SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Electric detonator
UFI : X1F9-85W4-WSKR-QYKF
Product code : EX02010006_EN
Synonyms : A-140F/BLOCK, Oil*Star A-140F/BLOCK, A-140F DM/BLOCK, Oil*Star A-140F DM/BLOCK, A-140S, Oil*Star A-140S, A-140S DM, Oil*Star A-140S DM,A-85, Oil*Star A-85, A-105, Oil*Star A-105, A-105/100, Oil*Star A-105/100, A-140, Oil*Star A-140, A-96L, Oil*Star A-96L, A-140YJ, Oil*Star A-140YJ

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use, Industrial use
Use of the substance/mixture : Borehole detonators for initiation of industrial explosives. Restricted to professional users.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

AUSTIN DETONATOR s.r.o.
Jasenice 712
75501 Vsetín - Czech Republic
T : +420 571 404 001 - F : +420 571 404 002
msds@austin.cz - www.austin.cz

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Explosives, Division 1.1	H201
Acute toxicity (oral), Category 4	H302
Reproductive toxicity, Category 1A	H360Df
Specific target organ toxicity – single exposure, Category 1	H370
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Explosive; mass explosion hazard. Harmful if swallowed. May damage the unborn child. Suspected of damaging fertility. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS01 GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Contains : Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX); Lead diazide, lead azide; Potassium perchlorate

Hazard statements (CLP) : H201 - Explosive; mass explosion hazard.
H302 - Harmful if swallowed.
H360Df - May damage the unborn child. Suspected of damaging fertility.
H370 - Causes damage to organs.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : 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, 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 - Dispose of contents/container to be in accordance with corresponding local regulations for disposal of packages and explosives.

Extra phrases : 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 labeled and packaged in accordance with the requirements for explosives only.

2.3. Other hazards

Other hazards which do not result in classification : 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. The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Electric assembled detonator contains also chemicals that are not classified as hazardous, and various other components, such as wires, plug and plastic components.

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX)	(CAS-No.) 121-82-4 (EC-No.) 204-500-1 (REACH-no) 01-2119990795-17	≤ 20	Expl. 1.1, H201 Acute Tox. 3 (Oral), H301 (ATE=187 mg/kg bodyweight) STOT SE 1, H370 STOT RE 2, H373
Lead diazide, lead azide substance listed on REACH Candidate List	(CAS-No.) 13424-46-9 (EC-No.) 236-542-1 (EC Index-No.) 082-003-00-7 (REACH-no) 01-2119475503-38	≤ 14	Unst. Expl., H200 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Repr. 1A, H360Df STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Potassium perchlorate (**)	(CAS-No.) 7778-74-7 (EC-No.) 231-912-9 (EC Index-No.) 017-008-00-5 (REACH-no) 01-2120764842-47	≤ 2	Ox. Sol. 1, H271 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)
Zirconium powder (pyrophoric) (*)	(CAS-No.) 7440-67-7 (EC-No.) 231-176-9 (EC Index-No.) 040-001-00-3 (REACH-no) 01-2119490102-49	≤ 2	Water-react. 1, H260 Pyr. Sol. 1, H250

Comments : * 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.
** The mixture is introduced in the market as a solid substance. The mixture is not in contact with air. The classification Ox. Sol. 1 H271 is not relevant for this mixture.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : 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.

First-aid measures after 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.

First-aid measures after skin contact : In case of detonation, there is a risk of burns, general injuries and injuries caused by splinters. Seek medical advice.

First-aid measures after eye contact : In case of detonation, there is a risk of general injuries and injuries caused by splinters. Seek medical advice.

First-aid measures after ingestion : Rinse mouth, seek medical advice.

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

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

Symptoms/effects after skin contact : Injuries, burns.

Symptoms/effects after eye contact : Injuries, burns.

Symptoms/effects after ingestion : Not relevant.

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: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media : Not stated.

5.2. Special hazards arising from the substance or mixture

Fire hazard : 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 firefighters

Firefighting instructions : 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

6.1. Personal precautions, protective equipment and emergency procedures

General 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.

6.1.1. For non-emergency personnel

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 sections 7 and 8.

6.1.2. For emergency responders

No additional information available

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

Methods for 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

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

Storage conditions : 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. . Store in accordance with local regulations for the storage of explosives.

