Safety Data Sheet



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

1.1 Product identifier

Product Name SLIP Plate Chain & Cable Aerosol

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

Southwestern Graphite (Division of Asbury Carbons) 2564 Highway 12 DeQuincy, LA 70633 (337) 786-5905

Cummings Moore Graphite (Division of Asbury Carbons) 1646 N. Green Avenue Detroit, MI 48209 (313) 841-1615

1.4 Emergency telephone number

Manufacturer US: 1-800-255-3924; International: +01-813-248-0585; China: 400-120-0751;

Brazil: 0-800-591-6042; India: 000-800-100-4086; Mexico: 01-800-099-0731

Manufacturer ChemTel contract number: MIS0001931 (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 ■ Flammable Aerosols 1 - H222

Skin Irritation 2 - H315

Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336

Specific Target Organ Toxicitý Repeated Exposure 2 - H373 Hazardous to the aquatic environment Chronic 2 - H411

EUH066

DSD/DPD • Extremely Flammable (F+)

Harmful (Xn)

Dangerous to the Environment (N) R12, R48/20, R66, R67, R51, R53

2.2 Label Elements

CLP

DANGER

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Hazard statements .

H222 - Extremely flammable aerosol

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

H373 - May cause damage to organs - Lungs through prolonged or repeated exposure via Inhalation

H411 - Toxic to aquatic life with long lasting effects

EUH066 - Repeated exposure may cause skin dryness or cracking.

Precautionary statements

Prevention |

P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Pressurized container: Do not pierce or burn, even after use.

P260 - Do not breathe mist/vapours/spray. P264 - Wash thoroughly after handling.

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

P273 - Avoid release to the environment.

P280 - Wear protective gloves .

Response P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 - Call a POISON ČENTER 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.

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

P391 - Collect spillage.

Storage/Disposal P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding

50°C/122°F. 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 R12 - Extremely flammable.

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R66 - Repeated exposure may cause skin dryness or cracking.

R67 - Vapours may cause drowsiness and dizziness.

R51 - Toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

Safety phrases

S9 - Keep container in a well ventilated place

S16 - Keep away from sources of ignition - No Smoking.

S57 - Use appropriate containment to avoid environmental contamination.

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

Flammable Aerosols 1 - H222

Skin Irritation 2 - H315 Eye Irritation 2 - H319

Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336 Specific Target Organ Toxicity Repeated Exposure 1 - H372

2.2 Label elements OSHA HCS 2012

DANGER







Hazard statements

Extremely flammable aerosol - H222 Causes skin irritation - H315 Causes serious eye irritation - H319 May cause drowsiness or dizziness - H336

Causes damage to organs - Lungs through prolonged or repeated exposure via Inhalation - H372

Precautionary statements

Prevention .

Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. - P210 Do not spray on an open flame or other ignition source. - P211

Pressurized container: Do not pierce or burn, even after use. - P251

Do not breathe mist/vapours/spray. - P260 Wash thoroughly after handling. - P264

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

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

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

Response •

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340

Call a POISON CENTER or doctor/physician if you feel unwell. - P312

If on skin: Wash with plenty of water .

Take off contaminated clothing and wash before reuse. - P362 If skin irritation occurs: Get medical advice/attention. - P332+P313 Specific treatment, see supplemental first aid information. - P321

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing. - P305+P351+P338 If eye irritation persists: Get medical advice/attention. - P337+P313 IF exposed or concerned: Get medical advice/attention. - P308+P313 Get medical advice/attention if you feel unwell. - P314

Storage/Disposal

Store in a well-ventilated place. Keep container tightly closed. - P403+P233 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. -

P410+P412

Store locked up. - P405

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

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

Flammable Aerosols - B5 Other Toxic Effects - D2A Other Toxic Effects - D2B

2.2 Label elements WHMIS





Flammable Aerosols - B5 Other Toxic Effects - D2A 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

