

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

CARTRIDGE ASSEMBLY 2"

Revision Date: 30-Aug-2011

Revision Number: 5

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

Product Identifier

Product Name CARTRIDGE ASSEMBLY 2"

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

Recommended Use Explosive Charge
Uses Advised Against No information available

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

For further information, please contact

E-Mail address: fdunexchem@halliburton.com

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	Toxline: +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

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

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

2. HAZARDS IDENTIFICATION

Classification	E - Explosive.
Risk Phrases	R2 Risk of explosion by shock, fire, friction, or other sources of ignition.

Label Elements

Hazard Pictograms



Signal Word

Warning

Hazard Statements

H204 - Fire or projection hazard

Contains

Substances

Hexanitrostilbene (HNS)

CAS Number

20062-22-0

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

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P240 - Ground/Bond container and receiving equipment
 P250 - Do not subject to grinding/shock/friction
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P370 + P380 - In case of fire: Evacuate area
 P372 - Explosion risk in case of fire
 P373 - DO NOT fight fire when fire reaches explosives

Other Hazards

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	EINECS	CAS Number	PERCENT	EEC Classification	EU - CLP Substance Classification	REACH No.
Hexanitrostilbene (HNS)	243-494-5	20062-22-0	60 - 100%	E;R2	Expl. 1.1 (H201)	No data available

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

4. FIRST AID MEASURES

Description of 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.

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

Skin

4. FIRST AID MEASURES

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.

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 cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIREFIGHTING MEASURES

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.

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.

Advice for firefighters

Special Protective Equipment for Fire-Fighters

Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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

See Section 12 for additional information

Environmental precautions

Prevent from entering sewers, waterways, or low areas.

Methods and material for containment and cleaning up

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

Reference to other sections

See Section 12 for additional information.

7. HANDLING AND STORAGE

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

Conditions for safe storage, including any incompatibilities

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

Specific End Use(s)

Exposure Scenario

Other Guidelines

No information available

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Substances	EU	UK OEL	Netherlands	France OEL	Germany MAK/TRK
Hexanitrostilbene (HNS)	Not applicable				

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Hexanitrostilbene (HNS)	Not applicable				

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

Exposure controls

Engineering Controls

Personal protective equipment

Respiratory Protection

Use in a well ventilated area.

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.

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

Cloth gloves.

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

Wear safety glasses or goggles to protect against exposure.

None known.

Hand Protection

Skin Protection

Eye Protection

Other Precautions

Environmental Exposure Controls

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State: Solid
Odor: Odorless

Color: Metallic

Odor Threshold: No information available

Property

Remarks/ Method

pH:

Melting Point/Range

Freezing Point/Range (C):

Boiling Point/Range

Flash Point

Evaporation rate

Vapor Pressure

Vapor Density

Specific Gravity

Water Solubility

Solubility in other solvents

Partition coefficient: n-octanol/water

Autoignition Temperature

Decomposition Temperature

Viscosity

Explosive Properties

Oxidizing Properties

Values

No data available

No information available

No information available

Other information

VOC Content (%)

No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable

Chemical Stability

Stable

Possibility of Hazardous Reactions

Will Not Occur

Conditions to Avoid

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

10. STABILITY AND REACTIVITY

Incompatible Materials

Strong acids. Strong alkalis.

Hazardous Decomposition Products

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

11. TOXICOLOGICAL INFORMATION

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. May cause an allergic skin reaction.

Ingestion

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

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 1% are chronic health hazards.

Substances	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexanitrostilbene (HNS)	No data available	No data available	No data available

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity Effects

Substances	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Hexanitrostilbene (HNS)	No information available	No information available	No information available	No information available

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Method

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

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

IMDG/IMO

UN Number: UN0349,
UN Proper Shipping Name: Articles, Explosive, N.O.S., (Pressed Desensitized Pellets of HNS)
Transport Hazard Class(es):, 1.4S
Packing Group:, II
EMS: EmS F-B, S-X

RID

UN Number: UN0349,
UN Proper Shipping Name: Articles, Explosive, N.O.S., (Pressed Desensitized Pellets of HNS)
Transport Hazard Class(es):, 1.4S
Packing Group:, II

ADR

UN Number: UN0349,
UN Proper Shipping Name: Articles, Explosive, N.O.S., (Pressed Desensitized Pellets of HNS)
Transport Hazard Class(es):, 1.4S
Packing Group:, II

IATA/ICAO

UN Number: UN0349,
UN Proper Shipping Name: Articles, Explosive, N.O.S., (Pressed Desensitized Pellets of HNS)
Transport Hazard Class(es):, 1.4S
Packing Group:, II

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

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

International Inventories

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 Product contains one or more components not listed on the inventory.

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/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) Not determined.

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.

16. OTHER INFORMATION

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 30-Aug-2011
Revision Note: Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer Statement

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End of Safety Data Sheet