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

1.1 Product identifier:

Product name: Non-electric detonator.

Registration number of the substance: Not allocated. Product is classified as mixture in the package.

Other names of product: T200 elemented cap (1100-2000 ms), T200-1 elemented cap (1100-2000 ms), LP SHOCKSTAR IHD 1200-2000 elemented cap, INDETSHOCK TS/SHOCKSTAR TS (1100-2000 ms), INDETSHOCK TS-1/SHOCKSTAR TS-1 (1100-2000 ms)

1.2 Relevant identified uses of the substance or mixture and uses advise against:

Relevant identified uses of the mixture: Borehole detonators for initiation of industrial explosives.

Uses advise against: Restricted to professional users.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:

AUSTIN DETONATOR s.r.o.
Jasenice 712
755 01 Vsetín
Czech Republic
Tel.: 00420-571-404-001
Fax: 00420-571-404-002
www.austin.cz
E-mail of the person responsible for the safety sheet: msds@austin.cz

1.4 Emergency telephone number: non-stop service:

Toxicological Information Centre
Clinic of occupational disease
Na Bojišti 1, 128 08 Prague 2
Non-stop service: +420 224 919 293 or +420 224 915 402
www.tis-cz.cz; tis@vfn.cz

If necessary, call a toxicological center of the country.

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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the mixture:

The mixture is classified as hazardous in accordance with *Regulation (EC) No. 1272/2008*.

- **Expl. 1.1 H201**
- **Acute Tox. 4 H302**
- **Carc. 2 H351**
- **Repr. 1A H360Df**
- **STOT SE 2 H371**
- **STOT RE 2 H373**
- **Aquatic Acute 1 H400**
- **Aquatic Chronic 2 H411**

Full wordings of abbreviations and hazard statements are listed in Section 2 and 16.

2.2 Label elements:

Marking in accordance with EC regulation *No. 1272/2008*:

Explosives, as referred to in section 2.1 of Regulation (EC) No. 1272/2008, placed on the market with a view to obtaining an explosive or pyrotechnic effect shall be labelled and packaged in accordance with the requirements for explosives only.

Marking of the mixture in accordance with classification:

Pictograms:

Signal word: Danger

Hazard statements:

H201	Explosive, mass explosion hazard.
H302	Harmful if swallowed.
H351	Suspected of causing cancer.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H371	May cause damage to the central nervous system by ingestion.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking**.**
P250	Do not subject to grinding, shock and friction.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P370 + P380	In case of fire: Evacuate area.
P372	Explosion risk in case of fire.
P401	Store in dry and well ventilated areas, in temperatures -30 °C to +40 °C.
P501	Disposal of contents/container must be in accordance with corresponding local regulations for disposal of packages and explosives.

2.3 Other hazards:

The mixture doesn't meet the criteria for classification as PBT or vPvB substances and mixtures.

Physicochemical effect: Risk of explosion, an uncontrolled explosion may cause great physical damage.

In the assembled detonator, the hazardous substances are enclosed in a metal case that cannot be disassembled. These substances can be released only by detonation in the form of post-detonation reaction products.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures:

Nonelectric assembled detonator contains also chemicals that are not classified as hazardous, and various other components, such as plastic tube, plug and other plastic components. These parts do not contain SVHC substances.

The mixture contains the following hazardous chemicals:

Name of substance	Registration Number	EC CAS INDEX number	CLASSIFICATION 1272/2008/ES (CLP) Hazard Category /M-factor/	CLASSIFICATION 1272/2008/ES (CLP) Hazard statement Code	Concentration (%)
NON-ELECTRIC DETONATOR					
1,3,5-Trinitroperhydro-1,3,5-triazine; Hexogen; (RDX)	01-2119990795-17-0002	204-500-1 121-82-4 -	Expl. 1.1 Acute Tox. 3 STOT SE 1 STOT RE 2	H201 H301 H370 H373 ***b)***	5.7 - 7.8
Lead tetroxide	01-2119517589-27-0002	215-235-6	Repr. 1A Carc. 2 Acute Tox. 4 (*)	H360Df H351 H302	4.9 - 5.8

