HALLIBURTON

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

CARTRIDGE, 2 1/2 SHORTY - PC25092023

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 1/2 SHORTY - PC25092023

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	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	EU - CLP Substance	REACH No.
				Classification	Classification	
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 mediaó

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	Not applicable				
perchlorate					

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

Derived No Effect Level (DNEL)

Predicted No Effect Concentration

No information available. No information available.

(PNEC)

Exposure controls

Engineering ControlsUse 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 ProtectionChemical 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

Values

Information on basic physical and chemical properties

Physical State: Solid Color: Gray to black

Odor: Odorless Odor Threshold: No information available

Property

Remarks/ Method

pH: No data available
Melting Point/Range No data available

Freezing Point/Range (C):

Boiling Point/Range
No data available
Vaporation 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

Revision Date: 04-Jan-2011

 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

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 (methemalobinemia).

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	No information available	No information available	No information available	No information available
perchlorate				

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

Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

IMDG/IMO

UN0323. **UN Number:**

Cartridges, Power Device **UN Proper Shipping Name:**

, 1.4S Transport Hazard Class(es): , II **Packing Group:**

EmS F-B, S-X EMS:

RID

UN Number: UN0323.

UN Proper Shipping Name: Cartridges, Power Device

Transport Hazard Class(es): , 1.4S , II **Packing Group:**

ADR

UN Number: UN0323,

UN Proper Shipping Name: Cartridges, Power Device

Transport Hazard Class(es): , 1.4S **Packing Group:** , 11

IATA/ICAO

UN Number: UN0323.

UN Proper Shipping Name: Cartridges, Power Device

Transport Hazard Class(es): , 1.4S , II **Packing Group:**

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. All components listed on inventory or are exempt. **Canadian DSL 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)

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 04-Jan-2011 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