7.3. Specific end use(s)

Borehole detonators for initiation of industrial explosives.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
Ireland - Occupational Exposure Limits	
Local name	Hexahydro-1,3,5-trinitro-1,3,5-triazine [Cyclonite, RDX]
OEL TWA	0.5 ppm
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024

Lead diazide, lead azide (13424-46-9)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Lead and its inorganic compounds
BOEL TWA	0.03 mg/m³ (Inhalable fraction)
Notes	Non-threshold reprotoxic substance
Regulatory reference	DIRECTIVE (EU) 2024/869 (amending Directive 2004/37/EC)

Lead diazide, lead azide (13424-46-9)	
EU - Biological Limit Value (BLV)	
Local name	Lead and its inorganic compounds
BLV	15 µg/100ml Parameter: Pb - Medium: blood - Notations: BBLV. For workers whose blood lead level exceeds the biological limit value of 15 µg Pb/100 ml blood due to exposure which has occurred before 9 April 2026, but is below 30 µg Pb/100 ml blood, medical surveillance is carried out on a regular basis. If a declining trend towards the limit value of 15 µg Pb/100 ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead. 30 µg/100ml Until 31 December 2028 - Parameter: Pb - Medium: blood - Notations: BBLV. For workers whose blood lead level exceeds the biological limit value of 30 µg Pb/100 ml blood due to exposure which has occurred before 9 April 2026, but is below 70 µg Pb/100 ml blood, medical surveillance is carried out on a regular basis. If a declining trend towards the limit value of 30 µg Pb/100 ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead.
Remark	Medical surveillance is carried out if exposure to a concentration of lead in air is greater than 0,015 mg/m3, calculated as a time-weighted average over 40 hours per week, or a blood lead level greater than 9 µg Pb/100 ml blood is measured in individual workers. Medical surveillance is also carried out with regard to female workers of childbearing age whose blood lead level exceeds 4,5 µg Pb/100 ml blood or the national reference value of the general population not occupationally exposed to lead, if such a value exists.
Regulatory reference	DIRECTIVE (EU) 2024/869 (amending Directive 2004/37/EC)
Ireland - Occupational Exposure Limits	
Local name	Inorganic Lead and its compounds
OEL TWA	0.15 mg/m³
Remark	BOELV (Binding Occupational Exposure Limit Values), Repr.1A (Substances which are known human reproductive toxicants)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Lead and its ionic compounds
BLV	70 µg/100ml Parameter: lead - Medium: blood - Notations: Absorption spectrometry or a method giving equivalent results
Remark	Health surveillance is carried out if: a. exposure to a concentration of lead in air is greater than 0.075mg/m3, calculated as a time-weighted average over 40 hours per week, or b. a blood-lead level greater than 40µg Pb/100 ml blood is measured in individual employees.
Regulatory reference	S.I. No. 619/2001 - Safety, Health and Welfare At Work (Chemical Agents) Regulations, 2001

Zirconium powder (pyrophoric) (7440-67-7)	
Ireland - Occupational Exposure Limits	
Local name	Zirconium compounds (as Zr)
OEL TWA	5 mg/m³
OEL STEL	10 mg/m³
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Zirconium

Zirconium powder (pyrophoric) (7440-67-7)	
WEL TWA (OEL TWA)	5 mg/m³ compounds (as Zr)
WEL STEL (OEL STEL)	10 mg/m³ compounds (as Zr)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

DNEL and PNEC

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	3.36 mg/kg bodyweight/day (SDS)
Acute - systemic effects, inhalation	8.29 mg/m³ (SDS)
Long-term - systemic effects, dermal	0.04 mg/kg bodyweight/day (SDS)
Long-term - systemic effects, inhalation	0.31 mg/m³ (SDS)
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	0.2 mg/kg bodyweight (SDS)
Long-term - systemic effects, dermal	0.1 mg/kg bodyweight/day (SDS)
PNEC (Soil)	
PNEC soil	7.56 mg/kg dwt

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Follow the usual basic precautions for handling explosives. Avoid inhaling of gases after the detonation.

Personal protection equipment

Personal protective equipment:
Not necessary, if the product is used in accordance with section 1.2.

Eye and face protection

Eye protection:
Use protective glasses if needed.

Skin protection

Skin and body protection:
Use clothes suitable for work that does not accumulate static charge (cotton).

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

Respiratory protection

Respiratory protection:
After detonation use the dust filter.

Thermal hazards

Thermal hazard protection:
Not relevant.

Environmental exposure controls

Environmental exposure controls:
Not relevant.

Other information:
Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Black.
Odour	:	Odourless.
Odour threshold	:	Not available
Melting point	:	203 °C (RDX)
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Flammable
Explosive properties	:	Velocity of detonation: 8750 m/s (RDX).
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	235 °C (RDX)
Decomposition temperature	:	Not available
pH	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	Not available
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

9.2. Other information

No additional information available

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, NOx.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Based on available data, the classification criteria are not met

Acute toxicity (inhalation) : Based on available data, the classification criteria are not met

Electric detonator	
ATE CLP (oral)	719.674 mg/kg bodyweight

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
LD50 oral rat	187 mg/kg (SDS)
LD50 dermal rat	> 2000 mg/kg (SDS)

Lead diazide, lead azide (13424-46-9)	
TDL0, orally, sewer-rat, 14 weeks intermittently (mg/kg)	3920 mg/kg (Data according to the database TOMES/RTECS, Vol. 75)

Potassium perchlorate (7778-74-7)	
TDL0, orally, sewer-rat, 14 weeks intermittently (mg/kg)	7890 (Data according to the database TOMES/RTECS, Vol. 75)

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

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

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

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

Carcinogenicity : Based on available data, the classification criteria are not met.