		1314-41-6 082-001-00-6	Acute Tox. 4 (*) STOT RE 2 (*) Aquatic Acute 1 /M=10/ Aquatic Chronic 1 /M=1/ *Note A*	H332 H373 (**) H400 H410 ***b)***	
Lead azide	01-2119475503-38-0000	236-542-1 13424-46-9 082-003-00-7	Unst. Expl. Repr. 1A Acute Tox. 4 (*) Acute Tox. 4 (*) STOT RE 2 (*) Aquatic Acute 1 Aquatic Chronic 1	H200 H360Df H332 H302 H373 (**) H400 H410 ***a)***	0.4 – 0.6
FerroSilico-Zirconium Powder	-	- - -	-	-	0.3 - 0.5
Pentaerythritol tetranitrate, P.E.T.N.	-	201-084-3 78-11-5 603-035-00-5	Unst. Expl.	H200 ***a)***	0.2 - 0.4
*** Zirconium powder (pyrophoric)**	-	231-176-9 7440-67-7 040-001-00-3	Water-react. 1 Pyr. Sol. 1 *Note T*	H260 H250 ***a)***	0.1 - 0.2

Notes:

a) Classification of substance according to the Annex VI of Regulation (EC) No. 1272/2008 of the European Parliament and the Council listed in the safety data sheet.

b) Classification of substance according to the current Safety Data Sheet.

***** The mixture is introduced in the market as a solid substance. The mixture is not in contact with air or water. The classification Water-react. 1 H260 a Pyr. Sol. 1 H250 is not relevant for this mixture.

Note A: Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4 of Regulation (EC) No. 1272/2008 of the European Parliament and the Council.

Note T: This substance may be marketed in a form which does not have the physical hazards as indicated by the classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed do not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method(s) shall be included in the safety data sheet.

(*) For certain hazard classes, including acute toxicity and STOT repeated exposure; the classification according to the criteria in Directive 67/548/EEC does not correspond directly to the classification in a hazard class and category under this Regulation. In these cases the classification in this Annex shall be considered as a minimum classification. This classification shall be applied if none of the following conditions are fulfilled:

— the manufacturer or importer has access to data or other information as specified in Part 1 of Annex I that lead to classification in a more severe category compared to the minimum classification. Classification in the more severe category must then be applied;

— the minimum classification can be further refined based on the translation table in Annex VII when the physical state of the substance used in the acute inhalation toxicity test is known to the manufacturer or importer. The classification as obtained from Annex VII shall then substitute the minimum classification indicated in this Annex if it differs from it.

(**) For certain hazard classes, e.g. STOT, the route of exposure should be indicated in the hazard statement only if it is conclusively proven that no other route of exposure can cause the hazard in accordance to the criteria in Annex I. Under Directive 67/548/EEC the route of exposure is indicated for classifications with R48 when there was data justifying the classification for this route of exposure. The classification under 67/548/EEC indicating the route of exposure has been translated into the corresponding class and category according to this Regulation, but with a general hazard statement not specifying the route of exposure as the necessary information is not available.

Specific concentration limits		
	Hazard Category	**Limit**
Lead tetroxide	Repr. 2 H361f	c > 2,5 %
	STOT RE 2 H373	c > 0,5 %

Full wordings of abbreviations and hazard statements are stated in section 2 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

General instruction:

In the assembled detonator, the mixture is enclosed in a metal case that cannot be disassembled. If used in accordance with section 1.2, the exposition is not possible. The exposition can occur only in case of detonation in the form of post-detonation reaction products. Detonation may cause burns and injuries. In case of any suspicion, seek medical advice.

Inhalation:

Interrupt the exposition, move the exposed person to the fresh air. Keep the person warm and at rest. If the symptoms of respiratory system irritation (e.g. heavy breathing) persist, look for the medical help.

