

Material Safety Data Sheet

This MSDS is used in production sites in The United States of America & Europe, and cannot be construed as being a binding injunction; it does not replace the legislation applicable to qualified users of the products in accordance with recognized practices. It may be used to comply with OSHA's Hazard Communication Standard 29CFR 1910. 1200. Standard must be consulted for specific requirements.

1. Manufacturer:

Energetix Solutions, Inc. | formerly Daveyfire, Inc.
2601 Cherry Lane
Walnut Creek | CA 94597-9701
phone 925 | 926-6412
fax 925 | 926-6439

Emergency Response Information during Transportation: Contact CHEM.TEL, INC
In the United States, Canada and Puerto Rico & U.S. Virgin Islands: **800 | 255-3924**
International Emergency : **813 | 248-0585** (collect)

2. Products Designation:

UN Proper Shipping Name & Number: Igniters, UN0454. Hazard Class 1.4S

2.1 Fuseheads With energetic material: Type B, BR, F, FR, KF, KFR, FLF & FRLF (i.e. SA2001 AN28BR)

2.2 Fuseheads With energetic material: Standard Type P, F, FA, A | HPP 52.651PP & 1A/1W | Green FA & A | High Sensitive 4.5O (i.e. SA3003 Green A).

2.3 Electric Igniters Series SA2000 to SA2001, SA3000 to SA3004.

3. Hazardous Ingredient/Identity:

Trade secret & Confidential - LMNR, PbO, B, Nitrocellulose, Al, PbO, NC, KClO₃, Zr, Ni, MgO, KClO₄, Bi₂O₃ - N.E.Q.: 30 to 120mg. Hazard Classification – Igniters, Electric UN0454 class 1.4S. None of the ingredient contains materials that are listed as hazardous chemicals upon ignition. Reaction if exposed: when unpacked → Ignition. When packed → No effect outside packaging.

4. Physical & Chemical Characteristics:

Boiling Point:	N/A	Specific gravity:	N/A
Vapor pressure:	N/A	Vapor density:	N/A
Solubility in water:	N/A	Reactivity in water:	N/A
Appearance & odor:	N/A	Melting point:	N/A

5. Fire & Explosion Data:

Flash point:	N/A
Extinguisher media:	NONE
Flammable limits in Air % by volume - Lower:	N/A
Upper:	N/A

Auto Ignition Temperature: 428°F / 220°C

Special fire fighting procedure: Class C Explosive - Do not fight fires - Evacuate area.

Unusual fire & Explosion Hazards: Consult Emergency Response Guide book #50 – Extreme caution should be used.

6. Storage and Handling

- Do not smoke
- Protect from damp and electric / electromagnetic environments
- Avoid subjecting products or their packing to mechanical shock
- Handle carefully
- Keep these products away from children

7. Handling and utilization

- Handle with caution
- Do not remove the fusehead shroud
- Testing and use of pyrotechnic items and materials may be carried out only with approved equipment and by qualified personnel. (Maximum intensity of current used for testing firing circuit resistance = 10 mA).

8. Precautions to be taken on disposal

- Never dispose of these products in a dustbin / trash can or in a public disposal area.
- Destruction of pyrotechnic products by explosion or incineration must be carried out in an area specially designated for such disposal by physically protected personnel.
- Procedures, instructions and rules for the destructive disposal of pyrotechnic products and the associated means for physical protection of personnel must be determined on the basis of a technical safety study which must examine in particular the maximum load acceptable in terms of the disposal environment and the personnel to be protected from risk.
- Explosive materials must not be mixed with priming devices when the latter are being destroyed.

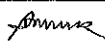
9. Precautions to be taken in the event of an incident

- Explosive materials accidentally spilled from pyrotechnic items must be recovered for removal and destructive disposal. Where such an incident has occurred:
- Avoid all mechanic shock
- Avoid all friction
- Eliminate all risk of production of sparks
- Keep away from all heat sources
- Keep away from flames
- Keep away from other pyrotechnic products since any manipulation of such material may cause an explosion.
- Where packed pyrotechnic product packing is broken open, transfer all the contents to a wooden or cardboard container avoiding subjecting them to any mechanical shocks, spark, heat or other source of risk.

10. Product behavior in case of fire

- Prohibited fire extinguishing materials: None
- High levels of thermal emission

This information sheet cannot in any circumstances free the user of the product in question from his obligation to consult applicable legislation in order to take note of his legal duties. This information contained in this sheet is based upon the state of our knowledge of the product concerned as of 06/13

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