

MATERIAL SAFETY DATA SHEET

Product Trade Name: MaxForce HMX CHARGE

Revision Date: 28-Oct-2014

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Statement of Hazardous Nature Hazardous according to the criteria of NOHSC, Dangerous Goods according to the criteria of ADG.

Manufacturer/Supplier Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: 61 (08) 9455 8300
Fax Number: 61 (08) 9455 5300

Product Emergency Telephone
Australia: 08-64244950
Papua New Guinea: 05 1 281 575 5000
NewZealand: 06-7559274

Fire, Police & Ambulance - Emergency Telephone
Australia: 000
Papua New Guinea: 000
New Zealand: 111

Identification of Substances or Preparation

Product Trade Name: MaxForce HMX CHARGE
Synonyms: 102054947 – CHG,390 MAXFORCE, HMX, SDP, 39G
Chemical Family: Explosive
UN Number: UN0440
Dangerous Goods Class: 1.4D
Subsidiary Risk: None
Hazchem Code: E
Poisons Schedule: None Allocated
Application: Explosive Charge

Prepared By Chemical Compliance
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

2. HAZARDS IDENTIFICATION

Statement of Hazardous Nature Hazardous according to the criteria of NOHSC, Dangerous Goods according to the criteria of ADG.

Hazard Overview May cause headache, dizziness, and other central nervous system effects. May be harmful if swallowed. explosive

Classification

T - Toxic.
E - Explosive.

Risk Phrases

R2 Risk of explosion by shock, fire, friction, or other sources of ignition.
R33 Danger of cumulative effects.
R61 May cause harm to the unborn child.
R62 Possible risk of impaired fertility.
R20/22 Harmful by inhalation and if swallowed.

Safety Phrases

S53 Avoid exposure - obtain special instructions before use.
S45 In case of accident or if you feel unwell, seek medical advice immediately.
S60 This material and/or its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.
S2 Keep out of reach of children.
S16 Keep away from sources of ignition - No Smoking.
S33 Take precautionary measures against static discharges.
S34 Avoid shock and friction.

HSNO Classification Not Determined

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	Australia NOHSC	New Zealand WES	ACGIH TLV-TWA
Cyclotetramethylene tetranitramine (HMX)	2691-41-0	Unknown	Not applicable	Not applicable	Not applicable
Lead	7439-92-1	Unknown	TWA: 0.15 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.05 mg/m ³
Copper	7440-50-8	Unknown	TWA: 1 mg/m ³ TWA: 0.2 mg/m ³	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	TWA: 0.2 mg/m ³
Tungsten	7440-33-7	Unknown	5 mg/m ³	STEL: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Graphite	7782-42-5	Unknown	TWA: 3 mg/m ³	TWA: 3 mg/m ³	TWA: 2 mg/m ³

Non-Hazardous Substance to Total of 100%

4. FIRST AID MEASURES

Inhalation 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.

Skin Get medical attention if irritation persists. Wash with soap and water.

Eyes 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.

Ingestion 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.

Notes to Physician Treat symptomatically.

5. FIRE FIGHTING MEASURES

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.

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.

Special Protective Equipment for Fire-Fighters Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment. Use only competent persons for cleanup.

Environmental Precautionary Measures Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption 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.

7. HANDLING AND STORAGE

Handling Precautions 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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Use in a well ventilated area.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Color:	Metallic
Odor:	Odorless
pH:	Not Determined
Specific Gravity @ 20 C (Water=1):	Not Determined
Density @ 20 C (kg/l):	Not Determined

Bulk Density @ 20 C (kg/M3):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (C):	Not Determined
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	Not Determined
Flash Point Method:	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (g/m ³):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (g/m ³):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Insoluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (g/l):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	Not Determined
Decomposition Temperature (C):	Not Determined

