

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

SECTION 1 – IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Form : Mixture (Explosive Articles)
Product Name (Trade Name) : Detonating Cord, Specialty (Oil Field) (Class 1.1D)
Article Number : 1121EU1.1
Other Product Identifiers

8/40 RDX NYLON LS
8/40 HMX NYLON LS
8/40 RDX NYLON RIBBON LS
8/40 HMX NYLON RIBBON LS
17/80 RDX NYLON
10/50 HMX LOPRO NYLON LS
17/80 RDX NYLON LS
13/60 HMX NYLON LS
17/80 RDX NYLON XHV LS
13/60 HMX HI-TEMP LOW PROFILE LS
17/80 PETN Plastic
13/60 HMX HI-TEMP LS
21/100 PETN Plastic
17/80 HMX NYLON LS
13/60 HNS LS
17/80 HNS LS
17/80 HMX HI-TEMP LS
17/80 HMX NYLON XHV LS
17/80 HMX EXPOSED

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

1.2.1 Application of the Substance / the Mixture

Explosive Product.

Commercial Blasting Applications.

1.2.2 Uses Advised Against

Consumer use is prohibited, trained professional use only.

1.3 Details of the Supplier of the Safety Data Sheet

Company

Location Address (If Required):

Dyno Nobel Inc.
6440 S. Millrock Drive, Suite 150
Salt Lake City, Utah 84121
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dna.hse@am.dynonobel.com

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

1.4 Emergency Telephone Number

Emergency Number

CHEMTREC 1-800-424-9300 (US/Canada)
+01 703-527-3887 (International)

SECTION 2 – HAZARD(S) IDENTIFICATION

2.1 Classification of the Substance or Mixture

Classification According to Regulation (EC) No 1272/2008 [CLP]



exploding bomb

Explosive Category 1.1

H201 Explosives; mass explosion hazard

Classification According to Directive 67/548/EEC or Directive 1999/45/EC



E; Explosive

R2: Risk of explosion by shock, friction, fire, or other sources of ignitions

Information Concerning Particular Hazards for Human and Environment: The product has to be labelled due to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version.

Classification System: The classification is according to the latest editions of the EU-lists and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists and is supplemented by information from technical literature and by information provided by the company.

Additional Information: There are no other hazards not otherwise classified that have been identified. 0 percent of the mixture consists of component(s) of unknown toxicity.

2.2 Label Elements

Labeling According to Regulation (EC) No 1272/2008 [CLP]

(All other associated hazards are referenced in Section 16)

Hazard Pictograms



GHS01

Signal Word

:Danger

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

Hazard Statements :H201 Explosive; mass explosion hazard.

Precautionary Statements:

| | |
|-----------|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P250 | Do not subject to grinding/shock/friction. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P240 | Ground/bond container and receiving equipment. |
| P373 | DO NOT fight fire when fire reaches explosives. |
| P370+P380 | In case of fire: Evacuate area. |
| P372 | Explosion risk in case of fire. |
| P401 | Store in accordance with local/regional/national/international regulations. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

2.3 Other Hazards

Results of PBT and vPvB Assessment

PBT : Not applicable.

vPvB : Not applicable.

Explosive Product Notice: PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best-known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. The user should realize that this force, if misdirected, may either kill or injure both him and his fellow workers. Under normal usage, the user will not be exposed to the constituent substances within this article. Information provided on individual substances in sections 8, 11, and 12 relay information on exposure to chemicals/substances in their free form.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

(Note: Under normal usage, users will not be exposure to substances contained within this article.)

Product will consist of flexible white or colored cord. Coloration will determine the explosive present.

White - Pentaerythritol tetranitrate (PETN - CAS 78-11-5) and/or Cyclotetramethylene tetranitramine (HMX - 2691-41-0)

Pink - Cyclotrimethylene trinitramine (RDX - 121-82-4)

Yellow - Hexanitrostilbene (HNS - 20062-22-0)

