



MATERIAL SAFETY DATA SHEET

Refer to Section 16 for List of Acronyms and Abbreviations

SECTION 1: IDENTIFICATION		
1.1 Product Name:	PAINS WESSEX RED HANDFLARE MK7.	
1.2 Product Code:	52800, 52801, 52802, 52803, 52804, 52805, 52806, 52807, 52808, 52809, 52810, 52811, 52812.	
1.3 Description:	The Pains Wessex Red Handflare Mk7 is a hand held pyrotechnic device which produces a bright red flame for outdoor signalling in emergency or distress situations.	
1.4 Manufacturers Name:	Manufacturer: Pains Wessex Ltd.	Sales: McMurdo Ltd.
1.5 Address:	High Post, SALISBURY, Wiltshire, SP4 6AS, United Kingdom.	Silverpoint, Airport Service Road, PORTSMOUTH, PO3 5PB, United Kingdom.
1.6 Telephone No:	+44 (0)1722 411611	+44 (0)23 9262 3900
1.7 EMERGENCY 24 HR SERVICE NO:	+ 44 (0) 1722 411611 (UK/ EU and Rest of the World) + 001 703 527 3887 (Shipment to and from USA) + 800 424 9300 (Shipment inside USA)	

SECTION 2: INFORMATION ON HAZARDOUS INGREDIENTS

This device contains intimate mixtures of the ingredients listed below. These mixtures cannot be converted back to individual ingredients and are sealed inside the product.

INGREDIENT	CAS NO.	MASS PER PRODUCT
Magnesium Metal	07439-95-4	<40 grams
Strontium Nitrate	10042-76-9	<40 grams
Ellisprene	09006-03-5	<3 grams
Potassium Nitrate	07757-79-1	<1 gram
Potassium Perchlorate	07778-74-7	<10 grams
Poly Vinyl Chloride	09002-86-2	<10 grams
Boiled Linseed Oil	08001-26-1	<2 grams
Di-Butyl Phthalate	00084-74-2	<4 grams
Gunpowder	N/A	<1 gram

SECTION 3: HAZARD IDENTIFICATION

3.1 General Hazards:

- When fired, a hot bright red flame is emitted from this product. Steel tube will become excessively hot.
- **Do not point (and fire) product at people or property.**
- **Keep out of reach of children.**
- **Do not fire in confined spaces.** Product is designed for outdoor use only.
- In its unfired form, the product presents no hazard.
- Keep product away from extreme heat and sources of ignition.

- During function, avoid looking directly at burning flare.

3.2 Health Hazards:

- If product is damaged, the contents may be harmful to skin, eyes and respiratory tract.
- Smoke produced on ignition may cause irritation to eyes and throat.
- Where this product is used for training purposes and therefore potential exposure increased, every effort must be made to ensure that personnel are upwind of the smoke.
- Medical conditions that may be aggravated by exposure to smoke are respiratory diseases that include Asthma and Emphysema.
- Risk of receiving burns during normal usage is highly unlikely.

3.3 Environmental Hazards:

- Smoke is produced on ignition of this product.
- Products of combustion include salts of potassium and strontium, oxides of magnesium and small traces of carbon dioxide and carbon monoxide.

SECTION 4: FIRST AID MEASURES

In the unlikely event of receiving burns from this product, seek medical attention at once. Exposure to smoke may cause irritation to eyes and throat. Move patient to fresh air. Other measures to be taken as follows:

4.1 Eye Contact:	Flush with water for at least 10 minutes. If symptoms persist seek medical advice.
4.2 Skin Contact:	Remove contaminated clothing. Wash exposed areas with soap and water. Do not use solvents or thinners of any kind.
4.3 Inhalation:	Remove from further exposure. If symptoms develop such as coughing, wheezing or shortness of breath seek medical attention.
4.4 Ingestion:	Make patient drink water. Do not induce vomiting. Seek medical attention at once.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Flammable Properties:	N/A
5.2 Flash Point LTL (°C):	N/A
5.3 Auto Ignition Temperature:	N/A
5.4 Flammability Limits:	N/A
5.5 Extinguishing Agent:	Use copious amounts of water to control the burn.
5.6 Special Fire Fighting Procedures:	Once product has ignited the store will burn until all composition has been exhausted.
5.7 Fire Fighting Equipment:	For fires in enclosed areas fire fighters must use self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Safeguards:	Keep product away from all sources of ignition.
6.2 Spillage:	Collect all damaged and undamaged products and replace in original packaging for disposal. Loose composition should be treated with dry sand, carefully swept up and disposed of according to local authority regulations. The area should then be washed down with copious quantities of water.
6.3 Other Precautions:	Contact appropriate emergency services.

SECTION 7: HANDLING AND STORAGE

7.1 Handling:	<ul style="list-style-type: none"> • Ensure that handle is retained in safe position at all times until such time as product is required for use. Do not remove top cap. • Handle with care. • Do not attempt to dismantle this product. • Follow printed instructions on this product at all times.
7.2 Storage:	<ul style="list-style-type: none"> • Store in manufacturers approved packaging in a well ventilated area away from sources of heat or direct sunlight. • Temperature of storage to be between 5°C and 50°C.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 During Function	The product is to be held at arms length pointing downwind. Do not point at people. Keep out of reach of children. Hold by handle only when functioning.
8.2 Engineering Controls:	No specific controls necessary.
8.3 Respiratory Protection:	No specific controls necessary.
8.4 Skin Protection:	No specific controls necessary.
8.5 Eye Protection:	No specific controls necessary.
8.6 Personal Protective Equipment:	No specific controls necessary.
8.7 General Hygiene Considerations:	Personal hygiene – wash hands after use.
8.8 Exposure Guidelines:	No exposure guidelines are available for this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance:	The product consists of a corrosion resistant steel casing which contains a consolidated flare composition. At the base end there is a pull-twist-strike firing mechanism integral with the plastic handle. The top end is protected by a waterproof cap. Flame emission is from the top end of steel tube.
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9.2 Stability in Water:	Product is waterproof.	9.3 Reaction with water:	None
9.4 Odour:	None	9.5 Boiling Point:	N/A
9.6 State:	Solid	9.7 Vapour Pressure:	N/A
9.8 Vapour Density:	N/A	9.9 Evaporation Rate:	N/A
9.10 Melting Point:	120 °C	9.11 Solubility in water:	N/A
9.12 Specific Gravity:	N/A	9.13 pH:	N/A
9.14 Colour:	Various		

