1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	**FLINT STRIKER**
1.2	Chemical Name:	Mixture
1.3	Synonyms:	P/N 96084
1.4	Trade Names:	Chicago Welding
1.5	Product Uses & Restrictions:	Flint Striker
1.6	Distributor's Name:	Harbor Freight Tools USA, Inc.
1.7	Distributor's Address:	26541 Agoura Road, Calabasas, CA 91302 USA
1.8	Emergency Phone:	**CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 676687)**
1.9	Business Phone / Fax:	+1 (805) 388-1000

2. HAZARDS IDENTIFICATION

2.1 Hazard Identification:

This product is classified as a HAZARDOUS SUBSTANCE but not as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (1999) and ADG Code (Australia).
Risk of burning off for fine material or explosions after raising the dust.
DANGER! FLAMMABLE SOLID. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. MAY BE HARMFUL IF INHALED.
Classification: Flam. Sol. 1Skin Sens. 1B; Eye Irrit. 2; Acute Tox. Inh. 5
Hazard Statements (H): H228 – Flammable solid. H317 – May cause an allergic skin reaction. H319 – Causes serious eye irritation. H333 – May be harmful if inhaled.
Precautionary Statements (P): P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 – Avoid breathing dust. P264 – Wash thoroughly after handling. P280 – Wear protective gloves/eye protection/face protection. P304 + P312 – IF INHALED: Call a POISON CENTER/doctor if you feel unwell. P302+P352 – IF ON SKIN: Wash with soap and water. P333+P313 – If skin irritation occurs: Get medical advice/attention. P305+P351+P338 – IF IN EYES: Rinse immediately with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P370+P378 – In case of fire: Use Dry sand or salt (NaCl), class D dry-powder extinguisher. DO NOT USE water, CO_2-extinguisher and halogenated agents. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).



3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m³) ACGIH ppm TLV	ACGIH ppm STEL	NOHSC ppm ES-TWA	NOHSC ppm ES-STEL	NOHSC ppm ES-PEAK	OSHA ppm PEL	OSHA ppm STEL	OSHA ppm IDLH	OTHER
CERIUM	7440-45-1	FK485000	231-154-9	30-60	NA	NA	NF	NF	NF	NA	NA	NA	
	Flam. Sol. 1; H228												
LANTHANUM	7439-91-0	NA	231-099-0	10-30	NA	NA	NF	NF	NF	NA	NA	NA	
NEODYMIUM	7440-00-8	QO8575000	231-109-3	10-30	NA	NA	NF	NF	NF	NA	NA	NA	
PRASEODYMIUM	7440-10-0	NA	231-120-3	5-10	NA	NA	NF	NF	NF	NA	NA	NA	
	Pyr. Sol. 1; H250												
SAMARIUM	7440-19-9		231-128-7	0.1-1.0	NA	NA	NF	NF	NF	NA	NA	NA	
	Flam. Sol. 2; Water-react.3;H228,H261												

4. FIRST AID MEASURES

4.1 First Aid:

Ingestion: Ingestion is unlikely; however, particulates from grinding or cutting may be ingested. **DO NOT INDUCE VOMITING**. Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.

Eyes: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention.

Skin: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned.

Inhalation: Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.

4.2 Effects of Exposure:

Ingestion: Not expected route of exposure. Ingestion may cause gastrointestinal irritation, nausea, and/or vomiting.
Eyes: None expected. May be slightly irritating.
Skin: None expected. May cause sensitization in some sensitive individuals.
Inhalation: None expected. Fumes may cause irritation to nasal membranes.

4.3 Symptoms of Overexposure: No known or reported by manufacturer.

4.4 Acute Health Effects: No known or reported by manufacturer

4. FIRST AID MEASURES – cont'd

4.5	Chronic Health Effects:	No known or reported by manufacturer
4.6	Target Organs:	No known or reported by manufacturer
4.7	Medical Conditions Aggravated by Exposure:	Individuals with allergies or impaired respiratory function may have symptoms worsened by exposure to welding fumes; however, such reaction cannot be predicted due to the variation in the composition and in the quantity of the decomposition products.

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARDS	0
PROTECTIVE EQUIPMENT	B

EYES	SKIN		

5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This product is not flammable. Welding slag or sparks may cause fire. Manmade alloy, .mainly containing cerium and lanthanum. Cerium will burn when heated. Lanthanum will create spark when struck.
5.2	Extinguishing Methods:	Water, Dry Chemical, Foam, Carbon Dioxide.
5.3	Firefighting Procedures:	Fight fires as for surrounding materials. Firefighters should wear a MSHA/NIOSH approved or equivalent self-contained breathing apparatus (SCBA) and protective clothing. Fire should be fought from a safe distance. Keep containers cool until well after the fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.



