

## SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

### HMX BH CHARGES

Revision Date: 26-Feb-2014

Revision Number: 11

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1 Product Identifier

Product Name

HMX BH CHARGES

Synonyms:

CHARGE - 2" -HMX - BH - 101206246

CHARGE - 2.75" -HMX - BH - 101270158

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use

Explosive Charge

##### 1.3 Details of the supplier of the safety data sheet

Halliburton Energy Services  
Halliburton House, Howemoss Place  
Kirkhill Industrial Estate  
Dyce  
Aberdeen, AB21 0GN  
United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

[www.halliburton.com](http://www.halliburton.com)

For further information, please contact

E-Mail address: [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)

##### 1.4 Emergency telephone number

+44 1224 795277 or +1 281 575 5000

Emergency telephone - §45 - (EC)1272/2008	
Europe	112
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO):+ 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

#### 2. Hazards Identification

##### 2.1 Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute Toxicity - Dermal	Category 3 - (H311)
Specific Target Organ Toxicity - (Single Exposure)	Category 1 - (H373)
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - (H373)
Explosives.	Division 1.4 - H204

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**  
 For the full text of the R-phrases mentioned in this Section, see Section 16

**Classification** E - Explosive.

**Risk Phrases** R2 Risk of explosion by shock, fire, friction, or other sources of ignition.

**2.2 Label Elements**

**Hazard Pictograms**



**Signal Word** Danger

**Hazard Statements**

- H204 - Fire or projection hazard
- H311 - Toxic in contact with skin
- H370 - Causes damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements - EU (§28, 1272/2008)**

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P250 - Do not subject to grinding/shock/friction
- P370 + P380 - In case of fire: Evacuate area
- P372 - Explosion risk in case of fire
- P373 - DO NOT fight fire when fire reaches explosives
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P312 - Call a POISON CENTER or doctor/physician if you feel unwell

**Contains**

**Substances**

Cyclotetramethylenetetranitramine (HMX)

**CAS Number**

2691-41-0

**2.3 Other Hazards**

None known

**3. Composition/information on Ingredients**

Substances	EINECS	CAS Number	PERCENT (w/w)	EEC Classification	EU - CLP Substance Classification	REACH No.
Cyclotetramethylenetetranitramine (HMX)	220-260-0	2691-41-0	Unknown	E; R2	Expl. 1.4 (H204) Acute Tox. 3 (H311) STOT SE 1 (H370) STOT RE 2 (H373)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

**4. First aid measures**

**4.1 Description of first aid measures**

<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
<b>Eyes</b>	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
<b>Skin</b>	Wash with soap and water. Get medical attention if irritation persists.
<b>Ingestion</b>	Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed**

May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May effect the blood's ability to carry oxygen.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically

**5. Firefighting Measures**

**5.1 Extinguishing media**

**Suitable Extinguishing Media**

Do NOT fight fire. Isolate area and evacuate personnel to a safe area. Guard against intruders. Allow fire to burn itself out.

**Extinguishing media which must not be used for safety reasons**

None known.

**5.2 Special hazards arising from the substance or mixture**

**Special Exposure Hazards**

May detonate with impact or on heating. May explode and throw fragments 1 mile or more in fire. Evacuate all persons, including emergency responders.

**5.3 Advice for firefighters**

**Special Protective Equipment for Fire-Fighters**

Not applicable.

**6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Use only competent persons for cleanup.

See Section 8 for additional information

**6.2 Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3 Methods and material for containment and cleaning up**

Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Remove ignition sources and work with non-sparking tools.

**6.4 Reference to other sections**

See Section 8 and 13 for additional information.

**7. Handling and Storage**

**7.1 Precautions for Safe Handling**

Do NOT consume food, drink, or tobacco in contaminated areas. Avoid contact with eyes, skin, or clothing. Wash hands after use. Launder contaminated clothing before reuse.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

**7.2 Conditions for safe storage, including any incompatibilities**

Store only in ATF approved magazines. Keep away from friction, impact, and heat.

**7.3 Specific End Use(s)**

**Exposure Scenario**

No information available

**Other Guidelines**

No information available

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Exposure Limits

Substances	CAS Number	EU	UK OEL	Netherlands	France OEL
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany MAK/TRK	Spain	Portugal	Finland
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Denmark
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	Not applicable

**Derived No Effect Level (DNEL) Worker** No information available.

#### General Population

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2 Exposure controls

#### Engineering Controls

Use in a well ventilated area.

#### Personal protective equipment

##### Respiratory Protection

Dust/mist respirator. (N95, P2/P3)

##### Hand Protection

Cloth gloves.

##### Skin Protection

Cotton coveralls, undergarments, and socks. Conductive soled shoes.

