

Safety Data Sheet



Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name | SLIP Plate No. 4

Product Code |

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) | Dry film lubricant

1.3 Details of the supplier of the safety data sheet

Manufacturer | Superior Graphite
10 S. Riverside Plaza
Chicago, IL 60606
United States

Telephone (General) | 312-559-2999 - (8-5CST, M-F)

1.4 Emergency telephone number

Manufacturer | 1-800-424-9300 - For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night

Manufacturer | +1 703-527-3887 - Outside USA and Canada (collect calls accepted)

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP | Acute Toxicity Oral 4 - H302
Skin Irritation 2 - H315
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
Specific Target Organ Toxicity Repeated Exposure 2 - H373

DSD/DPD | Irritant (Xi)
Harmful (Xn)
R36/37/38, R48/20

2.2 Label Elements

CLP

DANGER



Hazard statements | H302 - Harmful if swallowed
H315 - Causes skin irritation

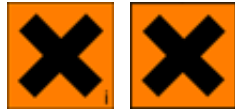
H335 - May cause respiratory irritation
 H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements

- Prevention** | P260 - Do not breathe mist, vapours, or vspray.
 P264 - Wash thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P271 - Use only outdoors or in a well-ventilated area.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response** | P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 P362 - Take off contaminated clothing and wash before reuse.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P321 - Specific treatment, see supplemental first aid information.
 P301+P312 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.
 P330 - Rinse mouth.
 P314 - Get medical advice/attention if you feel unwell.

- Storage/Disposal** | P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 P405 - Store locked up.
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases** | R36/37/38 - Irritating to eyes, respiratory system and skin.
 R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

- Safety phrases** | S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other Hazards

- CLP** | According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

- DSD/DPD** | According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012** | Acute Toxicity Oral 4
 Skin Irritation 2
 Eye Irritation 2
 Reproductive Toxicity 2
 Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements** | Harmful if swallowed
 Causes skin irritation

Causes serious eye irritation
 Suspected of damaging fertility or the unborn child.
 Causes damage to organs through prolonged or repeated exposure

Precautionary statements

Prevention | Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe mist/vapours/spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response | If on skin: Wash with plenty of water.
 Take off contaminated clothing and wash before reuse.
 If skin irritation occurs: Get medical advice/attention.
 Specific treatment, see supplemental first aid information.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.
 Rinse mouth.
 IF exposed or concerned: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.

Storage/Disposal | Store locked up.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

| Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

| Very Toxic - D1A
 Other Toxic Effects - D2A

2.2 Label elements

WHMIS



| Very Toxic - D1A
 Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

| In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

| Material does not meet the criteria of a substance in accordance with Regulation (EC)

No 1272/2008.

