

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

CARTRIDGE, 2 1/8 MULTI-STAGE - PC21393021

Revision Date: 04-Jan-2011

Revision Number: 6

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

Product Identifier

Product Name

CARTRIDGE, 2 1/8 MULTI-STAGE - PC21393021

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
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United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

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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	Poisons Information (NO): + 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

Acute Oral Toxicity	Category 4 - (H302)
Explosives.	Division 1.4 - (H204)
Oxidizing solids	Category 1 - (H271)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

2. HAZARDS IDENTIFICATION

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

Classification
O - Oxidizing.
Xn - Harmful.

Risk Phrases
R8 Contact with combustible material may cause fire.
R22 Harmful if swallowed.

Label Elements

Hazard Pictograms



Signal Word

Danger

Hazard Statements

H302 - Harmful if swallowed
H204 - Fire or projection hazard
H271 - May cause fire or explosion; strong oxidizer

Contains

Substances

Titanium potassium perchlorate

CAS Number

Mixture

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

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/ combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/Bond container and receiving equipment
P250 - Do not subject to grinding/shock/friction
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P283 - Wear fire/flame resistant/retardant clothing
P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P306 + P360 - IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P371 + P380 + P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
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.
Titanium potassium perchlorate	Not applicable	Mixture	Unknown	O;R9 Xn;R22	Acute Tox. 4 (H302) Ox. Sol. 1 (H271) Expl. 1.4 (H204)	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.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse. Destroy or properly dispose of contaminated shoes.

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 effect the blood's ability to carry oxygen.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically

5. FIREFIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Special hazards arising from the substance of mixture**Special Exposure Hazards**

Flammable solid, may detonate under adverse conditions. Oxidizer. May ignite combustibles. Sprinkler and/or deluge systems recommended for bulk storage areas.

Advice for firefighters**Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

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

Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Scoop up and remove.

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. Avoid creating or inhaling dust. 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

Keep away from friction, impact, and heat. Store away from combustibles.

Specific End Use(s)**Exposure Scenario** No information available**Other Guidelines** No information available**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

Substances	EU	UK OEL	Netherlands	France OEL	Germany MAK/TRK
Titanium potassium perchlorate	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Titanium potassium perchlorate	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Derived No Effect Level (DNEL) No information available.**Predicted No Effect Concentration (PNEC)** No information available.**Exposure controls****Engineering Controls**

Use in a well ventilated area.

Personal protective equipment**Respiratory Protection**

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

Hand Protection

Cloth gloves.

Skin Protection

Cotton coveralls, undergarments, and socks. Conductive soled shoes. Anti-static clothing.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Physical State:** Solid**Color:** Gray to black**Odor:** Odorless**Odor Threshold:** No information available**Property****Values****Remarks/ Method****pH:**

No data available

Melting Point/Range

No data available

Freezing Point/Range (C):

No data available

Boiling Point/Range

No data available

Flash Point

No data available

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

1.04

Water Solubility

Insoluble in water

Solubility in other solvents

No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

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

Other information

VOC Content (%)	No data available
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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.

Incompatible Materials

Strong alkalis. Strong acids. Combustible materials. Organic matter. Reducing agents.

Hazardous Decomposition Products

Oxides of nitrogen. Chlorine. Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Inhalation	May cause respiratory irritation. May cause blood disorders including prolonged weakness and fatigue.
Eye Contact	May cause eye irritation.
Skin Contact	May cause skin irritation.
Ingestion	May reduce the blood's ability to transport oxygen (methemoglobinemia).

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
Titanium potassium perchlorate	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)
Titanium potassium perchlorate	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.

Contaminated Packaging

Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION**IMDG/IMO**

UN Number: UN0323,
UN Proper Shipping Name: Cartridges, Power Device
Transport Hazard Class(es): , 1.4S
Packing Group: , II
EMS: EmS F-B, S-X

RID

UN Number: UN0323,
UN Proper Shipping Name: Cartridges, Power Device
Transport Hazard Class(es): , 1.4S
Packing Group: , II

ADR

UN Number: UN0323,
UN Proper Shipping Name: Cartridges, Power Device
Transport Hazard Class(es): , 1.4S
Packing Group: , II

IATA/ICAO

UN Number: UN0323,
UN Proper Shipping Name: Cartridges, Power Device
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

All components listed on inventory or are exempt.

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/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering
Classes (WGK)**

WGK 2: Hazard to waters.

Chemical Safety Assessment

No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under Sections 2 and 3

R8 Contact with combustible material may cause fire.

R22 Harmful if swallowed.

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date:

04-Jan-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