6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	Before cleaning any spill, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment including gloves, glasses and NIOSH approved (or equivalent) dust respirator. Spilled product may produce a tripping hazard. Particulate from grinding, welding or burning may produce a slipping hazard. Carefully vacuum or sweep up the particulate, slag, dusts or powders. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas. Remove any contaminated clothing and wash thoroughly before reuse. Keep spills and cleaning runoffs out of drains, municipal sewers and open bodies of water.

7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid contact to eyes, skin, and mucous membranes. Avoid inhalation of vapors, gases, fumes and dusts. Wash thoroughly after handling and use. Do not smoke, eat, drink, chew gum or tobacco, or apply cosmetics within the working area. Do not store or bring tobacco products, gum, food, drinks or cosmetics within the working area. Otherwise follow the standards of good industrial hygiene practices.
7.2	Storage & Handling:	No unusual methods are required. Keep product contained and retain all warning and identity labels. Preferred storage is a sheltered warm area with temperature and humidity control to prevent high humidity and "going through the dew point." Keep away from incompatible materials listed in Section 10. Open containers slowly on a stable surface. Keep container tightly closed when not in use.
7.3	Special Precautions:	Read and understand the manufacturer's instructions and the precautionary label on this product. See American National Standard Z-49.1, "Safety in Welding, Cutting and Allied Processes," published by the American Welding Society, P. O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 for additional details regarding fire and explosion control, exposure control and other special precautions.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 Exposure Limits: ppm (mg/m^3)

CHEMICAL NAME(S)	ACGIH		NOHSC			OSHA			OTHER
	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	

8.2	Ventilation & Engineering Controls:	Use industrial hygiene monitoring equipment to ensure that exposure does not exceed threshold limit values. Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). Use in a chemical fume hood when working with large quantities of product and provide adequate ventilation (e.g., local exhaust ventilation, fans).
8.3	Respiratory Protection:	CAUTION: Welding or cutting may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. Use adequate ventilation. Use NIOSH approved respiratory protection. See ANSI Z49.1-1967 Safety in Welding and Cutting published by the American Welding Society. Keep the exposure within legal limits. In the worker's breathing zone and the general area, the fumes and gases must be kept below the TLVs and the equivalent exposure must compute to less than one. Keep exposure as low as possible. Use respirable fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below the TLV. Where respiratory protection is necessary, NIOSH approved respiratory protection should be used. The selection of the appropriate respirator protection (dust respirator, etc.) should be based on the actual or potential airborne contaminants and their concentrations present.



8. EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd

8.4	Eye Protection:	Wear helmet or use face shield with filter lens according to ANSI Z87.1. Provide protective screens and flash goggles, if necessary, to shield others. Wear safety glasses with UV protective side shields or goggles. Wear contact lenses in combination with safety eyewear, except where the contact lenses create a likelihood of injury from intense heat, highly particulate atmosphere, or where their use is prohibited. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).	
8.5	Hand Protection:	Wear head, hand and body protection that help to prevent injury from hot metal, sparks, slag, infrared radiation, UV radiation, abrasions, contusions and heat stress. Protective clothing will not generally prevent shock except for leather if kept dry. Gloves made of leather with inside seams (or those that give equal performance) are preferred. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, or the EU member states.	
8.6	Body Protection:	Wear head, hand and body protection that help to prevent injury from radiation, sparks and electrical shock. Wear flame resistant ear plugs to keep sparks out of ears. See ANSI Z-49.1. The clothing may include heat/fire resistant gloves, overalls, aprons, sleeves, footwear, welder's spats and head cover. Wear garments made of leather, heavyweight tightly woven wool or cotton. Keep clothing clean (free of oil, grease or solvents) and in good repair. Do not wear clothing with frayed edges, tears or holes. Do not roll up sleeves or trousers (pants should not be cuffed). If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA.	

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Solid, grey or silver color
9.2	Odor:	Odorless
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	NA
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	NA
9.12	Solubility:	Insoluble
9.13	Partition Coefficient (log P_{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions of use (See Section 7).
10.2	Hazardous Decomposition Products:	Irritating vapors and toxic gases (e.g., carbon monoxide and carbon dioxide).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Use or storage near incompatible substances.
10.5	Incompatible Substances:	Strong oxidizing agents, strong acids and bases.

11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation:	NO	Absorption:	YES	Ingestion:	NO
11.2	Toxicity Data:	This material or its emission may induce an allergic of sensitization reaction and thereby aggravate existing systemic disease.					
11.3	Acute Toxicity:	Overexposure to welding fumes may cause: fever, nausea, giddiness, eye irritation to the respiratory tract and to other mucous membranes.					
11.4	Chronic Toxicity:	See Section 4.5					
11.5	Suspected Carcinogen:	No.					
11.6	Reproductive Toxicity:	This product is not reported to cause reproductive toxicity in humans.					
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.					
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.					
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.					
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.					

