

## MATERIAL SAFETY DATA SHEET

**Product Trade Name:** CHARGE, 4-5 DP HMX - C5003169

**Revision Date:** 04-Jan-2011

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** CHARGE, 4-5 DP HMX - C5003169  
**Synonyms:** None  
**Chemical Family:** Explosive  
**Application:** Explosive Charge  
**Manufacturer/Supplier:** Halliburton Energy Services  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431  
Emergency Telephone: (281) 575-5000  
**Prepared By:** Chemical Compliance  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
1,3,5-Trinitro-2,4,6-tripicrylbenzene (BRX)	Mixture	0-10	Not applicable	Not applicable
2,6-Bis(picrylamino)-3,5-dinitro-pyridine (PYX)	38082-89-2	0-10	Not applicable	Not applicable
Tin	7440-31-5	NF	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Antimony	7440-36-0	NF	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Lead	7439-92-1	NF	0.05 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>
Desensitizing wax	Mixture	0-10	Not applicable	Not applicable
Corrosion resistant steel	Mixture	NF	Not applicable	Not applicable
Aluminum	7429-90-5	NF	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Copper	7440-50-8	NF	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Iron oxide	1309-37-1	NF	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

### 3. HAZARDS IDENTIFICATION

**Hazard Overview** Explosive. May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be harmful if swallowed.

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

**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

<b>Flash Point/Range (F):</b>	Not Determined
<b>Flash Point/Range (C):</b>	Not Determined
<b>Flash Point Method:</b>	Not Determined
<b>Autoignition Temperature (F):</b>	Not Determined
<b>Autoignition Temperature (C):</b>	Not Determined
<b>Flammability Limits in Air - Lower (%):</b>	Not Determined
<b>Flammability Limits in Air - Upper (%):</b>	Not Determined

**Fire Extinguishing Media** None. Do NOT fight fire. Isolate area and evacuate personnel to a safe area. Guard against intruders. Allow fire to burn itself out.

**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.

**NFPA Ratings:** Health 1, Flammability 3, Reactivity 4  
**HMS Ratings:** Health 1, Flammability 3, Reactivity 4

## 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. (95%)

**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 (lbs./gallon):	Not Determined
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	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 (lbs./gallon):	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

## 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.
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.
Skin Contact	May be absorbed through the skin and contribute to the symptoms listed under ingestion. Nitrogen oxides generated during use are skin irritants.
Eye Contact	May cause eye irritation.

<b>Ingestion</b>	May cause abdominal pain, vomiting, nausea, and diarrhea.
<b>Aggravated Medical Conditions</b>	None known.
<b>Chronic Effects/Carcinogenicity</b>	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.
<b>Other Information</b>	None known.
<b>Toxicity Tests</b>	
<b>Oral Toxicity:</b>	Not determined
<b>Dermal Toxicity:</b>	Not determined
<b>Inhalation Toxicity:</b>	Not determined
<b>Primary Irritation Effect:</b>	Not determined
<b>Carcinogenicity</b>	Not determined
<b>Genotoxicity:</b>	Not determined
<b>Reproductive / Developmental Toxicity:</b>	Not determined

## 12. ECOLOGICAL INFORMATION

<b>Mobility (Water/Soil/Air)</b>	Not determined
<b>Persistence/Degradability</b>	Not applicable
<b>Bio-accumulation</b>	Not determined

### Ecotoxicological Information

<b>Acute Fish Toxicity:</b>	Not determined
<b>Acute Crustaceans Toxicity:</b>	Not determined
<b>Acute Algae Toxicity:</b>	Not determined
<b>Chemical Fate Information</b>	Not determined
<b>Other Information</b>	Not applicable

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Method</b>	Disposal should be made in accordance with federal, state, and local regulations.
<b>Contaminated Packaging</b>	Do NOT reuse container. Store only in ATF approved magazines.

## 14. TRANSPORT INFORMATION

### Land Transportation

#### DOT

UN0440, Charges, Shaped, 1.4D, II  
EX-8801206

**Canadian TDG**

Charges, Shaped, 1.4D, UN0440, II  
EX-8801206

**ADR**

UN0440,Charges, Shaped, 1.4D, II  
EX-8801206

**Air Transportation**

**ICAO/IATA**

UN0440,Charges, Shaped, 1.4D, II  
EX-8801206

**Sea Transportation**

**IMDG**

UN0440,Charges, Shaped, 1.4D, II  
EX-8801206  
EmS F-B, S-X

**Other Shipping Information**

**Labels:** Explosive 1.4D

<b>15. REGULATORY INFORMATION</b>
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**US Regulations**

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

**EPA SARA Title III Extremely Hazardous Substances** Not applicable

**EPA SARA (311,312) Hazard Class** Acute Health Hazard  
Fire Hazard  
Sudden Release of Pressure Hazard

**EPA SARA (313) Chemicals** This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372:  
Lead//7439-92-1  
Copper//7440-50-8

**EPA CERCLA/Superfund Reportable Spill Quantity** EPA Reportable Spill Quantity is 400 Pounds based on Lead (CAS: 7439-92-1).

**EPA RCRA Hazardous Waste Classification** If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

Reactivity D003

<b>California Proposition 65</b>	The California Proposition 65 regulations apply to this product.
<b>MA Right-to-Know Law</b>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	All components listed on inventory.
<b>WHMIS Hazard Class</b>	F    Dangerously Reactive Material

## 16. OTHER INFORMATION

### The following sections have been revised since the last issue of this MSDS

Not applicable

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

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

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**\*\*\*END OF MSDS\*\*\***