloric acid (7647-01-0) | |
|-------------------------------|---|
| IARC group | 3 |

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. Toxic fumes may be generated from heating asphalt and may be harmful if inhaled.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction. Removal of solidified molten material from skin requires medical assistance.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of causing cancer. May damage fertility or the unborn child.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

| Hydrochloric acid (7647-01-0) | |
|-------------------------------|--|
| LC50 Fish 1 | 3.25 - 3.5 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus) |
| EC50 Daphnia 1 | 4.92 mg/l (Exposure time: 48 h - Species: Daphnia magna) |

12.2. Persistence and Degradability

| E-12; E-12PM | |
|-------------------------------|---|
| Persistence and Degradability | May cause long-term adverse effects in the environment. |

12.3. Bioaccumulative Potential

| E-12; E-12PM | |
|---------------------------|------------------|
| Bioaccumulative Potential | Not established. |

| Asphalt (8052-42-4) | |
|---------------------|-------------------------------|
| BCF fish 1 | (no bioaccumulation expected) |
| Log Pow | > 6 |

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION**14.1. In Accordance with DOT**

Proper Shipping Name: ASPHALT at or above its flash point

Hazard Class: 3

Identification Number: NA1999

Label Codes: 3

Packing Group: III

ERG Number: 130

**14.2. In Accordance with IMDG**

Not regulated for transport

14.3. In Accordance with IATA

Not regulated for transport

SECTION 15: REGULATORY INFORMATION**15.1 US Federal Regulations**

| E-12; E-12PM | |
|-------------------------------------|-------------|
| SARA Section 311/312 Hazard Classes | Fire hazard |
| Immediate (acute) health hazard | |
| Delayed (chronic) health hazard | |

| Asphalt (8052-42-4) | |
|---|---------------------------------|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| SARA Section 311/312 Hazard Classes | Delayed (chronic) health hazard |

| Hydrochloric acid (7647-01-0) | |
|---|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| Listed on the United States SARA Section 302 | |
| Listed on United States SARA Section 313 | |
| SARA Section 302 Threshold Planning Quantity (TPQ) | 500 (gas only) |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |
| SARA Section 313 - Emission Reporting | 1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) |

| Water (7732-18-5) | |
|---|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

15.2 US State Regulations

| Asphalt (8052-42-4) | |
|--|--|
| U.S. - Massachusetts - Right To Know List | |
| U.S. - New Jersey - Right to Know Hazardous Substance List | |
| U.S. - Pennsylvania - RTK (Right to Know) List | |

Hydrochloric acid (7647-01-0)

U.S. - Massachusetts - Right To Know List
 U.S. - New Jersey - Right to Know Hazardous Substance List
 U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
 U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date: 09/01/2015

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

| GHS Full Text Phrases | |
|---------------------------|--|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal) Category 3 |
| Acute Tox. 3 (Inhalation) | Acute toxicity (inhalation) Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral) Category 3 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment - Acute Hazard Category 1 |
| Aquatic Acute 2 | Hazardous to the aquatic environment - Acute Hazard Category 2 |
| Aquatic Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment - Chronic Hazard Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment - Chronic Hazard Category 2 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment - Chronic Hazard Category 3 |
| Asp. Tox. 1 | Aspiration hazard Category 1 |
| Carc. 2 | Carcinogenicity Category 2 |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Flam. Liq. 2 | Flammable liquids Category 2 |
| Flam. Liq. 3 | Flammable liquids Category 3 |
| Flam. Liq. 4 | Flammable liquids Category 4 |
| Met. Corr. 1 | Corrosive to metals Category 1 |
| Repr. 1B | Reproductive toxicity Category 1B |
| Skin Corr. 1B | Skin corrosion/irritation Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| Skin Sens. 1 | Skin sensitization Category 1 |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H225 | Highly flammable liquid and vapor |
| H226 | Flammable liquid and vapor |
| H227 | Combustible liquid |
| H290 | May be corrosive to metals |
| H301 | Toxic if swallowed |
| H302 | Harmful if swallowed |
| H304 | May be fatal if swallowed and enters airways |

| GHS Full Text Phrases | |
|-----------------------|--|
| H311 | Toxic in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness |
| H351 | Suspected of causing cancer |
| H360 | May damage fertility or the unborn child |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H400 | Very toxic to aquatic life |
| H401 | Toxic to aquatic life |
| H402 | Harmful to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects |
| H412 | Harmful to aquatic life with long lasting effects |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)