

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: June 06, 2017

Revision: June 06, 2017

1 Identification

- **Product identifier**
- **Trade name:** FUSEE
- **Product code:** FUSEE-200
- **Other means of identification:** Highway safety flares
- **Recommended use and restriction on use**
- **Recommended use:** Emergency signaling
- **Restrictions on use:** Contact manufacturer/supplier
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
GW Safety Signal, LLC DBA Gateway Safety Flare
107 West Poplar St.
Lamar, CO 81052
(303)726-0045
info@GatewaySafetyFlare.com
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Expl. 1.4 H204 Fire or projection hazard.
- **Additional information:** Exposure to product contents is highly unlikely during normal usage.

-
- **Label elements**
 - **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms:**



GHS01

- **Signal word:** Warning
- **Hazard statements:**
H204 Fire or projection hazard.
- **Precautionary statements:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P250 Do not subject to grinding/shock/friction.
P280 Wear protective gloves / eye protection / face protection.
P372 Explosion risk in case of fire.
P374 Fight fire with normal precautions from a reasonable distance.
P401 Store in accordance with local/regional/national/international regulations.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Components:**

| | | | |
|------------|-----------------------|---|--------|
| 10042-76-9 | strontium nitrate |  Ox. Sol. 2, H272 | 60-80% |
| 7704-34-9 | sulfur |  Skin Irrit. 2, H315 | <10% |
| 7778-74-7 | potassium perchlorate |  Ox. Sol. 1, H271  Acute Tox. 4, H302 | <10% |
| 68476-30-2 | Fuel oil, No 2 |  Carc. 2, H351 | <2% |
| 8008-20-6 | Kerosine (petroleum) |  Flam. Liq. 3, H226  Asp. Tox. 1, H304  Skin Irrit. 2, H315; STOT SE 3, H336 | <2% |

- **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

- **Description of first aid measures**

- **General information:**

This is a packaged product that will not result in exposure to the contents under normal conditions of use.
In the event of exposure, administer first aid appropriate for symptoms present.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Generally the product does not irritate the skin.

Wash with soap and water.

In case of minor burns, flush with cool water.

- **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:**

Unlikely route of exposure.

Do not induce vomiting; immediately call for medical help.

- **Most important symptoms and effects, both acute and delayed:** Thermal burns.

- **Indication of any immediate medical attention and special treatment needed:**

If medical advice is needed, have product container or label at hand.

Treat symptomatically.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Water spray
 - Water fog / haze
 - Foam
 - Fire-extinguishing powder
 - Gaseous extinguishing agents
 - Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture**
 - Risk of explosion if heated under confinement.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:** Eliminate all ignition sources if safe to do so.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Remove persons from danger area.
 - Ensure adequate ventilation.
 - Protect from heat.
- **Environmental precautions** No special measures required.
- **Methods and material for containment and cleaning up**
 - Pick up mechanically.
 - Dispose of the collected material according to regulations.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:** Use only outdoors or in a well-ventilated area.
- **Information about protection against explosions and fires:**
 - Prevent impact and friction.
 - Risk of explosion if heated under confinement.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Avoid storage near extreme heat, ignition sources or open flame.

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- **Information about storage in one common storage facility:**
Store away from flammable substances.
Store away from foodstuffs.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

68476-30-2 Fuel oil, No 2

| | |
|---------------|--|
| TLV (USA) | Long-term value: 100* mg/m ³ as total hydrocarbons; Skin; *inh. fraction + vapor |
| EL (Canada) | Long-term value: 100 mg/m ³ vapour and inhalable aerosol; Skin |
| EV (Canada) | Long-term value: 100 mg/m ³ as total hydrocarbons, vapour and aerosol, Skin |
| LMPE (Mexico) | Long-term value: 100 mg/m ³ A3, PIEL, IFV |

8008-20-6 Kerosine (petroleum)

| | |
|---------------|--|
| REL (USA) | Long-term value: 100 mg/m ³ Kerosine only |
| TLV (USA) | Long-term value: 200 mg/m ³ as total hydrocarbon vapor; Skin; P |
| EL (Canada) | Long-term value: 200 mg/m ³ Skin |
| EV (Canada) | Long-term value: 200(G) mg/m ³ as total hydrocarbon vapour, Skin |
| LMPE (Mexico) | Long-term value: 200 mg/m ³ A3, PIEL |

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:** Not required under normal conditions of use.
- **Protection of hands:**



Thermally-protective gloves.

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· Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Not required under normal conditions of use.
- **Limitation and supervision of exposure into the environment**
No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

- **Appearance:**
 - **Form:** Solid material - round tube containing granular material.
 - **Color:** Red
- **Odor:** Petroleum-like
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Melting point/Melting range:** Not determined.
- **Boiling point/Boiling range:** Not determined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Flammable solid.
- **Auto-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Danger of explosion:** Risk of explosion if heated under confinement.
- **Explosion limits**
 - **Lower:** Not determined.
 - **Upper:** Not determined.
- **Oxidizing properties:** Contains oxidizing agent.
- **Vapor pressure:** Not determined.
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not applicable.
- **Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity**
 - **Dynamic:** Not applicable.
 - **Kinematic:** Not applicable.

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· **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
Risk of explosion if heated under confinement.
- **Possibility of hazardous reactions** Flammable solid.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products**

Under fire conditions only:
Carbon monoxide and carbon dioxide
Nitrogen oxides
Toxic metal oxide smoke

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer):**

| | | |
|------------|----------------|----|
| 68476-30-2 | Fuel oil, No 2 | 2B |
|------------|----------------|----|

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

- **Probable route(s) of exposure:** Inhalation.
- **Acute effects (acute toxicity, irritation and corrosivity):** Risk of thermal burns.
- **Repeated dose toxicity:** No relevant information available.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

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- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Incinerate in accordance with local, state and federal regulations.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|----------------------------------|----------------------|
| · UN-Number | |
| · DOT | NA1325 |
| · ADR, IMDG, IATA | UN0191 |
| · UN proper shipping name | |
| · DOT | Fusee |
| · ADR, IMDG | SIGNAL DEVICES, HAND |
| · IATA | Signal devices, hand |

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· **Transport hazard class(es)**

· **DOT**



· **Class**

4.1 Flammable solids, self-reactive substances and solid desensitized explosives

· **ADR**



· **Class**

1.4

· **IMDG, IATA**



· **Class**

1.4

· **Label**

1.4G

· **Packing group**

· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards**

· **Marine pollutant:**

No

· **Special precautions for user**

Not applicable.

· **EMS Number:**

F-B, S-

· **Segregation groups**

Nitrites and their mixtures

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **IATA**



Cargo Aircraft Only.

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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 304 (emergency release notification):

None of the ingredients are listed.

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

10042-76-9 | strontium nitrate

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· Proposition 65 (California)

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency):

7778-74-7 | potassium perchlorate

NL

· IARC (International Agency for Research on Cancer):

68476-30-2 | Fuel oil, No 2

2B

· NIOSH-Ca (National Institute for Occupational Safety and Health):

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Date of preparation / last revision June 06, 2017 / -

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 IMDG: International Maritime Code for Dangerous Goods

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DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: l'Institut national de recherche sur la sécurité et la santé au travail / National Institute for Occupational Safety (États-Unis)
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Expl. 1.4: Explosives – Division 1.4
Flam. Liq. 3: Flammable liquids – Category 3
Ox. Sol. 1: Oxidizing solids – Category 1
Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com