

SAFETY DATA SHEET



1. Identification

Product identifier UNITED COATINGS ELASTUFF 103 ROOF COATING PART A

Other means of identification

Product Code

Recommended use Polyurethane coating system.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name GAF
1 Campus Drive
Parsippany, NJ 07054 USA

Telephone 1-800-766-3411

Emergency phone number CHEMTREC [DAY OR NIGHT] 1-800-424-9300
Within USA and CANADA 1-800-424-9300
Outside USA and Canada: 1 703-741-5970

2. Hazard(s) identification

| | | |
|------------------------------|--|-------------|
| Physical hazards | Flammable liquids | Category 3 |
| Health hazards | Acute toxicity, oral | Category 4 |
| | Acute toxicity, inhalation | Category 1 |
| | Skin corrosion/irritation | Category 1 |
| | Serious eye damage/eye irritation | Category 1 |
| | Sensitization, respiratory | Category 1 |
| | Sensitization, skin | Category 1 |
| | Carcinogenicity | Category 1A |
| | Reproductive toxicity | Category 2 |
| | Specific target organ toxicity, repeated exposure | Category 1 |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 3 |
| | Hazardous to the aquatic environment, long-term hazard | Category 2 |
| OSHA defined hazards | Not classified. | |

Label elements



Signal word Danger

Hazard statement Flammable liquid and vapor. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment is urgent (see this label). If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

Storage

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

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|---------------------------------------|--------------------------|-------------|-----------|
| ALUMINUM HYDROXIDE | | 21645-51-2 | 10 to <20 |
| Dicyclohexylmethane-4,4'-diisocyanate | | 5124-30-1 | 10 to <20 |
| Crystalline Silica | | 14808-60-7 | 5 to <10 |
| Titanium Dioxide | | 13463-67-7 | 5 to <10 |
| Xylene | | 1330-20-7 | 5 to <10 |
| Antimony Oxide | | 1309-64-4 | 1 to <5 |
| Ethyl 3-ethoxypropionate | | 763-69-9 | 1 to <5 |
| ETHYLBENZENE | | 100-41-4 | 1 to <5 |
| p-Toluenesulfonyl Isocyanate (PTSI) | | 4083-64-1 | 1 to <5 |
| Silica, amorphous, fumed | | 112945-52-5 | 1 to <5 |
| TOLUENE (METHYLBENZENE, TOLUOL) | | 108-88-3 | 0.1 to <1 |
| Non-Hazardous Ingredients | | | 40 to <50 |

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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| Most important symptoms/effects, acute and delayed | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing. Prolonged exposure may cause chronic effects. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| General information | Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. |

5. Fire-fighting measures

| | |
|--|--|
| Suitable extinguishing media | Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. |
| Unsuitable extinguishing media | Water. Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Flammable liquid and vapor. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Use appropriate containment to avoid environmental contamination. |

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value | Form |
|-----------------------------------|------|----------------------|-------------|
| Antimony Oxide (CAS 1309-64-4) | PEL | 0.5 mg/m3 | |
| ETHYLBENZENE (CAS 100-41-4) | PEL | 435 mg/m3 | |
| Titanium Dioxide (CAS 13463-67-7) | PEL | 150 ppm 15 mg/m3 | Total dust. |
| Xylene (CAS 1330-20-7) | PEL | 435 mg/m3 100 ppm | |

US. OSHA Table Z-2 (29 CFR 1910.1000)

| Components | Type | Value |
|--|---------|---------|
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | Ceiling | 300 ppm |
| | TWA | 200 ppm |

US. OSHA Table Z-3 (29 CFR 1910.1000)