11. TOXICOLOGICAL INFORMATION

11.7	Irritancy of Product:	General Nuisance Dusts: Many of the metal oxides generated as components of welding fume, are considered nuisance dusts (such as oxides of titanium and aluminum), which are essentially nontoxic and chemically nonirritating. Skin contact has shown no problems other than possible drying and mechanical irritation. Eye contact can produce particulate irritation. Excessive inhalation can produce mild pulmonary irritation and possible non-disabling slight fibrosis of the lungs.
11.8	Biological Exposure Indices:	NE
11.9	Physician Recommendations:	Treat symptomatically.

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	There are no specific data available for this product.
12.2	Effects on Plants & Animals:	There are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Waste disposal must be in accordance with appropriate Federal, state, provincial and local regulations.
13.2	Special Considerations:	NA

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	NOT REGULATED
14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canadian GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	SCT (MEXICO):	NOT REGULATED
14.7	ADGR (AUS):	NOT REGULATED

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements. Aluminum (fumes and dusts) are subject to SARA Title 313 (EPCRA).
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory or are otherwise exempt.
15.4	CERCLA Reportable Quantity (RQ):	NA
15.5	Other Federal Requirements:	None of the ingredients are listed as Hazardous Air Pollutants (HAPs). None of the ingredients are listed as Toxic Pollutants under the Clean Water Act (CWA). None of the ingredients are listed as Priority Pollutants under the Clean Water Act (CWA). This product does not contain any Class 1 or Class 2 ozone depletors.
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. The following chemicals are listed on the Ingredient Disclosure List: Chromium, Manganese, and Molybdenum. WHMIS Classification: D2B (Other Toxic Effects). 
15.7	State Regulatory Information:	None of the ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).
15.8	Other Requirements:	The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC: Harmful (Xn). Risk Phrases (R): 9 - Use only in well ventilated areas. Safety Phrases (S): 22-36/37/39-38-51 - Do not breathe fumes. Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation wear suitable respiratory equipment. Use only in well-ventilated areas. 

16. OTHER INFORMATION

16.1	Other Information:	**DANGER! FLAMMABLE SOLID. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. MAY BE HARMFUL IF INHALED.** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection. IF INHALED: Call a POISON CENTER/doctor if you feel unwell. IF ON SKIN: Wash with soap and water. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse immediately with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P370+P378 – In case of fire: Use Dry sand or salt (NaCl), class D dry-powder extinguisher. DO NOT USE water, CO_2-extinguisher and halogenated agents. Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF). **KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.**	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Harbor Freight Tools USA, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for:	**Harbor Freight Tools USA, Inc.** 26541 Agoura Road Calabasas, CA 91302 USA Tel: +1 (805) 388-1000 http://www.harborfreight.com/	HARBOR FREIGHT TOOLS Quality Tools at Ridiculously Low Prices
16.5	Prepared by:	**ShipMate, Inc.** P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com	

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
C	Ceiling Limit
ES	Exposure Standard (Australia)
IDLH	Immediately Dangerous to Life and Health
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		**G**	
B		**H**	
C		**I**	
D		**J**	
E		**K**	
F		**X**	**Consult your supervisor or SOPs for special handling directions.**

Safety Glasses | **Splash Goggles** | **Face Shield & Protective Eyewear** | **Gloves**

Boots | **Synthetic Apron** | **Protective Clothing & Full Suit** | **Dust Respirator**

Full Face Respirator | **Dust & Vapor Half-Mask Respirator** | **Full Face Respirator** | **Airline Hood/Mask or SCBA**

OTHER STANDARD ABBREVIATIONS:

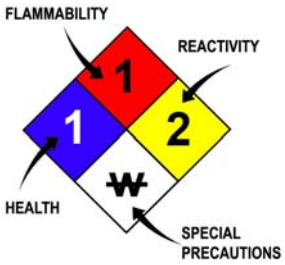
ML	Maximum Limit
mg/m3	milligrams per cubic meter
NA	Not Available
ND	Not Determined
NE	Not Established
NF	Not Found
NR	No Results
ppm	parts per million
SCBA	Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:	
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
W	Use No Water
OX	Oxidizer
TREFOIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD_{50}	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC_{50}	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD_{lo}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD_{lo}, LD_{lo}, & LD_o or TC, TC_o, LC_{lo}, & LC_o	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{OW} or log K_{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NOHSC	National Occupational Health and Safety Commission (Australia)
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)
HMIS-III	National Paint & Coatings Association Hazardous Materials Identification System

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:



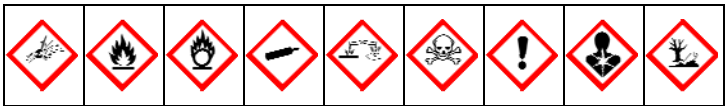
Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:



C	E	F	N	O	T	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:



GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environ-ment