Reproductive toxicity : May damage the unborn child. Suspected of damaging fertility.

STOT-single exposure : Causes damage to organs.

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
STOT-single exposure	Causes damage to organs.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Lead diazide, lead azide (13424-46-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2 Other information

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).

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Based on available data, the classification criteria are not met

Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
LC50 - Fish [1]	12.7 mg/l (SDS)
EC50 - Crustacea [1]	22.1 mg/l (SDS)
EC50 72h - Algae [1]	80.6 mg/l (SDS)

Potassium perchlorate (7778-74-7)	
LC50 - Fish [1]	2800 mg/l (SDS)
EC50 - Crustacea [1]	803 – 1077 mg/l (SDS)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
Bioconcentration factor (BCF REACH)	2.7 (SDS)

12.4. Mobility in soil

Hexahydro-1,3,5-trinitro-1,3,5-triazin (RDX) (121-82-4)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.62 – 2.22 (SDS)

12.5. Results of PBT and vPvB assessment

Electric detonator
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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.

Ecological waste information : 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

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 0255	UN 0255	UN 0255	Not applicable	UN 0255
14.2. UN proper shipping name				
DETONATORS, ELECTRIC	DETONATORS, ELECTRIC	Detonators, electric	Not applicable	DETONATORS, ELECTRIC
Transport document description				
UN 0255 DETONATORS, ELECTRIC	UN 0255 DETONATORS, ELECTRIC, 1.4B	UN 0255 Detonators, electric, 1.4B	Not applicable	UN 0255 DETONATORS, ELECTRIC
14.3. Transport hazard class(es)				
1.4B	1.4B	1.4B	Not applicable	1.4B
			Not applicable	
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Not applicable	Dangerous for the environment : No
No supplementary information available				

Extra UN N°: Using the UN number depends on the type of package.

UN 0030
UN proper shipping name: DETONATORS, ELECTRIC, for blasting
Transport hazard class: 1.1B
Label number: 1

UN 0456
UN proper shipping name: DETONATORS, ELECTRIC, for blasting
Transport hazard class:1.4S
Label number: 1.4

14.6. Special precautions for user

Overland transport
No data available

Transport by sea
No data available

Air transport
No data available

Inland waterway transport
Not applicable

Rail transport
No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations ≥ 0.1 % or SCL: Lead diazide, Lead azide (EC 236-542-1, CAS 13424-46-9)

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): Lead compounds (13424-46-9)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)
ANNEX I RESTRICTED EXPLOSIVES PRECURSORS
List of substances which are not to be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported within 24 hours.

Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Potassium perchlorate	7778-74-7	40 % w/w	No licensing permitted	ex 2829 90 10	ex 3824 99 96

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP)
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
1.1	Trade name	Modified	22.02.2019, 19.08.2019
1.1	UFI	Added	01.01.2021
1.1	Trade name	Modified	20.12.2023
1.1	Trade name	Modified	21.05.2024
1.1	Trade name	Modified	14.03.2025
2.2	Label elements	Modified	31.05.2020
3.2	Composition/information on ingredients	Modified	31.12.2020
3.2	Composition/information on ingredients	Modified	21.05.2024
8.1	Occupational Exposure Limits	Modified	14.03.2025
1-16	SDS EU format according to COMMISSION REGULATION (EU) 2020/878	Modified	01.01.2021

Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
LD50	Median lethal dose
LC50	Median lethal concentration
PNEC	Predicted No-Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
REACH-no	REACH registration number

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.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Expl. 1.1	Explosives, Division 1.1
Ox. Sol. 1	Oxidising Solids, Category 1
Pyr. Sol. 1	Pyrophoric Solids, Category 1
Repr. 1A	Reproductive toxicity, Category 1A
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 1	Specific target organ toxicity – single exposure, Category 1
Unst. Expl.	Explosives, Unstable explosives
Water-react. 1	Substances and Mixtures which, in contact with water, emit flammable gases, Category 1
H200	Unstable explosives.
H201	Explosive; mass explosion hazard.
H250	Catches fire spontaneously if exposed to air.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H271	May cause fire or explosion; strong oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Expl. 1.1	H201	On basis of test data
Acute Tox. 4 (Oral)	H302	Calculation method
Repr. 1A	H360Df	Calculation method
STOT SE 1	H370	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Chronic 2	H411	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.