

SAFETY DATA SHEETPursuant to the Directive of EP and Council (EC)
No. 1907/2006

Version: 1.1

Date of edition: 12/14 / 2008

Date of revision: -

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

- 1.1 Identification of the substance or preparation:
- Trade name: **Rocket Barrel Magnum**
- Chemical name: -
- No. of registration: -
- Other names of the substance: Magnum250, Magnum 450, Magnum 600R, Magnum 600, Magnum 1000, Magnum 1500
- Purpose of the product: An element of aerial safety systems – Rope puller
- 1.2 Use of the substance/preparation:
- 1.3 Company/undertaking identification:
- 1.3.1 Manufacturer identification:
- Name or trade name: **Stratos 07 s.r.o.**
- Registered office / seat of organization: Na Folimance 13
120 00 Prague 2
Czech Republic
- Phone: 00420 312 658151
- Fax: 00420 312 658151
- Emergency phone: 00420 603 416872 , +420 603 451819
- Web: www.stratos07.cz
- E-mail: info@stratos07.cz
- 1.4 Emergency telephone: Toxicological Information Centre, Na Bojišti 1, 128 08, Prague 2
Phone (day and night):
+420 2 2491 9293
+420 2 2491 5402
+420 2 2491 4575

2. HAZARDS IDENTIFICATION

- Classification of the substance or preparation in compliance with the legislation: Pursuant the Act No.356/2003 Coll., the product is not classified. The hazardous substances are incorporated in the metallic shell; their leak is not possible in case of ordinary use. Classification of the individual filling components is given in Art. 3.
- Warning symbol of the hazard: -
- Most important adverse effects on the human health relating to use of the substance / preparation: Due to the incorporation of the substances into the metallic shell, the product does not represent any acute risk for human health. In case of uncontrolled explosive burning, there is a risk of thermal burn and mechanical damage of tissues, in case of inspiration – chemical damage of the tissue.
- Most severe adverse effects on the environment when the substance /preparation is used: Explosive burning risk.
- Possible improper use of the substance / preparation: Confusion with other product.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

The product contains the following hazardous substances:

Chemical name	Content (%)	No. of regist.	CAS number	No. of ES (EINE CS)	VSN	R-phrase
Nitrocellulose	57,5 /P		9004-70-0	-	E	1-3
Nitroglycerin	26,6±1,5 /P		55-63-0	2000-240-8	E T+ N	3 26/27/28-33 51/53
Dinitrotoluene	8,5±1,5 /P		25321-14-6	246-836-1	Carc.cat.2 Mut.cat.3 Repr.cat.3 T Xn N	45-62-23/24/25- 48/22-51/53-68
Centralit I	2,9±0,5 /P		85-98-3	201-645-2	Xn	22
Lead oxide	1,4±0,5 /P		1317-36-8	-	T N	20/22-33-61-62- 50/53
Potassium nitrate	73,5-76,5 /I		7757-79-1	281-818-8	Xi	8
Sulphur	9,0-11,0 /I		7704-34-9	231-722-6	Xi	36/37/38

VSN = Warning symbol of the hazard

Full text of the R-phrases see Section 16.

P = propeller

I = initiator

4. FIRST AID MEASURES

- 4.1 General instructions: In all cases provide the affected person with physical / mental composure and protect him/her from alidity. In all serious cases, when the eyes are affected, always seek medical aid.
- 4.2 In cases of inhalation: In idle condition does not represent any exposure risk.
- 4.3 Skin contact: In idle condition does not represent any exposure risk.
- 4.4 Eye contact: In idle condition does not represent any exposure risk.
- 4.5 Ingestion: Improbable.
- 4.6 Other data: Further details about first aid may be discussed with the Toxicological Information Centre (TIS): Vocational Disease Clinic, Na Bojišti 1171/1, 128 21 Prague 2, tel. 224 919 293, 224 915 402 or 224 914 575.

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5. FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media: The burning rocket barrels are extinguishable by neither water nor any other extinguishing media. Efficient cooling and extinguishing with water may limit any possible fire and avert its possible expansion.
- 5.2 Unsuitable extinguishing media: None.
- 5.3 Special risks: After the initiation by fire or other heat source it burns even under absence of the air. All persons should be evacuated from the hazardous area.
- 5.4 Special protective equipment for fire-fighters: Isolating breathing device, chemical protective clothing.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions: Prevention of access of unauthorized persons.
- 6.2 Environmental precautions: Not expected.
Prevent any leak to the soil and underground space.
- 6.3 Recommended methods for cleaning and deactivation: For the disposal, contact the supplier. Deactivation of the rocket barrels, see Section 13.
- 6.4 Other data: In case of mechanical damage and damage of the rocket barrels, contact the manufacturer, who provide for their professional disposal.