| | | | Compos | ition | |
|---|---|----------|---|---|---|
| Chemical Name | Identifiers | % | LD50/LC50 | Classifications According to Regulation/Directive | Comments |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | CAS:64742-52- 5 EC Number:265- 155-0 EU Index:649- 465-00-7 | < 70% | Ingestion/Oral-Rat LD50 • >5000 mg/kg Skin-Rabbit LD50 • >2000 mg/kg | EU DSD/DPD: Annex VI, Table 3.2: Carc.Cat.2 R45 (Note L) EU CLP: Annex VI, Table 3.1: Carc. 1B; H350 (Note L) OSHA HCS 2012: Skin Irrit. 2 | Contains <3% DMSO therefore carcinogen classification does not apply |
| Heptane | CAS:142-82-5 EC Number:205- 563-8 EU Index:601- 008-00-2 | < 20% | Inhalation-Rat LC50 • 103 g/m³ 4 Hour(s) | EU DSD/DPD: Annex VI, Table 3.2: F R11 Xi R38 N R50-53 Xn R65 R67 EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3: Narc., H336; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Flam. Liq. 2; Skin Irrit. 2; Eye Irrit. 2; Asp. Tox. 1; STOT SE 3: Narc. | NDA |
| Coke (petroleum), calcined | CAS:64743-05- 1 EC Number:265- 210-9 | < 10% | NDA | EU DSD/DPD: Self Classified: T R48/20 EU CLP: Self Classified: STOT RE 1 (Lungs, Inhl), H372 OSHA HCS 2012: STOT RE 1 (Lungs, Inhl) | NDA |
| Acetone | CAS:67-64-1 EC Number:200- 662-2 EU Index:606- 001-00-8 | < 10% | Ingestion/Oral-Rat LD50 • 5800 mg/kg Inhalation-Rat LC50 • 50100 mg/m³ | EU DSD/DPD: Annex VI, Table 3.2: F R11 Xi R36 R66 R67 EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H226; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2, STOT SE 3: Narc. | NDA |
| | CAS:74-98-6 EC | | | EU DSD/DPD: Annex VI, Table 3.2: F+; R12 | |

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| Propane | Number:200- 827-9 EU Index:601- 003-00-5 | < 6% | NDA | EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220; Press. Gas - Comp., H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas - Comp.; Simp. Asphyx. | NDA |
|---------|---|---------|--|--|-----|
| Butane | CAS:106-97-8 EC Number:203- 448-7 EU Index:601- 004-00-0 | < 6% | Inhalation-Rat LC50 • 658 g/m³ 4 Hour(s) | EU DSD/DPD: Annex VI, Table 3.2: F+ R12 EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220; Press. Gas - Comp., H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas - Comp.; Simp. Asphyx. | NDA |

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. If signs/symptoms continue, get medical attention. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

In case of contact with substance, immediately flush skin with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin. Get medical attention immediately if symptoms occur.

Eye

In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

■ If swallowed, 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

Closed containers may explode from internal pressure build-up when exposed to extreme heat and discharge contents.

Vapors may travel to source of ignition and flash back.

Vapors may form explosive mixtures with air.

Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Hazardous Combustion Products

■ On burning, may release carbon dioxide and carbon monoxide.

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.

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Wear positive pressure self-contained breathing apparatus (SCBA). 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

Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.

Emergency Procedures

■ ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). 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. Ventilate closed spaces before entering. 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

Clean up area with absorbent material and place in closed containers for disposal. Wash floor with soap and water.

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

■ Keep away from heat and ignition sources – No Smoking. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Do not puncture or incinerate (burn) cans. Do not stick a pin, nail or any other sharp object into opening on top of can. Use only with adequate ventilation. Use good safety and industrial hygiene practices. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe (dust, vapor or spray mist) Avoid contact with eyes, skin and clothing. Do not use near ignition sources such as sparks or open flames. Do not cut, drill or weld on containers. Even empty containers may contain residue that will support a flame or explode when exposed to a spark, flame or other source of ignition. Do not eat, drink or smoke when using this product. After handling wash hands thoroughly.

7.2 Conditions for safe storage, including any incompatibilities

Storage

■ Store in a cool, dry, well-ventilated place. Keep away from heat, sparks, and flame. Do not store at temperatures >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 I | Limits/Guidelines | |
|----------------------|--------|--|------------------------------|------------------------------|
| | Result | ACGIH | NIOSH | OSHA |
| Propane (74-98-6) | | 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4) | 1000 ppm TWA; 1800 mg/m3 TWA | 1000 ppm TWA; 1800 mg/m3 TWA |

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| Butane | STELs | 1000 ppm STEL | Not established | Not established |
|-----------------------|----------|--|---|------------------------------|
| (106-97-8) | TWAs | Not established | 800 ppm TWA; 1900 mg/m3 TWA | Not established |
| Acetone | TWAs | 500 ppm TWA | 250 ppm TWA; 590 mg/m3 TWA | 1000 ppm TWA; 2400 mg/m3 TWA |
| (67-64-1) | STELs | 750 ppm STEL | Not established | Not established |
| | TWAs | 400 ppm TWA (listed under Heptane, all isomers) | 85 ppm TWA; 350 mg/m3 TWA | 500 ppm TWA; 2000 mg/m3 TWA |
| Heptane (142-82-5) | STELs | 500 ppm STEL (listed under Heptane, all isomers) | Not established | Not established |
| | Ceilings | Not established | 440 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min) | Not established |

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 Skin/Body Wear safety goggles.