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

| Product Identifier | Name | % (w/w) Range | Classification According to Regulation (EC) No. 1272/2008 |
|--|--|---------------|--|
| (Cas No) 78-11-5 (EC no) 201-084-3 | Pentaerythritol tetranitrate (PETN) | | Unst. Expl., H200 |
| (CAS No) 121-82-4 (EC no) 204-500-1 | perhydro-1,3,5-trinitro-1,3,5-triazine (RDX) | | Expl. 1.1, H201 Acute Tox. 4 (Oral), H301 Acute Tox. 3 (Dermal), H311 STOT SE 1, H370 (Central Nervous System/Kidneys) STOT RE 2, H373 |
| (CAS No) 2691-41-0 (EC no) 220-260-0 | octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) | | Expl. 1.1, H201 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Aquatic Chronic 3, H412 |
| (CAS No) 20062-22-0 (EC no) 243-494-5 | 2,2',4,4',6,6'-hexanitrostilbene | | Expl. 1.1, H201 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 |
| (CAS No) 126-73-8 (EC no) 204-800-2 | tributyl phosphate | | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Carc. 2, H351 Aquatic Acute 2, H401 Aquatic Chronic, H412 |
| (Cas No) 1336-21-6 (EC no) 215-647-6 | Ammonia, aqueous solution | | Acute Tox. 4(Inhalation: dust,mist), H332 Skin Corr. 1 (Dermal), H314 Aquatic Acute 1, H400 |

Additional Information: For the listed ingredients, the identity and exact percentages are being withheld as a trade secret. For full wording of the listed risk phrases/statements, refer to section 16.

SECTION 4 – DESCRIPTION OF FIRST-AID MEASURES

4.1 Description of First Aid Measures

General Information: No special measures required.

After Inhalation: Unlikely route of exposure.

Supply fresh air; consult doctor in case of complaints.

After Skin Contact: Generally the product does not irritate the skin.

Wash with soap and water.

If skin irritation is experienced, consult a doctor.

After Eye Contact: Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After Swallowing: Unlikely route of exposure.

Do not induce vomiting; call for medical help immediately.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Blast injury if mishandled.

Hazards

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

Danger of blast or crush-type injuries.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Agents: DO NOT FIGHT FIRE WHEN FIRE REACHES EXPLOSIVES.

For Safety Reasons Unsuitable Extinguishing Agents: None.

5.2 Special Hazards Arising from the Substance or Mixture

DO NOT ATTEMPT TO FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Evacuate all personnel to a predetermined safe location, no less than 2,500 feet in all directions. Can explode or detonate under fire conditions. Burning material may produce toxic vapors. It is recommended that users of explosives material be familiar with the Institute of Makers of Explosives Safety Library publications.

Explosive; mass explosion hazard.

5.3 Advice for Firefighters

Protective Equipment: Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional Information

Eliminate all ignition sources if safe to do so. Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Mass explosion of multiple devices is possible under certain conditions. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2012 Emergency response Guidebook for further information.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1 For non-emergency personnel

Wear appropriate PPE

Remove persons from danger area

6.1.2 For Emergency Responders

Ensure adequate ventilation

Wear protective clothing.

Protect from heat.

Evacuate area.

Isolate area and prevent access.

6.2 Environmental Precautions:

No special measures required.

6.3 Methods and Material for Containment and Cleaning up:

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Dispose unusable material as waste according to item 13.

6.4 Reference to Other Sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Open and handle receptacle with care.
Handle with care. Avoid jolting, friction and impact.
Use only in well ventilated areas.
Do not subject to grinding/shock/friction.

Information About Fire - and Explosion Protection: Prevent impact and friction.

Emergency cooling must be available in case of nearby fire.

7.2 Conditions for Safe Storage, Including Any Incompatibilities Storage:

Requirements to be Met by Storerooms and Receptacles: Store in a cool location. Avoid storage near extreme heat, ignition sources or open flame.

Information About Storage in One Common Storage Facility: Store away from foodstuffs.

Further Information About Storage Conditions: Store under lock and key and with access restricted to technical experts or their assistants only.

Keep away from heat.

7.3 Specific End Use(s): For professional use only.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional Information About Design of Technical Facilities: No further data; see item 7.

8.1 Control Parameters

Ingredients with Limit Values that Require Monitoring at the Workplace:

| (CAS No) 121-82-4; perhydro-1,3,5-trinitro-1,3,5-triazine (RDX) | | |
|---|-----------------------|---|
| Austria | OEL TWA | 1.5 mg/m ³ |
| | OEL STEL | 3 mg/m ³ |
| | OEL Chemical Category | Skin Notation |
| Belgium | OEL TWA | 1.5 mg/m ³ |
| | OEL Chemical Category | Skin |
| Canada | EL | 0.5 mg/m ³ |
| | EV | 0.5 mg/m ³ |
| Czech Republic | OEL TWA | 1.5 mg/m ³ |
| Denmark | OEL TWA | 1.5 mg/m ³ |
| | OEL Chemical Category | Potential for cutaneous absorption |
| Estonia | OEL TWA | 1.5 mg/m ³ |
| Finland | OEL TWA | 1.5 mg/m ³ |
| | OEL STEL | 4.5 mg/m ³ |
| | OEL Chemical Category | Potential for cutaneous absorption |
| France | OEL TWA | 1.5 mg/m ³ |
| | OEL Chemical Category | Risk of cutaneous absorption |
| Greece | OEL TWA | 1.5 mg/m ³ |
| | OEL STEL | 3 mg/m ³ |
| | OEL Chemical Category | Skin – potential for cutaneous absorption |
| Ireland | OEL TWA | 0.5 ppm |
| | OEL STEL | 1.5 mg/m ³ (calculated) |
| | OEL Chemical Category | Potential for cutaneous absorption |
| USA ACGIH | OEL TWA | 0.5 mg/m ³ |
| Norway | OEL TWA | 1.5 mg/m ³ |

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

| | | |
|-------------|-----------------------|---|
| | OEL STEL | 3 mg/m ³ (value calculated) |
| | OEL Chemical Category | Skin notation |
| Poland | OEL TWA | 1 mg/m ³ |
| | OEL Chemical Category | 3 mg/m ³ |
| Portugal | OEL TWA | 0.5 mg/m ³ |
| | OEL Chemical Category | A4 – Not Classifiable as a Human Carcinogen skin – potential for cutaneous exposure |
| Romania | OEL TWA | 2 mg/m ³ |
| | OEL STEL | 6 mg/m ³ |
| | OEL Chemical Category | Skin notation |
| Spain | OEL TWA | 0.5 mg/m ³ |
| | OEL Chemical Category | Skin – potential for cutaneous exposure |
| Switzerland | OEL TWA | 1.5 mg/m ³ |
| | OEL Chemical Category | Skin notation |

(CAS No) 126-73-8; Tributyl Phosphate

| | | |
|-------------|----------|-----------------------|
| Austria | OEL TWA | 2.5 mg/m ³ |
| | OEL STEL | 5 mg/m ³ |
| Belgium | OEL TWA | 2.2 mg/m ³ |
| Denmark | OEL TWA | 2.5 mg/m ³ |
| Finland | OEL TWA | 5 mg/m ³ |
| | OEL STEL | 10 mg/m ³ |
| France | OEL TWA | 2.5 mg/m ³ |
| Germany | OEL TWA | 2.5 mg/m ³ |
| Greece | OEL TWA | 5 mg/m ³ |
| | OEL STEL | 0.4 ml/m ³ |
| Ireland | OEL TWA | 5 mg/m ³ |
| | OEL STEL | 5 mg/m ³ |
| Italy | OEL TWA | 0.2 ml/m ³ |
| Netherlands | OEL TWA | 5 mg/m ³ |
| Norway | OEL TLV | 2.5 mg/m ³ |
| Portugal | OEL TWA | 2.2 mg/m ³ |
| Romania | OEL STEL | 5 mg/m ³ |
| Slovenia | OEL TWA | 2.5 mg/m ³ |
| Spain | OEL TWA | 2.2 mg/m ³ |
| Switzerland | OEL TWA | 2.5 mg/m ³ |
| USA ACGIH | OEL TWA | 5 mg/m ³ |
| UK | OES STEL | 5 mg/m ³ |

(CAS No) 1336-21-6; Ammonia, Aqueous Solution

| | | |
|----------|----------|----------------------|
| EU | OEL TWA | 14 mg/m ³ |
| | OEL STEL | 36 mg/m ³ |
| Ireland | OEL TWA | 14 mg/m ³ |
| | OEL STEL | 36 mg/m ³ |
| UK | OEL TWA | 18 mg/m ³ |
| | OEL STEL | 25 mg/m ³ |
| US ACGIH | OEL TWA | 25 mg/m ³ |
| | OEL STEL | 35 mg/m ³ |

Additional Information: The lists valid during the making were used as basis.

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

8.2 Exposure Controls

Personal Protective Equipment:

General Protective and Hygienic Measures: The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Respiratory Protection:

Not required under normal conditions of use.

Respiratory protection may be required after product use.

Protection of Hands:



Protective gloves

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

Material of Gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration Time of Glove Material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye Protection:



Safety glasses

Face protection

Body Protection: Impervious protective clothing

Limitation and Supervision of Exposure into the Environment: No further relevant information available.

