Safety Data Sheet

Section 1: Identification

Product Name: Firequick Flares

Synonyms: Firequick: Hotshot Flare, Stubby Flare, Big Shot Flare, Chubbie Flare

Manufacturer: Firequick Products, Inc.

Address: PO Box 910 / 1137 Redrock Inyokern Rd., Inyokern, CA 93527

General Information: 760-377-5766

Transportation Emergency Number: Infotrac 1-800-535-5053

Section 2: Hazards Identification

GHS Classification: 4.1 Flammable Solid, Category 1

Signal Word: Danger

Hazard Statement: 4.1 Flammable Solid, Type 4 Readily Combustible Solid. Requires specific ignition of fuse for ready ignition, however can be ignited through high force of friction. Highly flammable once ignited.

GHS Label:

Precautionary Statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

When igniting, wear protective gloves, clothing, and eye protection.

Use only in an open space with a minimum 40’ safety zone.

In case of fire evacuate the area and remain upwind to limit inhalation of smoke.

Section 3: Composition / Information on Ingredients

Component	CAS #	Weight (grams)
Proprietary Component A	undisclosed	25-197
Proprietary Component B	undisclosed	5-40
Calcium Sulfate Hemihydrate	26499-65-0	20-158
Proprietary Component D	undisclosed	.45-1.5
Proprietary Component E	undisclosed	.195-.325

The identity of specific ingredients is being withheld as a Trade Secret. Information about the properties and effects of the chemicals are disclosed herein.

Section 4: First-Aid Measures

These flares can be handled in their packaged state with no risk of exposure.

The primary physical hazard, if flares have been ignited, is exposure to hot combustion by-products that can cause burns to skin and eyes. Further, by-products of burning flares contain calcium or hydrogen sulfide, which is an irritant to the eyes and mucus membranes if inhaled.

First Aid Measures:

Burns: Call 911 or emergency medical help for major burns. Remove constrictive items from seriously burned areas. Do not remove burned clothing stuck to the skin. Cool the burn to help soothe the pain. Apply cool (not cold), moist burn blanket, bandage or clean cloth to protect the burn area. Elevate the burned area if possible.

Inhalation: Move victim to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, administer emergency oxygen. In more serious cases, symptoms may be delayed, such as pulmonary edema. Use CPR or AED as required, avoiding mouth-to-mouth contact. Transport victim to a hospital.

Eyes: Hold eyelids open and flush for several minutes with water or saline solution. Seek medical attention.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Water and foam are ineffective at extinguishing a flare fire, however in large quantities can decelerate a flare fire. Flooding quantities of water will hold down fumes but will not completely extinguish fire. Appropriate retardants are dry sand, sodium chloride Class D powder, or liquid nitrogen.

Fire-Fighting Procedures: Ignited flares are energetic, producing molten materials approximately 4000° F with localized smoke. The flares burn very rapidly and create their own oxygen. Move upwind and allow a 40’ safety zone. If possible, remove unburned flares and other items from the area. Use appropriate

Section 5: Fire-Fighting Measures Continued

extinguishing medium if available. Large amounts of water may prevent ignition if packaging is burning. Do not breathe fumes if water is applied.

Unusual Fire and Explosion Hazards: Flares will not explode. Delay fuse is pressure sensitive and is protected by a protective cap and seal, which is broken by the operator before use.

Combustion Products: Less than flooding quantities of water applied to burning flares may cause the emission of hazardous combustion hydrogen and hydrogen sulfide gas. Human exposure to H_2S @ 800-1000 ppm for 30 minutes may be fatal.

Section 6: Accidental Release Measures

Firequick Flares are solidified in capped, sealed cardboard tubes. Unless the caps have been removed or punctured, or the tubes have been crushed, there is not threat of substance release.

If flares have been damaged and any loose powder is visible: Keep unnecessary people away. Remove or shut off all possible ignition or heat sources. Do not allow smoking or flames in the area. Wear anti-static clothing (90% cotton or greater) during clean up.

If a cap has been removed or punctured on the Hotshot or Stubby flares, a small amount of start powder may be released. The powder is not caustic, however is static and friction sensitive. Add an anti-static inerting agent (like Kleen Sweep) or sand in equal amounts to released powder. Using a 100% cotton cloth or natural fiber brush, sweep into a paper or cardboard container, close securely and dispose of in regular trash.

Hotshot Flare

Stubby Flare

If flares have been crushed and grey powder or chunks have escaped, exercise caution as loose dry powder is combustible and may ignite easily if exposed to static. Larger chunks can be ignited if they are exposed to forceful friction. Wet all exposed flare material until saturated. If igniter cord is exposed, remove igniters and set aside. While flare material is still wet, use a rubber mallet to further break down flares to remove igniters if necessary. Place igniters in a safe place to burn and light the cord to burn off. Combine equal amounts of sand to loose flare powder, bag securely and dispose of. If there are whole but damaged flares requiring disposal, contact manufacturer for further instructions.