3.2 Mixtures

| Composition | | | | | |
|---------------------------------|--|-------|--|--|-----------------|
| Chemical Name | Identifiers | % | LD50/LC50 | Classifications According to Regulation/Directive | Comments |
| Graphite | CAS: 7782-42-5 EC Number: 231-955-3 | < 40% | NDA | EU DSD/DPD: Not classified EU CLP: Not classified OSHA HCS 2012: Comb. Dust | NDA |
| Ethylene glycol monobutyl ether | CAS: 111-76-2 EC Number: 203-905-0 EU Index: 603-014-00-0 | < 10% | Inhalation-Rat LC50 • 450ppm4Hour(s) Skin-Rabbit LD50 • 220 mg/kg Ingestion/Oral-Rat LD50 • 250 mg/kg | EU DSD/DPD: Annex VI, Table 3.2: Xn R20/21/22 Xi R36/38 EU CLP: Annex VI, Table 3.1: Acute Tox. 3, H331; Acute Tox. 3, H311; Acute Tox. 4*, H302; Eye Irrit. 2, H319; Skin Irrit. 2, H315 OSHA HCS 2012: Eye Irrit. 2; Skin Irrit. 2; STOT SE 3: Resp. Irrit & Narc.; Acute Tox. 4 (oral); Acute Tox. 3 (skn); Acute Tox. 3 (inhl); Repr. 2; | NDA |
| Butyl alcohol | CAS: 71-36-3 EC Number: 200-751-6 EU Index: 603-004-00-6 | < 5% | Skin-Rabbit LD50 • 3400 mg/kg Inhalation-Rat LC50 • 24000 mg/m ³ 4 Hour (s) Ingestion/Oral-Rat LD50 • 0.79 g/kg | EU DSD/DPD: Annex VI, Table 3.2: R10 Xn R22 Xi R37/38-41 R67 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226; Acute Tox. 4 *, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT SE 3: Resp. Irrit., H335; STOT SE 3: Narc., H336 OSHA HCS 2012: Flam. Liq. 3; Eye Irrit. 2; Skin Irrit. 2; Acute Tox. 4 (Oral); STOT SE 3: Resp. Irrit.; STOT SE 3: Narc. | NDA |
| Triethylamine | CAS: 121-44-8 EC Number: 204-469-4 EU Index: 612-004-00-5 | < 3% | Ingestion/Oral-Rat LD50 • 460 mg/kg Skin-Rabbit LD50 • 570 µL/kg | EU DSD/DPD: Annex VI, Table 3.2: F R11 Xn R20/21/22 C R35 EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Acute Tox. 4 *, H332; Acute Tox. 3*, H311; Acute Tox. 4 *, H302; Skin Corr. 1A, H314 OSHA HCS 2012: Flam. Liq. 2; Skin Corr. 1B; Eye Dam. 1; Acute Tox. 4 (oral); Acute Tox. 3 (skin) | NDA |
| Quartz | CAS: 14808-60-7 EC Number: 238-878-4 | < 1% | NDA | EU DSD/DPD: Self Classified: T R48/20 Carc. Cat. 1 R49 EU CLP: Self Classified: STOT RE 1 (Lungs, Inhl), H372; Carc. 1A, H350 OSHA HCS 2012: STOT RE 1 (Lungs, Inhl); Carc. 1A | <0.1% resprable |

See Section 16 for full text of H-statements and R-phrases.

Section 4-First Aid Measures

4.1 Description of first aid measures

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention if symptoms occur.

Skin

- Wash skin with soap and water. Wash contaminated clothing before reuse. If irritation develops and persists, get medical attention.

Eye

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

Ingestion

- Do NOT induce vomiting. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media | LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.

Unsuitable Extinguishing Media | No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards | Containers may explode when heated.
Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Hazardous Combustion Products | No data available

5.3 Advice for firefighters

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).
Move containers from fire area if you can do it without risk.
Water may be used to cool containers to prevent pressure build-up and explosion when exposed to extreme heat.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions | Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures | As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas.

6.2 Environmental precautions

Prevent entry into waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures | Stop leak if you can do it without risk.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only in well ventilated areas. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist, vapours, spray. Avoid contact with eyes, skin and clothing. Do not ingest. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool, dry, well-ventilated place. Do not store above 120 F.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

| Exposure Limits/Guidelines | | | | |
|--|----------|---|--|--|
| | Result | ACGIH | NIOSH | OSHA |
| Quartz (14808-60-7) | TWAs | 0.025 mg/m ³ TWA (respirable fraction) | 0.05 mg/m ³ TWA (respirable dust) | Not established |
| Triethylamine (121-44-8) | TWAs | 1 ppm TWA | Not established | 25 ppm TWA; 100 mg/m ³ TWA |
| | STELs | 3 ppm STEL | Not established | Not established |
| Butyl alcohol (71-36-3) | TWAs | 20 ppm TWA | Not established | 100 ppm TWA; 300 mg/m ³ TWA |
| | Ceilings | Not established | 50 ppm Ceiling; 150 mg/m ³ Ceiling | Not established |
| Ethylene glycol monobutyl ether (111-76-2) | TWAs | 20 ppm TWA | 5 ppm TWA; 24 mg/m ³ TWA | 50 ppm TWA; 240 mg/m ³ TWA |
| Graphite (7782-42-5) | TWAs | 2 mg/m ³ TWA (all forms except graphite fibers, respirable fraction) | 2.5 mg/m ³ TWA (natural, respirable dust) | 15 mg/m ³ TWA (synthetic, total dust); 5 mg/m ³ TWA (synthetic, respirable fraction) |

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation 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.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- Wear protective clothing and gloves.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