Risk Management Measures: Organizational measures should be in place for all activities involving this product.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

| | |
|--------------------------------|---|
| Physical State | :Solid |
| Colour, Appearance | :Solid Device – colour, appearance according to product specification |
| Colour | : According to product specification |
| Odour | : Odourless |
| Odour Threshold | : Not determined |
| pH-value | : Not applicable |
| Melting point/Melting range | : Not determined |
| Boiling point/Boiling range | : Undetermined |
| Flash point | : Not applicable |
| Flammability (solid, gaseous) | : Explosive; mass explosion hazard |
| Auto/Self-ignition temperature | : Not determined |
| Decomposition temperature | : Not determined |

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

| | |
|---|---|
| Self-igniting | : Product is not self-igniting |
| Danger of explosion | : Risk of explosion by shock, friction, fire or other sources of ignition |
| Lower Explosive Limit | : Not determined |
| Upper Explosive Limit | : Not determined |
| Vapour pressure | : Not applicable |
| Density | : Not determined |
| Relative density | : Not determined |
| Vapour density | : Not applicable |
| Evaporation rate | : Not applicable |
| Solubility in / Miscibility with water | : Variable, dependent upon product composition and packaging |
| Partition coefficient (n-octanol/water) | : Not determined |
| Dynamic Viscosity | : Not applicable. |
| Kinematic Viscosity | : Not applicable. |

9.2 Other Information

9.2.1. **Additional Information on Physical Hazard Classes:** No further relevant information available.

9.2.2. **Other Safety Characteristics:** No further relevant information available.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:

10.2 Chemical Stability:

Thermal Decomposition / Conditions to be Avoided: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

10.3 Possibility of Hazardous Reactions: Danger of explosion. Toxic fumes may be released if heated above the decomposition point.

10.4 Conditions to Avoid: No further relevant information available.

10.5 Incompatible Materials: No further relevant information available.

10.6 Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.
Nitrogen oxides. Hydrocarbons.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

| (CAS No) 2691-41-0; octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) | |
|---|--|
| LD50 oral rat | 1670 mg/kg |
| LD50 oral | 2300 mg/kg |
| LD50 dermal rat | 982 mg/kg (Species: New Zealand White) |
| LD50 dermal | 634 mg/kg |

| (CAS No) 121-82-4; perhydro-1,3,5-trinitro-1,3,5-triazine (RDX) | |
|--|----------|
| LD50 oral rat | 71 mg/kg |

| (CAS No) 20062-22-0; 2,2',4,4',6,6'-hexanitrostilbene | |
|--|--------------------------|
| ATE CLP (oral) | 500.00 mg/kg bodyweight |
| ATE CLP (dermal) | 1000.00 mg/kg bodyweight |
| ATE CLP (dust,mist) | 1.50mg/l/4h |

| (CAS No) 126-73-8; Tributyl Phosphate | |
|--|------------|
| LD50 oral rat | 3000 mg/kg |

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

| | |
|-----------------------------|---------------|
| LD50 dermal rabbit | > 3100 mg/kg |
| LC50 inhalation (dust,mist) | 4.242 mg/L/4h |

(CAS No) 1336-21-6; Ammonia, Aqueous Solution

| | |
|---------------|-----------|
| LD50 oral rat | 350 mg/kg |
|---------------|-----------|

11.2 Information on Other Hazard Classes Which Relates to Endocrine Disruption Properties

No components of this mixture have been identified as endocrine disruptors.

Othe information: Unknown

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

(CAS No) 121-82-4; perhydro-1,3,5-trinitro-1,3,5-triazine (RDX)

| | |
|-------------------|--|
| LC50 fish 1 | 11.14 – 14.97 mg/l (Exposure time: 96 h – Species: Pimephales promelas [flow-through]) |
| LC50 fish 2 | 5.6 – 10 mg/l (Exposure time: 96 h – Species: Pimephales promelas [flow-through]) |
| NOEC chronic fish | 1.4 mg/l |

(CAS No) 2691-41-0; octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)

| | |
|-------------|---|
| LC50 fish 1 | 8.8 - 26 mg/l (Exposure time: 96 h – Species: Pimephales promelas [static]) |
| LC50 fish 2 | > 32 mg/l (Exposure time: 96 h – Species: Pimephales promelas [static]) |

12.2 Persistence and Degradability: No further relevant information available.

12.3 Bioaccumulative Potential:

| CAS No | Chemical Name | Log Pow |
|------------|---|----------------|
| 121-82-4 | perhydro-1,3,5-trinitro-1,3,5-triazine (RDX) | 0.87 (@ 23 °C) |
| 2691-41-0 | 2691-41-0; octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) | 0.165 |
| 20062-22-0 | 2,2',4,4',6,6'-hexanitrostilbene | 2.18 |

12.4 Mobility in Soil: No further relevant information available.

Additional Ecological Information

General Notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB Assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine Disrupting Properties: No components of this mixture have been identified as endocrine disruptors.