■ 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.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene NIOSH = National Institute of Occupational Safety and Health

STEL = Short Term Exposure Limits are based on 15-minute exposures TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

| Material Description | | | |
|-----------------------------------|---------------|------------------------|--------------|
| Physical Form | Aerosol | Appearance/Description | Aerosol |
| Color | Data lacking | Odor | Data lacking |
| Odor Threshold | Data lacking | | |
| General Properties | | | • |
| Boiling Point | Data lacking | Melting Point | Data lacking |
| Decomposition Temperature | Data lacking | рН | Data lacking |
| Specific Gravity/Relative Density | Data lacking | Water Solubility | Negligible |
| Viscosity | Data lacking | Explosive Properties | Data lacking |
| Oxidizing Properties: | Data lacking | | |
| Volatility | • | | • |
| Vapor Pressure | Data lacking | Vapor Density | Data lacking |
| Evaporation Rate | Data lacking | | |
| Flammability | • | | • |
| Flash Point | 221 C (430 F) | UEL | Data lacking |
| LEL | Data lacking | Autoignition | Data lacking |
| | | | |

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| 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

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

■ Heat, sparks, open flames. 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 |
|--|----------------|---|
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) (< 70%) | 64742- 52-5 | Acute Toxicity: Ingestion/Oral-Rat LD50 • >5000 mg/kg; Skin-Rabbit LD50 • >2000 mg/kg; Irritation: Skin-Rabbit • 500 mg • Severe irritation |
| Coke (petroleum), calcined (< 10%) | 64743- 05-1 | Acute Toxicity: Inhalation-Rat LC50 • >30.7 mg/m³ 6 Hour(s) |
| Heptane (< 20%) | 142-82- 5 | Acute Toxicity: Inhalation-Rat LC50 • 103 g/m³ 4 Hour(s) |
| Acetone (< 10%) | 67-64-1 | Acute Toxicity: Ingestion/Oral-Rat LD50 • 5800 mg/kg; Inhalation-Rat LC50 • 50100 mg/m³; Irritation: Eye-Rabbit • 20 mg • Severe irritation; Skin-Rabbit • 395 mg-Open • Mild irritation; Reproductive: Inhalation-Rat TCLo • 11000 ppm (6-19D preg); Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities |
| Butane (< 6%) | 106-97- 8 | Acute Toxicity: Inhalation-Rat LC50 • 658 g/m³ 4 Hour(s) |

| GHS Properties | Classification |
|----------------|--|
| Acute toxicity | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |

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| 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: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects |
| Toxicity for Reproduction | EU/CLP • Data lacking OSHA HCS 2012 • Data lacking |
| 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)

Chronic (Delayed)

- May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.
- Repeated and prolonged inhalation may result in impaired lung function. Repeated or proplonged exposure may cause hyperactive reflexes, peripheral neuropathy, ataxia, personality changes, tremors, headaches, emotional liability, cognitive dysfunction and memory loss. Toluene abuse or sniffing may cause liver, kidney and central nervous system damage. Toluene may also cause sensitization to epinephrine or other adrenalin like agents.

Skin

Acute (Immediate)

Chronic (Delayed)

Causes skin irritation.

 Contact may dry the skin prolonged contact may cause irritation. Solvent action can dry and defate the skin causing skin to crack, leading to dermatitis.

Eye

Acute (Immediate)

Chronic (Delayed)

Ingestion

Acute (Immediate)

Chronic (Delayed)

- Causes serious eye irritation.
- No data available

Under normal conditions of use, no health effects are expected.

No data available

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

Section 12 - Ecological Information

12.1 Toxicity

■ This product contains a component that is potentially toxic to aquatic organisms and may have long lasting effects to the aquatic environment.

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

■ No PBT and vPvB assessment has been conducted.