| Components | Type | Value | Form |
|--|------|-----------|-------------|
| Crystalline Silica (CAS 14808-60-7) | TWA | 0.3 mg/m3 | Total dust. |
| | | 0.1 mg/m3 | Respirable. |
| | | 2.4 mppcf | Respirable. |
| Silica, amorphous, fumed (CAS 112945-52-5) | TWA | 0.8 mg/m3 | |
| | | 20 mppcf | |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|-------------------------------------|------|---------|----------------------|
| ALUMINUM HYDROXIDE (CAS 21645-51-2) | TWA | 1 mg/m3 | Respirable fraction. |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|--|------|-------------|----------------------|
| Antimony Oxide (CAS 1309-64-4) | TWA | 0.5 mg/m3 | |
| Crystalline Silica (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |
| Dicyclohexylmethane-4,4'-di isocyanate (CAS 5124-30-1) | TWA | 0.005 ppm | |
| ETHYLBENZENE (CAS 100-41-4) | TWA | 20 ppm | |
| Titanium Dioxide (CAS 13463-67-7) | TWA | 10 mg/m3 | |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | TWA | 20 ppm | |
| Xylene (CAS 1330-20-7) | STEL | 150 ppm | |
| | TWA | 100 ppm | |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|--|---------|---------------------------------|------------------|
| Antimony Oxide (CAS 1309-64-4) | TWA | 0.5 mg/m3 | |
| Crystalline Silica (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |
| Dicyclohexylmethane-4,4'-di isocyanate (CAS 5124-30-1) | Ceiling | 0.11 mg/m3 | |
| | | 0.01 ppm | |
| ETHYLBENZENE (CAS 100-41-4) | STEL | 545 mg/m3 | |
| | TWA | 125 ppm 435 mg/m3 100 ppm | |
| Silica, amorphous, fumed (CAS 112945-52-5) | TWA | 6 mg/m3 | |
| | STEL | 560 mg/m3 | |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | TWA | 150 ppm 375 mg/m3 100 ppm | |

Biological limit values**ACGIH Biological Exposure Indices**

| Components | Value | Determinant | Specimen | Sampling Time |
|--|-----------|---|---------------------|---------------|
| ETHYLBENZENE (CAS 100-41-4) | 0.15 g/g | Sum of mandelic acid and phenylglyoxylic acid | Creatinine in urine | * |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | 0.3 mg/g | o-Cresol, with hydrolysis | Creatinine in urine | * |
| | 0.03 mg/l | Toluene | Urine | * |
| Xylene (CAS 1330-20-7) | 0.02 mg/l | Toluene | Blood | * |
| | 1.5 g/g | Methylhippuric acids | Creatinine in urine | * |

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) Skin designation applies.

US - Tennessee OELs: Skin designation

Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1) Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -27.4 °F (-33 °C) estimated

Initial boiling point and boiling range 282.74 °F (139.3 °C) estimated

Flash point 80.1 °F (26.7 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 717.42 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density

11.98 lbs/gal

| | |
|---------------------------|--|
| Flammability class | Flammable IC estimated |
| Percent volatile | 42.06 % |
| Specific gravity | 1.44 |
| VOC | 1.689656 lbs/gal Material estimated 202.471478 g/l Material estimated 2.089638 lbs/gal Regulatory estimated 250.401322 g/l Regulatory estimated |

10. Stability and reactivity

| | |
|---|--|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| Incompatible materials | Strong acids. Acids. Strong oxidizing agents. Powerful oxidizers. Halogens. Amines. Alcohols. Chlorine. |
| Hazardous decomposition products | No hazardous decomposition products are known. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Fatal if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin contact | Causes severe skin burns. May cause an allergic skin reaction. |
| Eye contact | Causes serious eye damage. |
| Ingestion | Causes digestive tract burns. Harmful if swallowed. |

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.

Information on toxicological effects

Acute toxicity Fatal if inhaled. Harmful if swallowed. May cause an allergic skin reaction.

| Components | Species | Test Results |
|---|------------|---------------------|
| ALUMINUM HYDROXIDE (CAS 21645-51-2) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | > 5000 mg/kg |
| Antimony Oxide (CAS 1309-64-4) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | > 20 g/kg |
| Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 10000 mg/kg |
| Inhalation | | |
| LC50 | Guinea pig | 0.501 mg/l, 1 Hours |
| | Rat | 0.295 mg/l, 4 Hours |
| Oral | | |
| LD50 | Rat | 1065 mg/kg |
| ETHYLBENZENE (CAS 100-41-4) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 17800 mg/kg |