Skin contact:

In case of detonation, there is a risk of burns, general injuries and injuries caused by splinters. Seek medical advice.

Eye contact:

In case of detonation, there is a risk of general injuries and injuries caused by splinters. Seek medical advice.

Ingestion:

Rinse mouth, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed:

Inhalation: In case of inhalation of post-detonation reaction products, an irritation of respiratory system and a headache may occur.

Skin contact: Injuries, burns.

Eye contact: Injuries, burns.

Ingestion: If swallowed, seek medical advice.

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

No special means are stated.

If any health troubles appear or in case of doubt, please inform the doctor and provide the information from this safety sheet.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Suitable agents: Fire in the product cannot be extinguished with any fire-fighting equipment as it is explosive material.

Unsuitable extinguishing agents: Not stated.

5.2 Special hazards arising from the substance or mixture:

If a building containing the product is on fire, a high risk of explosion is involved. Perform an urgent evacuation of the building and its surroundings. Notify the Integrated Rescue System. Don't inhale the gasses of the fire because they contain heavy metals (lead). The combustion residues and contaminated extinguishing liquids must be disposed of according to valid regulations.

5.3 Advice for fire-fighters:

During the fire of the product, keep the safe distance, use suitable breathing protection (isolation device), or self-contained breathing apparatus**.**

SECTION 6: ACCIDENTAL RELEASE MEASURES

The measures to be taken in case of accidental leakage (e.g. traffic accident) depend on the scale of the accident and an expert opinion of a specialist.

6.1 Personal precautions, protective equipment and emergency procedures:

Warn away the trespassers. Remove possible sources of initiation and thermal agitation (open fire, electric sparks etc.). In case of risk of an explosion, evacuate the buildings and the surrounding area. Use appropriate means suitable for work to prevent contact with skin and eyes. Follow the direction in section 7 and 8.

6.2 Environmental precautions:

Do not allow the mixture to enter into sewer, water system (underground water, surface water) or soil.

6.3 Methods and material for containment and cleaning-up:

Pick up the spilled product mechanically using spark-free tools. Collect the product in approved and properly labelled containers. Disposal of damaged product may be performed only by an authorized person. Disposal of the contaminated material must be in accordance with section 13.

6.4 Reference to other sections: See Section 8 and 13 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Handle the products with increased care. Keep away from heat/sparks/open flame and hot surfaces. Protect from electrostatic discharge. No smoking.

7.2 Conditions for safe storage, including any incompatibilities:

Store in dry and well ventilated areas in temperatures from -30 °C to +40 °C. Keep the package closed tightly. Storage room must be locked. Do not store together with drugs, foodstuffs, drinks and forage. Do not store together with other explosives.

7.3 Specific end use: Borehole detonators for initiation of industrial explosives.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Time-Weighted Average and Threshold Limit Value - Short-Term Exposure Limit valid in various countries:

Name of substance	Country	EINECS	CAS	TWA	TLV-STEL	*Note*
				mg/m^3	mg/m^3	
Lead compounds as Pb (except alkyl compounds)	Czech Republic USA	-	-	**0,05**	**0,2**	P*
	United Kingdom Australia	-	-	**0,15**	**-**	-
	New Zealand South Africa	-	-	**0,1**	**-**	-

P*- The exposure level is determined by lead poisoning blood test.

DNELs and PNECs:

Substance	Indicator	Medium	Value	
Lead tetroxide	PNEC	fresh water	6,5 µg.l^{-1}	1)
	PNEC	marine water	3,4 µg.l^{-1}	1)
	PNEC	microorganisms	100 µg.l^{-1}	1)
	PNEC	freshwater sediment	174 mg.kg^{-1}	1)
	PNEC	marine sediment	164 mg.kg^{-1}	1)
	PNEC	soil	147 mg.kg^{-1}	1)
Hexogen	PNEC	soil	7,56 mg.kg^{-1}	1)