7. HANDLING AND STORAGE

- 7.1 Handling instructions: Handle in accordance with the regulations related to explosives. Do not use open fire, hot items, avoid creation of static electricity. Do not smoke, eat, drink. Use the personal protective equipment. During any manipulation with the product and transport maximum caution should be observed.
- 7.2 Storage instructions: Store in the transport containers, under relative humidity up to 75 % and temperatures $\pm 50^{\circ}\text{C}$.
Follow the provisions of the Czech Mining Office Regulation No. 99/1995 Coll., the product is classified in the B-class.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 Exposure limit values: Nitroglycerin: PEL 0.5 mg/m³, NPK-P 1.0 mg/m³
Dinitrotoluene: PEL 0.75 mg/m³, NPK-P 1.5 mg/m³
Inorganic lead compounds: PEL 0.05 mg/m³, NPK-P 0.2 mg/m³
- 8.2 Exposure controls: Prevent any unprofessional manipulation with the product.
- 8.2.1 Occupational exposure controls
- Respiratory protection: Not required.
- Hand protection: Cotton gloves.
- Eye protection: Safety glasses.
- Skin protection: Protective cotton suit, boots with leather / electric-conductive sole, cap.
- 8.2.2 Environmental exposure controls: Prevent leakage of the filling into the environment.
- 8.3 Other data: Do not eat / smoke at work, follow the principles of personal hygiene.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information:

Appearance:

Physical state: Solid

Colour: Depending on the metal used

Odour: Odourless

9.2 Important health, safety and environmental information:

pH (at °C): N/A

Boiling point / boiling range (°C): N/A

Flash point (°C): N/A

Flammability: After inflammation risk of explosive burning

Explosive properties:

Lower limit: N/A

Upper limit: N/A

Oxidising properties: N/A

Vapour pressure (at °C): N/A

Solubility:

- Water solubility(at °C): N/A

Partition coefficient n-octanol/water: N/A

Viscosity: N/A

Density: N/A

Vapour density: N/A

Evaporation rate: N/A

9.3 Other information: -

10. STABILITY AND REACTIVITY

10.1 Conditions, under which is the product stable: Stable under normal conditions.

10.2 Conditions to avoid: Temperature over 80 °C, strong impact.

10.3 Materials to avoid: Strong acids and bases.

10.4 Hazardous decomposition products: Explosion leads to hazardous products, fragments.

10.5 Other information: -

11. TOXICOLOGICAL INFORMATION

N/A.

12. ECOLOGICAL INFORMATION

N/A.

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13. DISPOSAL CONSIDERATIONS

- 13.1 Methods of disposal of the substance / preparation: The disposal shall be carried out by activation, explosion, delaboration or impairment, i.e. by removal of the fuse carrier, by flooding of the internal space with water and subsequent damage by a professional. Any disposal can only be carried out by a pyrotechnist at a place reserved for disposal of explosives in compliance with the Czech Mining Office regulations.
- 13.2 Methods of disposal of any contaminated packaging: No contamination of the packaging is expected.
- 13.3 Legislation on the waste: Act No. 185/2001 Coll. as subsequently amended.
Regulation of the Ministry of Environment and Ministry of Health No. 376/2001 Coll., On assessment of hazardous waste.
Regulation of the Ministry of Environment No. 381/2001 Coll., Waste catalogue
Regulation of the Ministry of Environment No. 383/2001 Coll., On details of waste disposal
Regulation of the Ministry of Environment No. 381/2001 Coll., On disposal with polychlorinated biphenyls, polychlorinated terphenyls, monomethyltetrachlordiphenylmethane, monomethyldichlordiphenylmethane, monomethyldibromdiphenylmethane and all mixtures containing any of those substances
Regulation of the Ministry of Environment No. 237/2002 Coll., On details of the take-back of some products
Act No. 86/2002 Coll., On atmosphere protection