Section 7: Handling and Storage

Handling: Maintain controlled access to flares. Protect exposed caps from damage or impact. Do not allow smoking or other ignition source within 50' of flares.

Storage: Locked storage is recommended to control access. Do not store near flammable liquids or other flammable products. Do not store near strong acids. Keep storage area free of spark and heat sources. Plan storage so that exit from the area would not be impaired if flares were to be accidentally ignited.

Keep away from heat and flame. Keep operating temperatures below fuse ignition temperature (800° F) at all times.

Section 8: Exposure Controls / Personal Protection

Exposure Limits: There are no exposure risks with the flare as it is packaged.

By-Product Exposure Limits: When a flare is burning if water is applied the flare can produce hydrogen sulfide gas. Human exposure to H_2S @ 800-1000 PPM for 30 minutes may be fatal.

Engineering Controls: Flare is to be used in outdoor environment only. Flare ignition no closer than 40' to human is required.

Personal Protective Equipment (PPE): No special PPE required for handling closed flare. For flare launch or ignition:

- Wear gloves suitable for high temperature products. Preferably Nomex or leather.
- Safety glasses or goggles should be worn.
- Respiratory protection: Do not breathe large quantities of smoke generated during reaction.

Section 9: Physical and Chemical Properties

Flashpoint: 800° F (427° C) will ignite the flare igniter cord (fuse)

Flammability: 1600° F (871° C) may ignite flare core

Auto-ignition Temperature: 2800° F (1538° C)

Appearance: Solid grey core in a capped red cardboard tube

pH: Neutral

Solubility: Insoluble

All other reportable properties: Odor; Odor Threshold; Melting/Freezing Point; Initial Boiling point and Boiling Range; Evaporation Rate; Upper/Lower Flammability or explosive Limits; Vapor Pressure; Vapor Density; Relative Density; Partition Coefficient: n-octanol/water; Decomposition temperature; Viscosity, **are all none or n/a.**

Section 10: Stability and Reactivity

Stability / Incompatibility: Flares are stable under normal conditions of use and at ambient temperature. Avoid temperatures above 800° F (427° C). Incompatible with strong acids.

Hazardous Reactions / Decomposition Products: Burning flares in contact with water can produce Hydrogen Sulfide Gas (H_2S). Crushing of flares may lead to hazardous conditions such as release of combustible dust and static / friction sensitive material.

Section 11: Toxicological Information

Flares not ignited are not hazardous to humans. Exposure occurs during burning of the flare.

Once Ignited:

Likely routes of exposure: Inhalation of combustion products, skin and eye exposure to combustion products.

Symptoms of Exposure: Eye and nasal irritation; flash to severe burning of the skin.

Chronic Effects: Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, Bronchitis, Emphysema, and Asthma may be worsened by prolonged exposure to combustion products.

Acute Toxicity Values: Unknown

Flares are not listed in the National Toxicology Program Report on Carcinogens, nor have they been found to be a potential carcinogen in the International Agency for Research on Cancer Monographs, nor have they been found to be a potential carcinogen by OSHA.

Section 12: Ecological Information

Flares have no known negative effect to the environment.

Section 13: Disposal Considerations

Flares may not be disposed of in landfills or incineration facilities. They must be properly disposed of as hazardous waste due to flammability in accordance with all applicable local, regional, State, and Federal regulations. Refer to Section 8 (Exposure Controls / Personal Protection) of this SDS for handling.

Section 14: Transport Information

UN Number: UN3178

UN Proper Shipping Name: Flammable Solid, inorganic, n.o.s., (aluminum powder)

Hazard Class: 4.1, Category 1

Packing Group: III (Packing Group II if shipping air)

Environmental Hazards: None

Labels Required: Limited Quantity or 4.1 Flammable Solid

Flares may be shipped as Limited Quantity under the regulated weight limits. Flare shipments not qualified as Limited Quantity must meet all DOT / IATA / IMDG regulations for road / air / vessel respectively.

Section 15: Regulatory Information

Not applicable

Section 16: Other Information

National Fire Protection (NFPA) Ratings: This information is intended solely for the use of individuals trained to understand the NFPA hazard rating system.

Health: 1

Flammability: 3

Reactivity: 0

Revision of SDS: Revision # 1 / Issued 06/01/2016 - (First MSDS originated approximately 1998)

The information contained herein has been developed based on current available data. New information may be developed from time to time which may render the conclusions in this report obsolete. Therefore, no warranty of any kind is made with respect hereto. Since the manufacturer shall have no control of the use of the product described herein, it assumes no liability for loss or damage incurred from the proper or improper use of the product.