##### Eye Protection

Wear safety glasses or goggles to protect against exposure.

##### Other Precautions

None known.

**Environmental Exposure Controls** No information available

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

**Physical State:** Solid **Color:** Metallic  
**Odor:** Odorless **Odor Threshold:** No information available

Property Remarks/ - Method	Values
<b>pH:</b>	No data available
<b>Freezing Point/Range</b>	No data available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	3.15
<b>Water Solubility</b>	Insoluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available

**Oxidizing Properties** No information available

**9.2 Other information**

**VOC Content (%)** No data available

**10. Stability and Reactivity**

**10.1 Reactivity**

Not applicable

**10.2 Chemical Stability**

Stable

**10.3 Possibility of Hazardous Reactions**

Will Not Occur

**10.4 Conditions to Avoid**

May detonate with friction, impact, heat, and low level electrical current.

**10.5 Incompatible Materials**

Strong acids. Strong alkalis.

**10.6 Hazardous Decomposition Products**

Shrapnel. Oxides of nitrogen. Metal oxides. Carbon monoxide and carbon dioxide.

**11. Toxicological Information**

**11.1 Information on Toxicological Effects**

**Acute Toxicity**

**Inhalation**

May cause effects to the blood and blood system. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

May cause damage to the nervous, urinary, and reproductive systems. Nitrogen oxides generated during use are irritating to the respiratory system.

**Eye Contact**

May cause eye irritation

**Skin Contact**

May be absorbed through the skin and contribute to the symptoms listed under ingestion. Nitrogen oxides generated during use are skin irritants.

**Ingestion**

May cause abdominal pain, vomiting, nausea, and diarrhea.

**Chronic Effects/Carcinogenicity**

Prolonged or repeated exposure may cause blood forming system, nervous, urinary tract and reproductive system damage. Prolonged or repeated exposure may cause embryo and fetus toxicity. Prolonged or repeated exposure may cause liver damage.

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cyclotetramethylenetetraanitramine (HMX)	2691-41-0	6490 mg/kg ( Rat )	5 g/kg ( Rat ) 630 mg/kg ( Rabbit )	No data available

**12. Ecological Information**

**12.1 Toxicity**

**Ecotoxicity Effects**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	No information available	LC50: 8.8-26 mg/L (Pimephales promelas)	No information available	No information available

**12.2 Persistence and degradability**

No information available

Substances	CAS Number	Persistence and Degradability
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	No information available

**12.3 Bioaccumulative potential**

Substances	CAS Number	Log Pow
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	No information available

**12.4 Mobility in soil**

No information available

**12.5 Results of PBT and vPvB assessment**

No information available.

**12.6 Other adverse effects**

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**13. Disposal Considerations**

**13.1 Waste treatment methods**

**Disposal Method**

Disposal should be made in accordance with federal, state, and local regulations.

**Contaminated Packaging**

Do NOT reuse container. Store only in ATF approved magazines.

**14. Transport Information**

**IMDG/IMO**

UN Number: UN0440,  
 UN Proper Shipping Name: Charges, Shaped  
 Transport Hazard Class(es): , 1.4D  
 Packing Group: , II  
 Environmental Hazards: Not applicable  
 EMS: EmS F-B, S-X

**RID**

UN Number: UN0440,  
 UN Proper Shipping Name: Charges, Shaped  
 Transport Hazard Class(es): , 1.4D  
 Packing Group: , II  
 Environmental hazard: Not applicable

**ADR**

UN Number: UN0440,  
 UN Proper Shipping Name: Charges, Shaped  
 Transport Hazard Class(es): , 1.4D  
 Packing Group: , II  
 Environmental hazard: Not applicable

**IATA/ICAO**

UN Number: UN0440,  
 UN Proper Shipping Name: Charges, Shaped  
 Transport Hazard Class(es): , 1.4D  
 Packing Group: , II  
 Environmental hazard: Not applicable

**Special Precautions for User** None

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable

## 15. Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

**All of the components in the product are on the following Inventory lists:** All of the components in the product are on the following Inventory lists:.

**EINECS Inventory** This product, and all its components, complies with EINECS

**US TSCA Inventory** All components listed on inventory or are exempt.

**Canadian DSL Inventory** All components listed on inventory or are exempt.

#### **Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering** Not determined.

**Classes (WGK)**

### 15.2 Chemical Safety Assessment

No information available

## 16. Other Information

### **Full text of R-phrases referred to under Sections 2 and 3**

R2 Risk of explosion by shock, fire, friction, or other sources of ignition.

### **Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Revision Date:** 26-Feb-2014

**Revision Note**

Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

### **Disclaimer Statement**

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**End of Safety Data Sheet**