

MATERIAL SAFETY DATA SHEET



Refer to Section 16 for List of Acronyms and Abbreviations

SECTION 1: IDENTIFICATION		
1.1 Product Name:	HAND FLARE	MSC.48(66)MSC.81(70)
1.2 Product Code:	JHH-3/HH-3	
1.3 Description:	The Hand Flare is a hand held pyrotechnic device which produces a bright red flame for outdoor signalling in emergency or distress situations.	
1.4 Manufacturers Name:	<i>Manufacturer:</i> Jiangsu Huahai Marine Signals Manufacturing Co., Ltd.	
1.5 Address:	No.158, Ruijiang North Road, Haimen District, Nantong City, Jiangsu Province. China.	
1.6 Tel No&Email	TEL: +86 (513) 82212760 FAX: +86(513) 82207771 Email: huahai@cn-huahai.com tonybocelle@hotmail.com Web site: www.cn-huahai.cn	
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	07439-95-4	32g
Strontium Nitrate	10042-76-9	17g
Potassium Perchlorate	07778-74-7	17g
Poly Vinyl Chloride	09002-86-2	4g
		Total:70g
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.)		
<ul style="list-style-type: none"> • 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:		
<ul style="list-style-type: none"> • 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:		
<ul style="list-style-type: none"> • 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 a lot once. 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:	Make patient drink water. Do not induce vomiting. Seek medical attention at once.	
SECTION 5: FIRE FIGHTING MEASURES		
Flammable Properties:	N/A	Flash Point LTL (°C): N/A
Flammability Limits:	N/A	Auto Ignition Temperature: N/A

5.1 Extinguishing Agent: 5.2 Special Fire Fighting Procedures: 5.3 Fire Fighting Equipment:	Use copious amounts of water to control the burn. Once product has ignited the store will burn until all composition has been exhausted. Projectile Hazard will be present during and after fire. For fires in enclosed areas fire fighters must use self-contained breathing apparatus (SCBA).		
SECTION 6: ACCIDENTAL RELEASE MEASURES			
6.1 Safeguards: 6.2 Spillage: 6.3 Other Precautions:	Keep product away from all sources of ignition. 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. 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. 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 40°C. 			
SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION			
8.1 During Function 8.2 Personal Protective Equipment: 8.3 Exposure Guidelines:	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. No specific controls necessary. 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 stainless steel handle. The top end is protected by a waterproof cap. Flame emission is from the top end of steel tube.		
9.2 Stability in Water: 9.4 Odour: 9.6 State: 9.8 Vapour Density: 9.10 Melting Point: 9.12 Specific Gravity: 9.14 Colour:	Product is waterproof. None Solid N/A 120 °C N/A Red & Various,	9.3 Reaction with water: 9.5 Boiling Point: 9.7 Vapour Pressure: 9.9 Evaporation Rate: 9.11 Solubility in water: 9.13 pH:	None N/A N/A N/A N/A N/A
SECTION 10: STABILITY AND REACTIVITY			
10.1 Stability: 10.2 Incompatibility: 10.3 Hazardous Decomposition: 10.4 Conditions To Avoid: 10.5 Hazardous Polymerisation:		This product is stable under normal conditions. Solvents, hydrocarbons, petroleum based products. N/A Avoid extreme heat, keep away from sources of ignition. 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 Hand flare Signal RF-60. 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 Perchlorate	Not established.	None specified.	27,675 mg/kg (oral rat).
Ellisprene	Not established.	10mg/m ³ .	5,000mg/kg (oral rat).

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 our corporation 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 UN Hazard Code: 1.4 G	14.2 UN Number: 0191	14.3 UN Proper Shipping Name: SIGNAL DEVICES, HAND
14.4 UN Packaging ID No:	4G/Y20/S/XX, CN/C230900 PI:XXX	
14.5 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.

List of Acronyms and Abbreviations used within this MSDS.

CAS	Chemical Abstract Service
LTL	Lower Temperature Limit
MSDS	Material Safety Data Sheet
N/A	Not Applicable
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.