| Components | Species | Test Results |
|--|---------|--------------------|
| Oral | | |
| LD50 | Rat | 3500 mg/kg |
| Silica, amorphous, fumed (CAS 112945-52-5) | | |
| Acute | | |
| Oral | | |
| LD50 | Mouse | > 15000 mg/kg |
| | Rat | > 22500 mg/kg |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 12124 mg/kg |
| | | 14.1 ml/kg |
| Inhalation | | |
| LC50 | Mouse | 5320 ppm, 8 Hours |
| | | 400 ppm, 24 Hours |
| | Rat | 26700 ppm, 1 Hours |
| | | 12200 ppm, 2 Hours |
| | | 8000 ppm, 4 Hours |
| Oral | | |
| LD50 | Rat | 2.6 g/kg |
| Xylene (CAS 1330-20-7) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 43 g/kg |
| Inhalation | | |
| LC50 | Mouse | 3907 mg/l, 6 Hours |
| | Rat | 6350 mg/l, 4 Hours |
| Oral | | |
| LD50 | Mouse | 1590 mg/kg |
| | Rat | 3523 - 8600 mg/kg |

* Estimates for product may be based on additional component data not shown.

| | |
|--|--|
| Skin corrosion/irritation | Causes severe skin burns and eye damage. |
| Serious eye damage/eye irritation | Causes serious eye damage. |
| Respiratory or skin sensitization | |
| Respiratory sensitization | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization | May cause an allergic skin reaction. |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity | May cause cancer. |

IARC Monographs. Overall Evaluation of Carcinogenicity

| | |
|--|---|
| Antimony Oxide (CAS 1309-64-4) | 2B Possibly carcinogenic to humans. |
| Crystalline Silica (CAS 14808-60-7) | 1 Carcinogenic to humans. |
| ETHYLBENZENE (CAS 100-41-4) | 2B Possibly carcinogenic to humans. |
| Silica, amorphous, fumed (CAS 112945-52-5) | 3 Not classifiable as to carcinogenicity to humans. |
| Titanium Dioxide (CAS 13463-67-7) | 2B Possibly carcinogenic to humans. |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | 3 Not classifiable as to carcinogenicity to humans. |
| Xylene (CAS 1330-20-7) | 3 Not classifiable as to carcinogenicity to humans. |

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Crystalline Silica (CAS 14808-60-7)

Known To Be Human Carcinogen.

| | |
|---|--|
| Reproductive toxicity | Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. Suspected of damaging fertility or the unborn child. |
| Specific target organ toxicity - single exposure | Not classified. |
| Specific target organ toxicity - repeated exposure | Causes damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | Not available. |
| Chronic effects | Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. Causes damage to organs through prolonged or repeated exposure. |

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

| Components | | Species | Test Results |
|--|------|---|------------------------------|
| Antimony Oxide (CAS 1309-64-4) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 361.5 - 496 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | > 80 mg/l, 96 hours |
| ETHYLBENZENE (CAS 100-41-4) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1.37 - 4.4 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 7.5 - 11 mg/l, 96 hours |
| Titanium Dioxide (CAS 13463-67-7) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | > 1000 mg/l, 48 hours |
| Fish | LC50 | Mummichog (Fundulus heteroclitus) | > 1000 mg/l, 96 hours |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 5.46 - 9.83 mg/l, 48 hours |
| Fish | LC50 | Coho salmon, silver salmon (Oncorhynchus kisutch) | 8.11 mg/l, 96 hours |
| Xylene (CAS 1330-20-7) | | | |
| Aquatic | | | |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | 7.711 - 9.591 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

| | |
|---------------------------------------|------------|
| Dicyclohexylmethane-4,4'-diisocyanate | 6.11 |
| ETHYLBENZENE | 3.15 |
| TOLUENE (METHYLBENZENE, TOLUOL) | 2.73 |
| Xylene | 3.12 - 3.2 |

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

| | |
|--|--|
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. |

14. Transport information

DOT

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|-------------------------------------|--|
| UN number | UN1993 |
| UN proper shipping name | Flammable liquids, n.o.s. (Benzene, 1-Chloro-4-(trifluoromethyl)-, Xylene RQ = 1253 LBS) (PREPOL 102/255 90% in EEP) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Label(s) | 3 |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | Yes |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | B1, B52, IB3, T4, TP1, TP29 |
| Packaging exceptions | 150 |
| Packaging non bulk | 203 |
| Packaging bulk | 242 |

IATA

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | Flammable liquid, n.o.s. (Benzene, 1-Chloro-4-(trifluoromethyl)-, Xylene) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | Yes |
| ERG Code | 3L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information | |
| Passenger and cargo aircraft | Allowed. |
| Cargo aircraft only | Allowed. |