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 | Consumer Commodity, ORM-D | NDA | NDA | NDA |
| TDG | NDA | Consumer Commodity, ORM-D | NDA | NDA | NDA |
| IMO/IMDG | UN1950 | AEROSOLS | 2.1 | NDA | NDA |
| IATA/ICAO | UN1950 | Aerosols | 2.1 | 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, Fire, Pressure(Sudden Release of)

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| | | | Inventory | | |
|--|------------|------------|-------------|-----------|-----------|
| Component | CAS | Canada DSL | Canada NDSL | EU EINECS | EU ELNICS |
| Acetone | 67-64-1 | Yes | No | Yes | No |
| Butane | 106-97-8 | Yes | No | Yes | No |
| Coke (petroleum), calcined | 64743-05-1 | Yes | No | Yes | No |
| Heptane | 142-82-5 | Yes | No | Yes | No |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Yes | No | Yes | No |
| Propane | 74-98-6 | Yes | No | Yes | No |

Canada - WHMIS - Classifications of Substances

| Acetone | 67-64-1 | B2, D2B |
|---|---|--|
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| • Heptane | 142-82-5 | B2, D2B |
| • Propane | 74-98-6 | A, B1 |
| Butane | 106-97-8 | A, B1 |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Canada - WHMIS - Ingredient Disclosure List | | |
| • Acetone | 67-64-1 | 1 % |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | 1 % |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | 1 % |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Environment | | |
| Canada - 2004 NPRI (National Pollutant Release Inventory) | | |
| | 67-64-1 | Not Listed |
| Canada - 2004 NPRI (National Pollutant Release Inventory) | 67-64-1 64742-52-5 | Not Listed Not Listed |
| Canada - 2004 NPRI (National Pollutant Release Inventory) • Acetone | | |
| Canada - 2004 NPRI (National Pollutant Release Inventory) • Acetone • Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Canada - 2004 NPRI (National Pollutant Release Inventory) • Acetone • Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) • Heptane | 64742-52-5 142-82-5 | Not Listed Not Listed |
| Canada - 2004 NPRI (National Pollutant Release Inventory) • Acetone • Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) • Heptane • Propane | 64742-52-5 142-82-5 74-98-6 | Not Listed Not Listed Part 5 Substance |
| Canada - 2004 NPRI (National Pollutant Release Inventory) • Acetone • Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) • Heptane • Propane • Butane | 64742-52-5 142-82-5 74-98-6 106-97-8 | Not Listed Not Listed Part 5 Substance Not Listed |
| Canada - 2004 NPRI (National Pollutant Release Inventory) Acetone Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) Heptane Propane Butane Coke (petroleum), calcined | 64742-52-5 142-82-5 74-98-6 106-97-8 | Not Listed Not Listed Part 5 Substance Not Listed |
| Canada - 2004 NPRI (National Pollutant Release Inventory) Acetone Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) Heptane Propane Butane Coke (petroleum), calcined Canada - 2005 NPRI (National Pollutant Release Inventory) | 64742-52-5 142-82-5 74-98-6 106-97-8 64743-05-1 | Not Listed Not Listed Part 5 Substance Not Listed Not Listed |

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· Coke (petroleum), calcined

Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting

• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)

• Propane

Butane

Acetone

Format: EU CLP/REACH Language: English (US) WHMIS, EU CLP, EU DSD/DPD, OSHA HCS 2012

Part 5 Substance

Not Listed

Not Listed

Not Listed

Not Listed

74-98-6

106-97-8

67-64-1

64742-52-5

64743-05-1

| Heptane | 142-82-5 | Not Listed |
|--|------------|------------|
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Canada - CEPA - Priority Substances List | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Canada - DWQ (Drinking Water Quality) - IMACs | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |

| Other — | | |
|--|------------|------------|
| Canada - Accelerated Reduction/Elimination of Toxics (ARET) | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Conc (portoleum), caronica | 04740 00 1 | Not Listed |

Canada New Brunswick

| Acetone | 67-64-1 | Not Listed |
|---|------------------------|--------------------------|
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Canada - New Brunswick - Ozone Denleting Substances - Schedule B | | |
| Canada - New Brunswick - Ozone Depleting Substances - Schedule B | | |
| , , | 67-64-1 | Not Listed |
| • Acetone | 67-64-1 64742-52-5 | Not Listed Not Listed |
| Acetone Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | | |
| Acetone Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) Heptane | 64742-52-5 | Not Listed |
| Canada - New Brunswick - Ozone Depleting Substances - Schedule B • Acetone • Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) • Heptane • Propane • Butane | 64742-52-5 142-82-5 | Not Listed Not Listed |