12.7 Other Adverse Effects: No further relevant information available.

12.8 Additional Information: See Section 16 for more information

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Damaged materials pose a danger to anyone in the immediate area; consult experts for disposal of damaged products.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

SDS#: 1121EU1.1 Date: 09/18/2023

14

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Dyno Nobel

Groundbreaking Performance[®]

Page 10 of

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

Uncleaned Packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended Cleansing Agents: Water, if necessary, together with cleansing agents.

SECTION 14 – TRANSPORTATION INFORMATION

14.1 UN-Number

DOT, ADR, IMDG : UN0065

IATA : FORBIDDEN

14.2 UN Proper Shipping Name

DOT, IMDG : CORD, DETONATING, FLEXIBLE

ADR : 0065 CORD, DETONATING, FLEXIBLE

IATA : FORBIDDEN

14.3 Transport Hazard Class(es)

DOT, ADR, IMDG



Class : 1.1

Label : 1.1D

IATA

Class : FORBIDDEN

14.4 Packing group

DOT, ADR, IMDG : II

IATA : FORBIDDEN

14.5 Environmental Hazards:

Marine Pollutant: : No

Special Marking (IATA): : FORBIDDEN BY AIR.

14.6 Special Precautions for User : Not applicable.

EMS Number: : F-B,S-X

14.7 Maritime Transport in Bulk According to IMO Instruments: Not applicable

Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information:

ADR

Limited Quantities (LQ) : 0

Excepted Quantities (EQ) : Code: E0

Tunnel Restriction code : 1

IMDG

Limited Quantities (LQ) : 0

Excepted Quantities (EQ) : Code: E0

: Not permitted as Excepted Quantity

IATA : FORBIDDEN.

UN "Model Regulation" : UN0065, CORD, DETONATING, FLEXIBLE, 1.1D, II

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

15.1.1 EU-Regulations

(CAS No) 121-82-4; perhydro-1,3,5-trinitro-1,3,5-triazine (RDX)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

(CAS No) 2691-41-0; octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

(CAS No) 20062-22-0; 2,2',4,4',6,6'-hexanitrostilbene

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.1.2 National regulations

United States (USA)

SARA

Section 355 (Extremely Hazardous Substances):

None of the ingredients are listed.

Section 313 (Specific Toxic Chemical Listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act)

All ingredients are listed.

Proposition 65 (California)

Chemicals known to cause cancer

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males

None of the ingredients are listed.

Chemicals known to cause developmental toxicity

None of the ingredients are listed.

Carcinogenic Categories

EPA (Environmental Protection Agency)

121-82-4: perhydro-1,3,5-trinitro-1,3,5-triazine (RDX) C

2691-41-0: octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) D

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

121-82-4 perhydro-1,3,5-trinitro-1,3,5-triazine (RDX) A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL)

Some components are listed on the NDSL.

All ingredients are listed.

Canadian Ingredient Disclosure list (limit 0.1%)

SDS#: 1121EU1.1 Date: 09/18/2023

14

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Page 12 of

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%)

126-73-8 tributyl phosphate

Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16 – OTHER INFORMATION

Relevant Phrases

- H200 Unstable explosives.
- H201 Explosive; mass explosion hazard.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- R2 Risk of explosion by shock, friction, fire or other sources of ignition.
- R22 Harmful if swallowed.
- R24 Toxic in contact with skin.
- R25 Toxic if swallowed.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R34 Causes burns.
- R38 Irritating to skin.
- R40 Limited evidence of a carcinogenic effect.
- R50 Very toxic to aquatic organisms.

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 (and Directive 98/24/E)

Trade Name: Detonating Cord, Specialty (Oil Field) (Class 1.1D)

- WHMIS: Workplace Hazardous Materials Information System (Canada)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Expl. 1.1: Explosives, Division 1.1
- Unst. Expl.: Explosives, Unstable explosives
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Carc. 2: Carcinogenicity, Hazard Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Sources

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