1) Data according to the MSDS

Substance	Indicator	Exposed persons / effect / route of exposure	Value	
Hexogen	DNEL	workers / chronic / dermal	0,04 $mg.kg^{-1}.day^{-1}$	1)
	DNEL	workers / acute / dermal	3,36 $mg.kg^{-1}.day^{-1}$	1)
	DNEL	workers / chronic / inhalation	0,31 $mg.m^{-3}$	1)
	DNEL	workers / acute / inhalation	8,29 $mg.m^{-3}$	1)
	DNEL	consumers / chronic / dermal	0,1 $mg.kg^{-1}.day^{-1}$	1)
	DNEL	consumers / acute / dermal	0,2 $mg.kg^{-1}.day^{-1}$	1)

1) Data according to the MSDS

For other chemical substances values are not currently available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Follow the usual basic precautions for handling explosives. Avoid inhaling of gases after the detonation.

8.2.2 Individual protection measures, such as personal protective equipment:

Not necessary, if the product is used in accordance with section 1.2**.**

Eye/face protection: Use protective glasses if needed.

Protection of skin (whole body): Don't eat, drink and smoke during work. Use clothes suitable for work that do not accumulate the static charge (cotton).

Hands protection: Wash your hands by warm water and soap after work and treat your skin by suitable reparation means.

Respiratory protection: After detonation use the dust filter.

Thermal hazards: Not stated.

8.2.3 Environmental exposure controls: Not necessary, if the product is used in accordance with section 1.2**.**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	All components of the mixture are solid substances.
Odour:	None
Odour threshold:	Not available.
pH:	Not available.
Melting point/freezing point:	142 °C (PETN)
Initial boiling point and bowling range:	Not available.
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	The mixture is flammable.

Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density (20 °C):	Not available.
Solubility:	Insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature:	190 °C (PETN)
Decomposition temperature:	Not available.
Viscosity:	Not available.
Explosive properties:	Velocity of detonation: 8750 m/s (RDX)
Oxidising properties:	Not available.

9.2 Other information:

Fat solubility (20 °C)	Insoluble

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: The product is stable if used according to subsection 1.2 and if stored according to subsection 7.2.

10.2 Chemical stability: The product is stable if used according to subsection 1.2 and if stored according to subsection 7.2.

10.3 Possibility of hazardous reactions: May detonate if heated to temperature above 100 °C. May malfunction upon long-term exposure of Al-shell to acidic environment.

10.4 Conditions to avoid: May detonate with impact or friction. May detonate if exposed to open fire, radiant heat, high frequency or electrostatic energy.

10.5 Incompatible materials: Acids and alkalis.

10.6 Hazardous decomposition products: Detonation gasses containing lead, NO_x.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Mixtures:

Acute Toxicity Estimates calculated for the classification of the mixture according to EC Regulation no. *1272/2008* (ATE_{mix}):

ATE_{mix} – oral ($mg.kg^{-1}$): 1101

ATE_{mix} – inhalation, dust and mist ($mg.l^{-1}$) 23,4

Substances:

Lead azide (CAS 13424-46-9)

TDL_0, orally, sewer-rat, 14 weeks intermittently ($mg.kg^{-1}$): 3920 [1)]

1) Data according to the database TOMES/RTECS, Vol. 75

2,2-Bis(Hydroxymethyl)Propane-1,3-Diol Tetra nitrate, P.E.T.N. (CAS 78-11-5)

LD_{50}, orally, sewer-rat ($mg.kg^{-1}$): 1660 [1)]

1) Data according to the database TOMES/RTECS, Vol. 75

1, 3, 5-Trinitroperhydro-1, 3, 5-triazine; RDX (CAS 121-82-4):

LD_{50}, orally, sewer-rat ($mg.kg^{-1}$) 187 [1)]

LD_{50}, dermal, sewer-rat ($mg.kg^{-1}$) > 2000 [1)]

1) Data according to the MSDS

Lead tetroxide (CAS 1314-41-6)

LD_{50}, orally, sewer-rat ($mg.kg^{-1}$): > 10 000 [1)]