STEL = Short Term Exposure Limits are based on 15-minute exposures

Section 9-Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

| Material Description | | | |
|-------------------------------------|---|------------------------|--------------------------------|
| Physical Form | Liquid | Appearance/Description | Dark gray liquid with no odor. |
| Color | Dark gray. | Odor | Odorless |
| Odor Threshold | Data lacking | | |
| General Properties | | | |
| Boiling Point | 212 F(100 C) | Melting Point | Data lacking |
| Decomposition Temperature | Data lacking | pH | Data lacking |
| Specific Gravity/Relative Density | = 1.18 | Water Solubility | Miscible |
| Viscosity | 1700 Centipoise (cPs, cP) or mPas | Explosive Properties | Data lacking |
| Oxidizing Properties: | Data lacking | | |
| Volatility | | | |
| Vapor Pressure | Of water | Vapor Density | 0.6 Air=1 |
| Evaporation Rate | < 1 n-Butyl Acetate = 1 | | |
| Flammability | | | |
| Flash Point | > 200 F(> 93.3333 C) STCC (Seta Test/Seta Flash Closed Cup) | UEL | Data lacking |
| LEL | Data lacking | Autoignition | Data lacking |
| Flammability (solid, gas) | Data lacking. | | |
| Environmental | | | |
| Octanol/Water Partition coefficient | Data lacking | | |

9.2 Other Information

| No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

| No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

| Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

| Hazardous polymerization will not occur.

10.4 Conditions to avoid

| Heat, sparks, open flames. Excess heat. Incompatible materials.

10.5 Incompatible materials

| Strong oxidizing agents, acids, and alkalis.

10.6 Hazardous decomposition products

| On burning may release carbon dioxide and carbon monoxide.

Section 11-Toxicological Information

11.1 Information on toxicological effects

| Components | | |
|---|------------|--|
| Quartz (< 1%) | 14808-60-7 | Multi-dose Toxicity: Inhalation-Hamster TCl ₀ • 3 mg/m ³ 6 Hour(s) 78 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:</i> Fibrosis (interstitial); Lungs, Thorax, or Respiration:Changes in lung weight; Inhalation-Rat TCl ₀ • 80 mg/m ³ 26 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:</i> Fibrosis, focal (pneumoconiosis); Blood:Changes in spleen; Immunological Including Allergic:Decrease in cellular immune response; Tumorigen / Carcinogen: Inhalation-Rat TCl ₀ • 50 mg/m ³ 6 Hour(s) 71 Week(s)-Intermittent; <i>Tumorigenic:</i> Carcinogenic by RTECS criteria; Liver:Tumors |
| Triethylamine (< 3%) | 121-44-8 | Acute Toxicity: Ingestion/Oral-Mouse LD50 • 546 mg/kg; <i>Behavioral:</i> Somnolence (general depressed activity); Behavioral:Excitement; Behavioral:Muscle weakness; Ingestion/Oral-Rat LD50 • 460 mg/kg; Skin-Rabbit LD50 • 570 µL/kg; Irritation: Skin-Rabbit • 365 mg-Open • Mild irritation; Multi-dose Toxicity: Inhalation-Rat TCl ₀ • 1 g/m ³ 2 Week(s)-Intermittent; <i>Sense Organs and Special Senses:Eye:Conjunctive irritation; Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi;</i> Mutagen: Cytogenetic analysis • Inhalation-Rat • 1 mg/m ³ |
| Butyl alcohol (< 5%) | 71-36-3 | Acute Toxicity: Ingestion/Oral-Rat LD50 • 790 mg/kg; <i>Liver:</i> Fatty liver degeneration; Kidney, Ureter, and Bladder:Other changes; Blood:Other changes; Inhalation-Rat LC50 • 24000 mg/m ³ 4 Hour(s); Skin-Rabbit LD50 • 3400 mg/kg; Irritation: Eye-Rabbit • 1.62 mg • Severe irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 45500 mg/kg 13 Week(s)-Intermittent; <i>Behavioral:Ataxia;</i> Reproductive: Inhalation-Rat TCl ₀ • 6000 ppm 7 Hour(s)(1-19D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> |
| Ethylene glycol monobutyl ether (< 10%) | 111-76-2 | Acute Toxicity: Ingestion/Oral-Rat LD50 • 250 mg/kg; Inhalation-Rat LC50 • 450 ppm 4 Hour(s); <i>Behavioral:Ataxia; Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain;</i> Irritation: Eye-Rabbit • 100 mg • Severe irritation; Eye-Rabbit • 100 mg 24 Hour(s) • Moderate irritation; Skin-Rabbit • 500 mg-Open • Mild irritation; Reproductive: Ingestion/Oral-Rat TDLo • 600 mg/kg (9-11D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetal death;</i> Inhalation-Rat TCl ₀ • 25 ppm 6 Hour(s)(6-15D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Tumorigen / Carcinogen: Inhalation-Mouse TCl ₀ • 250 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:</i> Carcinogenic by RTECS criteria; Liver:Tumors |