Europe

| _ | | _ | | |
|---------------------|---|---|---|---|
| $\boldsymbol{\cap}$ | 4 | h | _ | |
| u | | n | e | • |

| EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2011) | /65/EU) (RoHS) | | |
|--|----------------|------------|--|
| Acetone | 67-64-1 | Not Listed | |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed | |

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| Heptane | 142-82-5 | Not Listed |
|----------------------------|------------|------------|
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| | | |

Japan

| Inventory - Japan - Industrial Safety and Health Law Substances (ISHL) | | |
|--|------------|------------|
| • Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |

| apan - Chemical Substance Control Law (CSCL) - Monitoring Chemical Su | ubstances | |
|--|----------------|------------|
| • Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Japan - Poisonous and Deleterious Substances - Substances Not Consider | ad Dalatariaus | |
| • Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| Japan - Poisonous and Deleterious Substances - Substances Not Consider | ed Poisonous | |
| • Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |

United States

| Labor — | | | |
|--|------------|------------|--|
| U.S OSHA - Process Safety Management - Highly Hazardous Chemicals | | | |
| Acetone | 67-64-1 | Not Listed | |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed | |
| Heptane | 142-82-5 | Not Listed | |
| • Propane | 74-98-6 | Not Listed | |
| Butane | 106-97-8 | Not Listed | |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed | |
| U.S OSHA - Specifically Regulated Chemicals | | | |
| Acetone | 67-64-1 | Not Listed | |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed | |

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| Heptane | 142-82-5 | Not Listed |
|----------------------------|------------|------------|
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| | | |

| Environment | | |
|--|------------|------------------------------------|
| U.S CAA (Clean Air Act) - 1990 Hazardous Air Pollutants | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S CERCLA/SARA - Hazardous Substances and their Reportable Quantities | | |
| • Acetone | 67-64-1 | 5000 lb final RQ; 2270 kg final RQ |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S CERCLA/SARA - Radionuclides and Their Reportable Quantities | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| | | |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S CERCLA/SARA - Section 313 - Emission Reporting | | |
| • Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| | 64743-05-1 | Not Listed |
| Coke (petroleum), calcined | 04743-03-1 | INOL FISIGN |

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| Acetone | 67-64-1 | Not Listed |
|--|------------|------------|
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |

United States - California

| Environment | | |
|--|------------|------------|
| U.S California - Proposition 65 - Carcinogens List | | |
| • Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| Propane | 74-98-6 | Not Listed |
| • Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S California - Proposition 65 - Developmental Toxicity | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL) | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S California - Proposition 65 - No Significant Risk Levels (NSRL) | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| • Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S California - Proposition 65 - Reproductive Toxicity - Female | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Not Listed |
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| U.S California - Proposition 65 - Reproductive Toxicity - Male | | |
| Acetone | 67-64-1 | Not Listed |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |

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| Heptane | 142-82-5 | Not Listed |
|----------------------------|------------|------------|
| Propane | 74-98-6 | Not Listed |
| Butane | 106-97-8 | Not Listed |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |
| | | |

United States - Rhode Island

| Labor U.S Rhode Island - Hazardous Substance List | | |
|--|------------|------------------|
| Acetone | 67-64-1 | Toxic; Flammable |
| Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) | 64742-52-5 | Not Listed |
| Heptane | 142-82-5 | Toxic; Flammable |
| • Propane | 74-98-6 | Toxic; Flammable |
| • Butane | 106-97-8 | Toxic; Flammable |
| Coke (petroleum), calcined | 64743-05-1 | Not Listed |

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Relevant Phrases (code & full text)

H220 - Extremely flammable gas

H225 - Highly flammable liquid and vapour

H226 - Flammable liquid and vapour

H280 - Contains gas under pressure; may explode if heated H304 - May be fatal if swallowed and enters airways

H319 - Causes serious eye irritation

H350 - May cause cancer.

H372 - Causes damage to organs through prolonged or repeated exposure.

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

R11 - Highly flammable. R36 - Irritating to eyes. R38 - Irritating to skin.

R45 - May cause cancer. R50 - Very toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

R65 - Harmful: may cause lung damage if swallowed.

Last Revision Date Preparation Date

Disclaimer/Statement of Liability

22/September/2014

06/23/17

■ 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

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