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	May detonate with friction, impact, heat, and low level electrical current.
Incompatibility (Materials to Avoid)	Strong acids. Strong alkalis.
Hazardous Decomposition Products	Shrapnel. Oxides of nitrogen. Metal oxides. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation. Product does not present exposures health hazards during normal handling and use. However, this product is an explosive material and uncontrolled detonation may cause severe physical injury including death. All explosives are dangerous and must be handles carefully and used following approved safety procedures under the direction of competent, experience persons in accordance with all applicable regulations and ordinances.
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Symptoms related to exposure

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.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cyclotetramethylene tetranitramine (HMX)	2691-41-0	6490 mg/kg (Rat)	5 g/kg (Rat) 630 mg/kg (Rabbit)	No data available
Lead	7439-92-1	No data available	No data available	No data available
Copper	7440-50-8	No data available	No data available	No data available
Tungsten	7440-33-7	No data available	No data available	No data available
Graphite	7782-42-5	10000 mg/kg (Rat)	No data available	No data available

12. ECOLOGICAL INFORMATION**Ecotoxicological Information****Ecotoxicity Product**

Acute Fish Toxicity:	Not determined
Acute Crustaceans Toxicity:	Not determined
Acute Algae Toxicity:	Not determined

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Cyclotetramethylene tetranitramine (HMX)	2691-41-0	No information available	LC50: 8.8-26 mg/L (Pimephales promelas)	No information available	No information available
Lead	7439-92-1	No information available	No information available	No information available	No information available
Copper	7440-50-8	EC50: 0.0426 - 0.0535 mg/L (Pseudokirchneriella subcapitata)	LC50: 0.0068 - 0.0156 mg/L (Pimephales promelas)	No information available	EC50: 0.03 mg/L (Daphnia magna)
Tungsten	7440-33-7	No information available	No information available	No information available	No information available
Graphite	7782-42-5	No information available	No information available	No information available	No information available

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Cyclotetramethylene tetranitramine (HMX)	2691-41-0	No information available
Lead	7439-92-1	No information available
Copper	7440-50-8	No information available
Tungsten	7440-33-7	No information available
Graphite	7782-42-5	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Cyclotetramethylene tetranitramine (HMX)	2691-41-0	No information available
Lead	7439-92-1	No information available
Copper	7440-50-8	No information available
Tungsten	7440-33-7	No information available
Graphite	7782-42-5	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

13. DISPOSAL CONSIDERATIONS

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

Australia Dangerous Goods

UN Number: UN0440
UN Proper Shipping Name: Charges, Shaped
Transport Hazard Class(es): 1.4D
Packing Group: II
EX Number: EX1996080028 EX2009090093 EX2012020752

IMDG/IMO

UN Number: UN0440
UN Proper Shipping Name: Charges, Shaped
Transport Hazard Class(es): 1.4D
Packing Group: II
EX Number: EX1996080028 EX2009090093 EX2012020752
Environmental Hazards: Not applicable
EMS: EmS F-B, S-X

IATA/ICAO

UN Number: UN0440
UN Proper Shipping Name: Charges, Shaped
Transport Hazard Class(es): 1.4D
Packing Group: II
EX Number: EX1996080028 EX2009090093 EX2012020752

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

Chemical Inventories

Australian AICS Inventory All components listed on inventory or are exempt.
New Zealand Inventory of Chemicals This product does not comply with NZIOC
US TSCA Inventory All components listed on inventory or are exempt.
EINECS Inventory This product, and all its components, complies with EINECS

Classification
T - Toxic.
E - Explosive.

Risk Phrases

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S16 Keep away from sources of ignition - No Smoking.
S33 Take precautionary measures against static discharges.
S34 Avoid shock and friction.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this SDS
Not applicable

Contact**Australian Poisons Information Centre**

24 Hour Service: - 13 11 26

Police or Fire Brigade: - 000 (exchange): - 1100

New Zealand National Poisons Centre

0800 764 766

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Disclaimer Statement

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END OF MSDS