

SAFETY DATA SHEET

Product Trade Name: 2-5/8" HNS DCST KIT

Revision Date: 22-May-2017

Revision Number: 2

1. Identification

1.1. Product Identifier

Product Trade Name: 2-5/8" HNS DCST KIT
Synonyms: None
Chemical Family: Explosive
Internal ID Code: HM512266

1.2 Recommended use and restrictions on use

Application: Explosive Charge
Uses advised against: No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Halliburton Energy Services, Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Telephone: 1-281-871-6107

Halliburton Energy Services, Inc.
645 - 7th Ave SW Suite 1800
Calgary, AB
T2P 4G8
Canada

Prepared By: Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number: (281) 575-5000

2. Hazards Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Explosives.

Division 1.4 - H204

2.2. Label Elements

Hazard Pictograms



Signal Word:	Danger
Hazard Statements	H204 - Fire or projection hazard
Precautionary Statements	
Prevention	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 face protection
Response	P370 + P380 - In case of fire: Evacuate area P372 - Explosion risk in case of fire P373 - DO NOT fight fire when fire reaches explosives
Storage	P401 - Store in accordance with local/regional/national/international regulations.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Hexanitrostilbene (HNS)	20062-22-0	60 - 100%	Expl. 1.1 (H201)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First Aid Measures**4.1. Description of first aid measures**

Inhalation	If inhaled, move victim to fresh air and seek 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.
Skin	Wash with soap and water. Get medical attention if irritation persists.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Not determined May cause mild eye, skin, and respiratory irritation.

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

Notes to Physician Treat symptomatically.

5. Fire-fighting 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 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

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 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

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

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.

7. Handling and storage

7.1. Precautions for safe handling

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

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

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Hexanitrostilbene (HNS)	20062-22-0	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection 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, AS/NZS 1715:2009, 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)

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

9.1. Information on basic physical and chemical properties

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

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	No data available
Freezing Point / Range	No data available
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	No data available
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	No data available
Water Solubility	Insoluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available
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10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

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 likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

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 mild 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 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexanitrostilbene (HNS)	20062-22-0	No data available	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Serious eye damage/irritation
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Skin Sensitization
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Respiratory Sensitization
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Mutagenic Effects
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Carcinogenic Effects
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Reproductive toxicity
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	STOT - single exposure
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	STOT - repeated exposure
Hexanitrostilbene (HNS)	20062-22-0	No information available

Substances	CAS Number	Aspiration hazard
Hexanitrostilbene (HNS)	20062-22-0	Not applicable

12. Ecological Information

12.1. Toxicity

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Hexanitrostilbene (HNS)	20062-22-0	No information available	No information available	No information available	No information available

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Hexanitrostilbene (HNS)	20062-22-0	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Hexanitrostilbene (HNS)	20062-22-0	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Hexanitrostilbene (HNS)	20062-22-0	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods 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

US DOT

UN Number UN0444
UN proper shipping name: Charges, Explosive, Commercial
Transport Hazard Class(es): 1.4D
Packing Group: Not applicable
EX Number: EX2016020739
Environmental Hazards: Not applicable
NAERG: NAERG 114

Canadian TDG

UN Number UN0444
UN proper shipping name: Charges, Explosive, Commercial
Transport Hazard Class(es): 1.4D
Packing Group: Not applicable
EX Number: EX2016020739
Environmental Hazards: Not applicable

IMDG/IMO

UN Number UN0444
UN proper shipping name: Charges, Explosive, Commercial

Transport Hazard Class(es): 1.4D
Packing Group: Not applicable
EX Number: EX2016020739
Environmental Hazards: Not applicable
EMS: EmS F-B, S-X

IATA/ICAO

UN Number UN0444
UN proper shipping name: Charges, Explosive, Commercial
Transport Hazard Class(es): 1.4D
Packing Group: Not applicable
EX Number: EX2016020739
Environmental Hazards: Not applicable

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

Special Precautions for User None

15. Regulatory Information

US Regulations

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

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Hexanitrostilbene (HNS)	20062-22-0	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Hexanitrostilbene (HNS)	20062-22-0	Not applicable

EPA SARA (311,312) Hazard Class

Sudden Release of Pressure Hazard
Fire Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Hexanitrostilbene (HNS)	20062-22-0	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Hexanitrostilbene (HNS)	20062-22-0	Not applicable

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

California Proposition 65

Substances	CAS Number	California Proposition 65
Hexanitrostilbene (HNS)	20062-22-0	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Hexanitrostilbene (HNS)	20062-22-0	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 1, Flammability 3, Reactivity 4
HMIS Ratings: Health 1, Flammability 3, Physical Hazard 4

Canadian Regulations

Canadian Domestic Substances List (DSL) Product contains one or more components not listed on the inventory.

16. Other information

Preparation Information

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

Revision Date: 22-May-2017

Reason for Revision SDS sections updated:
2

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 Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
d - day
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
h - hour
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

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End of Safety Data Sheet