14. TRANSPORT INFORMATION**Terrestrial transport ADR, RID:**

Classification: 1/1.4G/PGII
UN No.: 0453
Designation of the substance / object: ROCKETS, LINE THROWING
Name of the substance / object: Rocket barrels Magnum
Safety mark: 1

Domestic waterborne transport**ADN/ADNR:**

Classification: 1/1.4G/PGII
UN No.: 0453
Designation of the substance / object: ROCKETS, LINE THROWING
Name of the substance /object: Rocket barrels Magnum
Sea polluting substance: No
Safety mark: 1

Naval transport IMDG:

Classification: 1/1.4G/PGII
UN No.: 0453
Designation of the substance / object: ROCKETS, LINE THROWING
Name of the substance / object: Rocket barrels Magnum
Sea polluting substance: No
Safety mark: 1

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Airborne transport IATA-DGR:

Classification: 1/1.4G/PGII
UN No.: 0453
Designation of the substance / object: ROCKETS, LINE THROWING
Name of the substance / object: Rocket barrels Magnum
Sea polluting substance: No
Safety mark: 1

15. REGULATORY INFORMATION

- 15.1 Information shown on the label according to Act No. 356/2003 Coll., as subsequently amended:
Warning symbol of hazard: Non applicable. Pursuant to the Act No. 356/2003 Coll., the product is not classified.
- 15.2 Chemical safety assessment (for the substance or a substance in the preparation): Not carried out.
- 15.3 Risk phrases: Non applicable.
- 15.4 Safety phrases:
S 18 Handle and open container with care
S 33 Take precautionary measures against static discharges
S 35 This material and its container must be disposed of in a safe way
S 39 Wear eyes/face protection
S 41 In case fire and/or explosion do not breathe the fumes
- 15.5 Czech legal regulations relating to the product:
Act of the Czech National Council No. 61/1988 Coll., On mining activity, explosives and government mining administration, as subsequently amended
Regulation of the Czech Mining Office No. 72/1988 Coll., On explosives, as subsequently amended
Regulation of the Czech Mining Office No. 327/1992 Coll., which sets requirements to labour safety and health protection assurance and operation safety in production / processing of explosives and qualification of personnel to this occupation, as subsequently amended
Regulation of the Czech Mining Office No. 102/1994 Coll., which sets requirements for to labour safety and health protection assurance and operation safety in buildings appointed to production and processing of explosives, as subsequently amended
Regulation of the Czech Mining Office No. 99/1995 Coll., On storage of explosives, as subsequently amended
Act No.258/2000 Coll., On public health protection and variation of related acts
Cabinet directive No. 361/2007 Coll., which sets conditions for occupational health protection
Act No. 65/1965 Coll., Labour Code, as subsequently amended

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16. OTHER INFORMATIONFull text of the R-phrases, referred to in the Safety Data Sheet:

- R 1 Explosive when dry.
- R 11 Highly flammable
- R 20/22 Harmful by inhalation and if swallowed
- R 22 Harmful if swallowed
- R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed
- R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed
- R 3 Extreme risk of explosion by shock, friction, fire or other sources of ignition
- R 33 Danger of cumulative effects
- R 36 Irritating to eyes
- R 36/37/38 Irritating to eyes, respiratory system and skin
- R 45 May cause cancer
- R 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed
- R 50 Very toxic to aquatic organisms
- R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R 61 May cause harm to the unborn child
- R 62 Possible risk of impaired fertility
- R 66 Repeated exposure may cause skin dryness or cracking
- R 67 Vapours may cause drowsiness and dizziness
- R 68 Possible risk of irreversible effects
- R 8 Contact with combustible material may cause fire

Relevant data for the classification:

According to the list of obligatorily classified substances.

Training instructions:

Use information from this Safety Data Sheet, emphasize the explosiveness, cautious manipulation, professional and health qualification. The schooling material must be approved by a public health protection body.

Sources of the most important data, used when compiling the Safety Data Sheet:

State legislation, chemical databases and signs/tables, Safety Data Sheet of the supplier.

Other information (written references or contact point of technical information):This Safety Data Sheet is effective for the Rocket barrel Magnum of the following types:
Magnum 250, Magnum 450, Magnum 600R, Magnum 600, Magnum 1000, Magnum 1500

The above-mentioned information expresses the present state of our knowledge and experience. The data only describe the product with respect to the safety and cannot be regarded as guaranteed data. The user is responsible for handling compliant to the existing legislation.
