



Div: EVANinc

Explosives
EXPERTS
Explosifs

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HIGHWAY SAFETY FLARES

MATERIAL SAFETY DATA SHEET

INDEX : CXU 0003/90A

DATE : 02/03/2011

EMERGENCY TELEPHONE NUMBER :

OTTAWA, ONTARIO: 613-996-6666

HAZARD SUMMARY (29 CFR 1910.1200)

Physical Hazards : Explosive - Flammable Solid

Health Hazards : This is a packaged product that will not result in exposure to the contents under normal conditions.

1. PRODUCT DESCRIPTION

Product Name : Highway Flares

Product Class : Signalling Device

SHIPPING DESCRIPTION/UNITED NATIONS (U.S.)

Shipping Name : Signal Devices, Hand (Flammable Solid, N.O.S.)

Shipping Class/Division : 1.4S (Flammable Solid)

Product Identification No (PIN) : UN0373

Packing Group : II

COMPOSITION

A totally contained mixture of:

Strontium Nitrate

Sawdust

Sulphur

Paraffin Wax

Potassium Perchlorate

2. PHYSICAL PROPERTIES

Description : Combustibles contained in a jacket

3. FIRE AND EXPLOSION DATA

Flash Point (method) : Not Applicable

Autoignition Temperature : Burns at 335oC in 4 seconds

Flammability Limits in Air (%) : Not Applicable

Fire Extinguishing Media : Do not fight fires

Fire Fighting Procedures : Evacuate area promptly

Other Fire or Explosion Hazards: Not Applicable



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4. REACTIVITY DATA

Stability:

- Under Normal Conditions : Stable
- Under Fire Conditions : Will ignite if in contact with flames or excess heat
- Hazardous Polymerization : Will not occur
- Conditions to Avoid : Shock, impact or heat that may ignite the product
- Materials to Avoid : Organic solvents, gasoline, diesel oil may dissolve the jacket

Hazardous Decomposition or Combustion Products : Vapors of NOx, SOx

5. TOXICOLOGICAL AND HEALTH DATA

Toxicological Data : This is a manufactured article and may release hazardous product during combustion. Combustion product includes NO, NO2, CO, SO2.

Recommended Exposure Limits :

	PEL (OSHA)	TLV (ACGIH)
Nitrogen Dioxide	5 ppm-ceiling	3 ppm
Nitric Oxide	25 ppm	25 ppm
Carbon Monoxide	50 ppm	50 ppm
Sulphur Dioxide	5 ppm	2 ppm

6. PREVENTATIVE MEASURES

Handling Procedures and Equipment : All personnel should keep clear during burning. Avoid inhalation of smoke and vapors.

Storage Temperature (oC) : Ambient temperatures

Storage Requirements : Product should be stored in a cool dry environment and not stored in close proximity to high explosives material.

Other Precautions : This product is classed as a 1.4S explosives in CANADA, Flammable Solid in the U.S.A. Meet all legal requirements for shipping and magazinging.



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7. ENVIRONMENTAL PROTECTION DATA

Steps to be taken in the event of a spill or leak : Pick up cautiously as per normal precautions taken in handling explosives.

Environmental Effects : None known

Deactivating Chemicals : Not Applicable

Waste Disposal Methods : Burn under supervision of an expert at an approved location. Call upon the services of a Technical Representative.

8. ADDITIONAL INFORMATION AND SOURCES USED

1. Documentation of the Threshold Limit Values and Biological Exposure, 5th ed., American Conference of Governmental Industrial Hygienists Inc., Cincinnati, 1986.
2. Grayson, Martin, Ed., Kirk-Othmer Concise Encyclopedia of Chemical Technology, 3rd ed., John Wiley and Sons, New York, 1985.

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DATE ISSUED: 1990 03 08

DATE REVISED: 02/03/2011

MSDA INDEX NO : CXU 0003/90A