| GHS Properties | Classification |
|----------------------------------|---|
| Acute toxicity | EU/CLP • Acute Toxicity - Oral 4 - ATEmix(oral) = 1919 mg/kg OSHA HCS 2012 • Acute Toxicity - Oral 4 - ATEmix(oral) = 1919 mg/kg |
| Aspiration Hazard | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |
| Carcinogenicity | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |
| Germ Cell Mutagenicity | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |
| Skin corrosion/Irritation | EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2 |
| Skin sensitization | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |
| STOT-RE | EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1 |
| STOT-SE | EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation OSHA HCS 2012 • Data lacking |
| Toxicity for Reproduction | EU/CLP • Data lacking OSHA HCS 2012 • Toxic to Reproduction 2 |

| | |
|-------------------------------|---|
| Respiratory sensitization | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |
| Serious eye damage/Irritation | EU/CLP • Data lacking OSHA HCS 2012 • Eye Irritation 2 |

Potential Health Effects

Inhalation

- Acute (Immediate) | May cause respiratory irritation.
- Chronic (Delayed) | No data available

Skin

- Acute (Immediate) | Causes skin irritation.
- Chronic (Delayed) | No data available

Eye

- Acute (Immediate) | Causes serious eye damage.
- Chronic (Delayed) | No data available

Ingestion

- Acute (Immediate) | Harmful if swallowed. May cause cramps and diarrhea.
- Chronic (Delayed) | No data available

Carcinogenic Effects

- | This material contains Quartz which is considered a carcinogen, however this material as a whole is not classified as a carcinogen.

| Carcinogenic Effects | | | |
|----------------------|------------|----------------------|------------------------|
| | CAS | IARC | NTP |
| Quartz | 14808-60-7 | Group 1-Carcinogenic | Known Human Carcinogen |

Reproductive Effects

- | Suspected of damaging fertility or the unborn child.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- | Material data lacking.

12.2 Persistence and degradability

- | Material data lacking.

12.3 Bioaccumulative potential

- | Material data lacking.

12.4 Mobility in Soil

- | Material data lacking.

12.5 Results of PBT and vPvB assessment

- | PBT and vPvB assessment has not been conducted for this material.

12.6 Other adverse effects

▮ No studies have been found.

Section 13-Disposal Considerations

13.1 Waste treatment methods

- Product waste** ▮ Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste** ▮ Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14-Transport Information

| | 14.1 UN number | 14.2 UN proper shipping name | 14.3 Transport hazard class(es) | 14.4 Packing group | 14.5 Environmental hazards |
|-----------|----------------|------------------------------|---------------------------------|--------------------|----------------------------|
| DOT | NDA | Not Regulated | NDA | NDA | NDA |
| TDG | NDA | Not Regulated | NDA | NDA | NDA |
| IMO/IMDG | NDA | Not Regulated | NDA | NDA | NDA |
| IATA/ICAO | NDA | Not Regulated | NDA | NDA | NDA |

14.6 Special precautions for user ▮ None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code ▮ Data lacking.

Section 15-Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications ▮ Acute, Chronic

| Inventory | | | | | |
|---------------------------------|------------|------------|-------------|-----------|-----------|
| Component | CAS | Canada DSL | Canada NDSL | EU EINECS | EU ELNICS |
| Butyl alcohol | 71-36-3 | Yes | No | Yes | No |
| Ethylene glycol monobutyl ether | 111-76-2 | Yes | No | Yes | No |
| Graphite | 7782-42-5 | Yes | No | Yes | No |
| Quartz | 14808-60-7 | Yes | No | Yes | No |
| Triethylamine | 121-44-8 | Yes | No | Yes | No |