IMDG

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | FLAMMABLE LIQUID, N.O.S. (Benzene, 1-Chloro-4-(trifluoromethyl)-, Xylene) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | Yes |
| EmS | F-E, <u>S</u> <u>E</u> |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT



IATA; IMDG



Marine pollutant



General information

DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

| | |
|--|---------|
| Antimony Oxide (CAS 1309-64-4) | Listed. |
| ETHYLBENZENE (CAS 100-41-4) | Listed. |
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | Listed. |
| Xylene (CAS 1330-20-7) | Listed. |

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|---------------------------------------|------------|-----------|
| Dicyclohexylmethane-4,4'-diisocyanate | 5124-30-1 | 10 to <20 |
| Xylene | 1330-20-7 | 5 to <10 |
| Antimony Oxide | 1309-64-4 | 1 to <5 |
| ETHYLBENZENE | 100-41-4 | 1 to <5 |
| TOLUENE (METHYLBENZENE, TOLUOL) | 108-88-3 | 0.1 to <1 |

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Antimony Oxide (CAS 1309-64-4)
 ETHYLBENZENE (CAS 100-41-4)
 TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) 594

US state regulations**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Antimony Oxide (CAS 1309-64-4)
 Crystalline Silica (CAS 14808-60-7)
 Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1)
 ETHYLBENZENE (CAS 100-41-4)
 p-Toluenesulfonyl Isocyanate (PTSI) (CAS 4083-64-1)
 Titanium Dioxide (CAS 13463-67-7)
 TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

US. Massachusetts RTK - Substance List

Antimony Oxide (CAS 1309-64-4)
 Crystalline Silica (CAS 14808-60-7)
 Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1)
 ETHYLBENZENE (CAS 100-41-4)
 Silica, amorphous, fumed (CAS 112945-52-5)
 Titanium Dioxide (CAS 13463-67-7)
 TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

US. New Jersey Worker and Community Right-to-Know Act

Antimony Oxide (CAS 1309-64-4)
 Crystalline Silica (CAS 14808-60-7)
 Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1)
 ETHYLBENZENE (CAS 100-41-4)
 Titanium Dioxide (CAS 13463-67-7)
 TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Antimony Oxide (CAS 1309-64-4)
 Crystalline Silica (CAS 14808-60-7)
 Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1)

ETHYLBENZENE (CAS 100-41-4)
 Silica, amorphous, fumed (CAS 112945-52-5)
 Titanium Dioxide (CAS 13463-67-7)
 TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

US. Rhode Island RTK

Antimony Oxide (CAS 1309-64-4)
 Dicyclohexylmethane-4,4'-diisocyanate (CAS 5124-30-1)
 ETHYLBENZENE (CAS 100-41-4)
 TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3)
 Xylene (CAS 1330-20-7)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

| | |
|-------------------------------------|---------------------------|
| Antimony Oxide (CAS 1309-64-4) | Listed: October 1, 1990 |
| Carbon Black (CAS 1333-86-4) | Listed: February 21, 2003 |
| Crystalline Silica (CAS 14808-60-7) | Listed: October 1, 1988 |
| ETHYLBENZENE (CAS 100-41-4) | Listed: June 11, 2004 |
| Titanium Dioxide (CAS 13463-67-7) | Listed: September 2, 2011 |

US - California Proposition 65 - CRT: Listed date/Developmental toxin

| | |
|--|-------------------------|
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | Listed: January 1, 1991 |
|--|-------------------------|

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

| | |
|--|------------------------|
| TOLUENE (METHYLBENZENE, TOLUOL) (CAS 108-88-3) | Listed: August 7, 2009 |
|--|------------------------|

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|-------------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | No |
| Canada | Domestic Substances List (DSL) | No |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

| | |
|----------------------|---|
| Issue date | 12-16-2014 |
| Revision date | 11-20-2015 |
| Version # | 02 |
| HMIS® ratings | Health: 4* Flammability: 3 Physical hazard: 0 |
| NFPA ratings | Health: 4 Flammability: 3 Instability: 0 |

Disclaimer

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Revision Information

Product and Company Identification: Converted to GAF SDS