1) Data according to the database TOMES/RTECS, Vol. 75

Mixtures:

a) Acute toxicity: The mixture is classified as acute toxic – *category 4.* Harmful if swallowed.

b) Skin corrosion/irritation: Based on available data, the classification criteria are not met.

c) Serious eye damage/irritation: Based on available data, the classification criteria are not met.

d) Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

e) Germ cell mutagenicity: Based on available data, the classification criteria are not met.

f) Carcinogenity: The mixture is classified as carcinogenic – *category 2.* Suspected of causing cancer.

g) Reproductive toxicity: The mixture is classified as toxic for reproduction - *category 1A*. May damage the unborn child. Suspected of damaging fertility.

h) STOT-single exposure: The mixture is classified as toxic - *category 2*. May cause damage to the central nervous system by ingestion.

i) STOT-repeated exposure: The mixture is classified as toxic - *category 2*. May cause damage to organs through prolonged or repeated exposure

j) Aspiration hazard: Based on available data, the classification criteria are not met

Other information: Lead and its compounds are partly excreted by kidneys, partly deposited inside body, especially bones. After long-term and high exposition, a chronic lead poisoning disease may develop, which is exhibited by failure of haemoglobin production, encephalopathy and also by paralysis of peripheral nerves. Lead and its compounds are known for their bioaccumulative effect and lead to irreversible health damage. Further lead and its compounds may damage unborn child and reproduction capability of humans. It is necessary to take this information into account in considering possibility of acquiring lead-poisoning disease caused by long term exposition (e.g. at work).

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SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Mixtures:

The mixture is classified as acute toxic - *category 1* and chronic toxic - *category 2* in terms of its effect on the aquatic environment. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Substances:

Lead tetroxide (CAS 1314-41-6)

LC_{50}, 96 hrs, fish ($mg.l^{-1}$)	0,1 [1)]
EC_{50}, 48 hrs, daphnia ($mg.l^{-1}$)	0,98 [1)]
IC_{50}, 72 hrs, algae ($mg.l^{-1}$)	0,05 [1)]

1) Data according to the MSDS

1, 3, 5-Trinitroperhydro-1, 3, 5-triazine; RDX (CAS 121-82-4)

LC_{50}, 96 hrs, fish ($mg.l^{-1}$)	12,7 [1)]
EC_{50}, 48 hrs, daphnia ($mg.l^{-1}$)	22,1 [1)]
IC_{50}, 72 hrs, algae ($mg.l^{-1}$)	80,6 [1)]

1) Data according to the MSDS

12.2 Persistence and degradability: The data are not available.

12.3 Bioaccumulative potential:

2,2-Bis(Hydroxymethyl)Propane-1,3-Diol Tetra nitrate, P.E.T.N. (CAS 78-11-5)

Octanol/Water partition coefficient:	2,4 [1)]
Bioconcentration factor (BCF):	17 [1)]

1) Data according to the MSDS

1, 3, 5-Trinitroperhydro-1, 3, 5-triazine; RDX (CAS 121-82-4)

Bioconcentration factor (BCF):	2,7 [1)]

1) Data according to the MSDS

12.4 Mobility in soil:

2,2-Bis(Hydroxymethyl)Propane-1,3-Diol Tetra nitrate, P.E.T.N. (CAS 78-11-5)

K_{oc} value:	650 [1)] – low mobility in soil

1) Data according to the MSDS

1, 3, 5-Trinitroperhydro-1, 3, 5-triazine; RDX (CAS 121-82-4) [1)]

K_{oc} value:	42 - 167 - medium to high mobility in soil
Henry constant:	$1,2 \times 10^{-5}$ $atm.m^3.mol^{-1}$

1) Data according to the MSDS

12.5 Results of PBT and vPvB assessment: No information is available to classify the mixture as PBT and vPvB. The mixture does not contain substances classified as PBT and vPvB; therefore the mixture will most probably not be classified as PBT vPvB.