SECTION 10: STABILITY AND REACTIVITY

10.1 Stability:	This product is stable under normal conditions.
10.2 Incompatibility:	Solvents, hydrocarbons, petroleum based products.
10.3 Hazardous Decomposition:	N/A
10.4 Conditions To Avoid:	Avoid extreme heat, keep away from sources of ignition.
10.5 Hazardous Polymerisation:	N/A

SECTION 11: TOXICOLOGICAL INFORMATION

Under normal operating circumstances, there are no known acute toxic hazards resulting from single exposure to the products of combustion from this Red Handflare MK7. However abuse or misuse of the product could result in situations where exposure to the combustion products could reach harmful levels in susceptible individuals. The following information relates to the individual constituents of the flare composition and is more relevant to prolonged contact with these materials.

INGREDIENT	OSHA / PEL	EH40/2002	LD50
Magnesium Metal	Not established.	None specified.	None specified.
Strontium Nitrate	Not established.	None specified.	2750 mg/m ³ (oral rat).
Poly Vinyl Chloride	Nuisance dust 15mg/m ³ 8hr TWA.	1ppm (vinyl chloride).	None specified (PVC).
Potassium Nitrate	Irritating to respiratory system, skin and eyes.	None specified.	3750 mg/kg (oral rat).
Potassium Perchlorate	Not established.	None specified.	27,675 mg/kg (oral rat).
Ellisprene	Not established.	10mg/m ³ .	>5,000mg/kg (oral rat).
Boiled Linseed Oil	Not established.	None specified.	None specified.
Di-Butyl Phthalate	5mg/m ³ 8hr TWA.	5mg/m ³ 8hr TWA.	8,000mg/kg (oral rat).
Gunpowder	Nuisance dust 15mg/m ³ 8hr TWA.	None specified.	None specified.

SECTION 12: ECOLOGICAL INFORMATION

There is no information available at the present time relating to ecological effects for this product.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Fired Products:	Subject to local authority arrangements.
13.2 Time Expired Products:	Return to Pains Wessex or distributor or local police, fire or coastguard forces as permitted by local regulations for disposal or recycling.
13.3 Damaged Products:	Repack in original packaging and treat as time expired product.

SECTION 14: TRANSPORT INFORMATION

14.1 Packaging specifications:	PS14-045
14.1 UN Hazard Code:	1.4 G
14.2 UN Number:	0191
14.3 UN Proper Shipping Name:	SIGNAL DEVICES, HAND
14.4 IMCOL:	N/A
14.5 NATO Stock No:	N/A
14.6 Packaging Group:	P135
14.7 UN Packaging ID No:	4G/Y7/S/**/GB/2974
14.8 Transportation:	Transportation must be carried out in accordance with all statutory regulations for the carriage of dangerous goods.

SECTION 15: REGULATORY INFORMATION

15.1 Classification:	Explosive. UN Class 1.
15.2 Hazard Symbol:	Orange Diamond - Explosive, on outer packaging.
15.3 Risk Phrases	N/A.
15.4 Safety Phrases	N/A.

SECTION 16: OTHER INFORMATION

This product is designed to be hand held and for use in emergency signalling situations. Its main application is short range distress signalling particularly at night time. When user instructions are followed, this product presents minimal risk to the user and those in the general vicinity of the product. This product is for outdoor use only. When used for demonstration purposes always stand upwind of product.

The information contained in this data sheet meets the requirements of the UK Health and Safety at Work Act 1974 under section 6 and the Control of Substances Hazardous to Health Regulations 1994. It also complies with US Federal OSHA Hazard Communication Standard 29 CFR 1910.1200 and ANSI Z400.1-1998.

List of Acronyms and Abbreviations used within this MSDS.

ANSI	American National Standards Institute
CAS	Chemical Abstract Service
CFR	Code of Federal Regulations
EH40/2002	Annual UK Health and Safety Executive publication containing the list of Maximum Exposure Limits (MEL's) and Occupational Exposure Limits (OEL's) for use with the Control of Substances Hazardous to Health Regulations 1999. Data quoted for 8 Hr TWA (Time Weighted Average).
LD	Lethal Dose
LTL	Lower Temperature Limit
MSDS	Material Safety Data Sheet
N/A	Not Applicable
OSHA	Occupational Safety and Health Administration (US)
PEL	Permissible Exposure Limit
SCBA	Self-Contained Breathing Apparatus
SFG	Sulphur Free Gunpowder
UN	United Nations
TID	Total Inhalable Dust
RD	Respirable Dust

The above information is given based on the present state of our knowledge of this product and is, to the best of our knowledge and belief, accurate at the time of publication. No warranty given, either express or implied, with respect to the accuracy, reliability or completeness of the information contained herein and we will assume no liability resulting from its use. The user must satisfy themselves that the information provided is entirely suitable for their particular use.

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