Canada

Labor

Canada - WHMIS - Classifications of Substances

- | | | |
|-----------------------------------|----------|--------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | B3, D1A, D2B |
| • Butyl alcohol | 71-36-3 | B2, D2B |
- D2A (In certain cases, this classification does not apply.)

| | | |
|--|------------|---|
| • Quartz | 14808-60-7 | For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.) |
| • Graphite | 7782-42-5 | D2A (natural); D2B (synthetic) |
| Canada - WHMIS - Ingredient Disclosure List | | |
| • Triethylamine | 121-44-8 | 1 % |
| • Ethylene glycol monobutyl ether | 111-76-2 | 1 % |
| • Butyl alcohol | 71-36-3 | 1 % |
| • Quartz | 14808-60-7 | 1 % |
| • Graphite | 7782-42-5 | Not Listed |

Environment**Canada - CEPA - Priority Substances List**

| | | |
|-----------------------------------|------------|--|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Priority Substance List 2 (substance considered toxic, added to CEPA's Schedule 1, List of Toxic Substances) |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

Europe**Other****EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2011/65/EU) (RoHS)**

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

Japan**Environment****Inventory - Japan - Industrial Safety and Health Law Substances (ISHL)**

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | 2-(8)-299 |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

Other**Japan - Chemical Substance Control Law (CSCL) - Monitoring Chemical Substances**

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

Japan - Poisonous and Deleterious Substances - Substances Not Considered Deleterious

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

Japan - Poisonous and Deleterious Substances - Substances Not Considered Poisonous

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - OSHA - Specifically Regulated Chemicals

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

| | | |
|-----------------------------------|------------|------------------------------------|
| • Triethylamine | 121-44-8 | 5000 lb final RQ; 2270 kg final RQ |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | 5000 lb final RQ; 2270 kg final RQ |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

| | | |
|-----------------------------------|------------|--------------------------------|
| • Triethylamine | 121-44-8 | 1.0 % de minimis concentration |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | 1.0 % de minimis concentration |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

| | | |
|-----------------------------------|------------|--|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | carcinogen, initial date 10/1/88 (airborne particles of respirable size) |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - California - Proposition 65 - Developmental Toxicity

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

| | | |
|-----------------------------------|------------|------------|
| • Triethylamine | 121-44-8 | Not Listed |
| • Ethylene glycol monobutyl ether | 111-76-2 | Not Listed |
| • Butyl alcohol | 71-36-3 | Not Listed |
| • Quartz | 14808-60-7 | Not Listed |
| • Graphite | 7782-42-5 | Not Listed |

15.2 Chemical Safety Assessment

┆ No Chemical Safety Assessment has been carried out.

15.3 Other Information

┆ WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information**Relevant Phrases (code & full text)**

┆ H225 - Highly flammable liquid and vapour
 H226 - Flammable liquid and vapour
 H311 - Toxic in contact with skin
 H314 - Causes severe skin burns and eye damage.
 H319 - Causes serious eye irritation
 H331 - Toxic if inhaled
 H332 - Harmful if inhaled
 H336 - May cause drowsiness or dizziness
 H350 - May cause cancer.
 H372 - Causes damage to organs through prolonged or repeated exposure.
 R10 - Flammable.
 R11 - Highly flammable.
 R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
 R22 - Harmful if swallowed.
 R35 - Causes severe burns.
 R36/38 - Irritating to eyes and skin.
 R37/38 - Irritating to respiratory system and skin.
 R41 - Risk of serious damage to eyes.
 R49 - May cause cancer by inhalation.
 R67 - Vapours may cause drowsiness and dizziness.

Last Revision Date ┆ 12/September/2014

Preparation Date ┆ 12/September/2014

Disclaimer/Statement of Liability ┆ The information contained herein is based on data available. However, no warranty is expressed or implied regarding the accuracy of the data or the results obtained from the use thereof. Because the information contained herein may be applied under

conditions beyond our control, we assume no responsibility for its use.

Key to abbreviations

NDA = No data available