12.6 Other adverse effects: Not stated.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: Dispose in accordance with corresponding regulations. Disposal of defect or damaged product is performed in accordance with instruction from manufacturer or in accordance with local regulation. Disposal may be performed only by the authorized person.

For the classification of waste and its removal corresponding to the waste producer.

Recommended disposal procedure:
Empty packages are handed over to person/company authorized to recycle packages. Contaminated packages are disposed in accordance with corresponding local regulations for disposal of packages and explosives.

SECTION 14: TRANSPORT INFORMATION

The product is a dangerous article in terms of international and national transport regulations.

14.1	**UN number**	UN 0029, UN 0360, UN 0267, UN 0361, UN 0455, UN 0500
14.2	**UN proper shipping name**	DETONATORS, NON-ELECTRIC for blasting DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting
14.3	**Transport hazard class**	1.1B, 1.4B, 1.4S
	Label	
14.4	**Packing group**	Not stated
14.5	**Environmental hazards**	Not stated
14.6	**Special precautions for user**	Transport the product only in vehicles with relevant approval for transport of dangerous goods Tunnel restriction code: B1000C (valid for 1.1B)

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

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: According to chapter VII and VIII of directive *1907/2006* of the European Parliament and the Council the mixtures and substances contained in the mixture, do not need to be authorized.

Lead azide (CAS: 13424-46-9) and lead tetroxide (CAS: 1314-41-6) were included in the SVHC Candidate List. Following will be a procedure to authorize this substance for use, according to item 59 of REACH directive.

15.2 Chemical safety assessment: Not available.

SECTION 16: OTHER INFORMATION

16.1 Full wording of abbreviations and hazard statements, listed in section 2 to 15:

Hazard statements

H200	Unstable explosives.
H250	Catches fire spontaneously if exposed to air.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H301	Toxic if swallowed.
H332	Harmful if inhaled.
H361f	Suspected of damaging fertility.
H370	Causes damage to the central nervous system by ingestion.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations

PBT	Persistent, bioaccumulative and toxic substances
vPvB	Very persistent and very bioaccumulative substances
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP	Regulation (EC) *No 1272/2008* of the European Parliament and of the Council
Unst. Expl.	Unstable explosive
Expl. 1.1	Explosive, division 1.1
Repr. 1A	Reproductive toxicity, category 1A
Carc. 2	Carcinogenicity, category 2

Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
STOT SE 1	Specific target organ toxicity — single exposure, category 1
STOT SE 2	Specific target organ toxicity — single exposure, category 2
STOT RE 2	Specific target organ toxicity — repeated exposure, category 2
Aquatic Acute 1	Acute aquatic toxicity, category 1
Aquatic Chronic 1	Chronic aquatic toxicity, category 1
Aquatic Chronic 2	Chronic aquatic toxicity, category 2
Water-react. 1	Substance or mixture which in contact with Water emits flammable gas, category 1
Pyr. Sol. 1	Pyrophoric solid, category 1
TWA	Time-Weighted Average
TLV-STEL	Threshold Limit Value - Short-Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
LD_{50}	Median lethal dose
LC_{50}	Median lethal concentration
EC_{50}	Half maximal effective concentration
IC_{50}	Half maximal inhibitory concentration
TDL_0	Lowest toxic dose
BOD_5	Biochemical oxygen demand
COD	Chemical oxygen demand
K_{oc}	Soil Organic Carbon-Water Partitioning Coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

16.2 Other information

a) Instructions for training: Training for handling and use of explosives and detonators.

b) Advised limitations of use: Restricted to professional users.

c) Important data sources: MSDS of substances manufacturers, expert databases.

d) Purpose of safety sheet: The aim of the safety data sheet is to enable users to take precautions relating to health and safety at work and environmental protection.

e) The procedure for classifying the mixture according to EC Regulation no. 1272/2008: The conventional method

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	Reason for change	Date	Responsible person
Version 1.1	Change of graphical format of document.	20. 1. 2016	Ing. Horák