

### RED PARACHUTE ROCKET

#### WesCom Signal & Rescue Germany GmbH

Chemwatch Hazard Alert Code: 2

Chemwatch: 65-6261  
Version No: 6.1  
Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

Issue Date: 11/07/2023  
Print Date: 19/07/2023  
S.REACH.GB-NIR.EN.E

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

### 1.1. Product Identifier

Product name	RED PARACHUTE ROCKET
Chemical Name	Not Applicable
Synonyms	Comet Parachute Signal Rocket, red – Art.-No.: 9163100 up to 9163198;; Pains Wessex Para Red Rocket MK8A – Art.-No.: 9506370, 9506720, 9506723,9506727, 9506950, 9506970;; Aurora PW Para Red Rocket, Art.-No. 9506960, 9506980;; Oroquieta Parachute Signal Rocket, red, Oro2
Proper shipping name	SIGNALS, DISTRESS, ship
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Sea distress signal. A day or night long-range distress signal. 12 may be carried on ships bridge and there is a requirement for 4 in ships lifeboats and liferafts. Also suitable for use in other commercial and recreational boats. Use according to manufacturer's directions.
Uses advised against	No specific uses advised against are identified.

### 1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	WesCom Signal & Rescue Germany GmbH
Address	Vielander Weg 147 Bremerhaven 27574 Germany
Telephone	+49 471 39 30
Fax	Not Available
Website	<a href="http://wescom-group.com/">http://wescom-group.com/</a>
Email	info@wescom-group.com

### 1.4. Emergency telephone number


Association / Organisation	CONSULTANK Lutz Harder GmbH
Emergency telephone numbers	+49 178 433 7434
Other emergency telephone numbers	Not Available

## SECTION 2 Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments [1]	H204 - Explosives Division 1.4
Legend:	1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

### 2.2. Label elements

Hazard pictogram(s)	
Signal word	Warning

**Hazard statement(s)**

<b>H204</b>	Fire or projection hazard.
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**Supplementary statement(s)**

Not Applicable

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P234</b>	Keep only in original packaging.
<b>P250</b>	Do not subject to grinding/shock/sources of friction.
<b>P280</b>	Wear protective gloves, protective clothing, eye protection, face protection and hearing protection.
<b>P240</b>	Ground and bond container and receiving equipment.

**Precautionary statement(s) Response**

<b>P370+P372+P380+P373</b>	In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.
<b>P370+P380+P375</b>	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

**Precautionary statement(s) Storage**

<b>P401</b>	Store in accordance with local/regional/national/international regulations.
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**Precautionary statement(s) Disposal**

<b>P503</b>	Refer to manufacturer or supplier for information on disposal/recovery/recycling.
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**2.3. Other hazards**

May produce discomfort of the eyes and skin\*.

<b>magnesium</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>aluminium</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>barium chromate</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

**SECTION 3 Composition / information on ingredients****3.1.Substances**

See 'Composition on ingredients' in Section 3.2

**3.2.Mixtures**

1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
Not Available		device contains	Not Applicable	Not Applicable	Not Available
Not Available		lighter composition, delay composition and ignition composition	Not Applicable	Not Applicable	Not Available
Not Available		polytechnic materials of;	Not Applicable	Not Applicable	Not Available
1. 7439-95-4 2.231-104-6 3.012-001-00-3 012-002-00-9 4.Not Available	30-60	<u>magnesium</u>	Flammable Solids Category 1, Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 2; H228, H261 [1]	Not Available	Not Available
1. 10042-76-9 2.233-131-9 3.Not Available 4.Not Available	30-60	<u>strontium nitrate</u>	Oxidizing Solids Category 3, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; H272, H315, H319, H335 [1]	Not Available	Not Available
1. 7757-79-1 2.231-818-8 3.Not Available 4.Not Available	70-80	<u>potassium nitrate</u>	Oxidizing Solids Category 3, Acute Toxicity (Oral) Category 4, Serious Eye Damage/Eye Irritation Category 2; H272, H302, H319 [1]	Not Available	Not Available
1. 7429-90-5 2.231-072-3 3.013-001-00-6 013-002-00-1 4.Not Available	10-30	<u>aluminium</u>	Pyrophoric Solids Category 1, Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 2; H250, H261 [2]	Not Available	Not Available
1. 7778-74-7 2.231-912-9 3.017-008-00-5 4.Not Available	5-10	<u>potassium perchlorate</u>	Oxidizing Solids Category 1, Acute Toxicity (Oral) Category 4; H271, H302 [2]	Not Available	Not Available
Not Available		rocket propellant;	Not Applicable	Not Applicable	Not Available

## RED PARACHUTE ROCKET

1. CAS No 2. EC No 3. Index No 4. REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
1. 10294-40-3 2. 233-660-5 3. 056-002-00-7 4. Not Available	10-30	barium chromate	Acute Toxicity (Oral) Category 4, Acute Toxicity (Inhalation) Category 4; H302, H332 [2]	*	Not Available
<b>Legend:</b> 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties					

## SECTION 4 First aid measures

## 4.1. Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<p>Not considered a normal route of entry.</p> <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

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

See Section 11

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5 Firefighting measures

## 5.1. Extinguishing media

Apply by mechanical means only.

**DANGER:** Deliver media remotely.

- ▶ For minor fires: Flooding quantities only.
- ▶ For large fires: **Do not attempt to extinguish.**

## 5.2. Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	Avoid contact with other chemicals.
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## 5.3. Advice for firefighters

<b>Fire Fighting</b>	<p><b>WARNING: EXPLOSIVE MATERIALS / ARTICLES PRESENT!</b></p> <ul style="list-style-type: none"> <li>▶ Evacuate all personnel and move upwind.</li> <li>▶ Prevent re-entry.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May detonate and burning material may be propelled from fire.</li> <li>▶ Wear full-body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage and fire effluent from entering drains and water courses.</li> <li>▶ Fight fire from safe distances and from protected locations.</li> <li>▶ Use flooding quantities of water.</li> <li>▶ <b>DO NOT</b> approach containers or packages suspected to be hot.</li> <li>▶ Cool any exposed containers not involved in fire from a protected location.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> <p>Slight hazard when exposed to heat, flame and oxidisers.</p>
<b>Fire/Explosion Hazard</b>	<p>Division 1.4 Substances, mixtures and articles which present no significant hazard: substances, mixtures and articles which present only a small hazard in the event of ignition or initiation. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package. Compatibility Group G explosives are pyrotechnic substances, or article containing a pyrotechnic substances, or article containing both an explosive substance and an illuminating, incendiary, tear- or smoke-producing substance (other than a water-activated article or one containing white phosphorus, phosphides, a pyrophoric substance, a flammable liquid or gel, or hypergolic liquids). Combustible. Will burn if ignited. Combustion products include: carbon monoxide (CO) carbon dioxide (CO<sub>2</sub>) other pyrolysis products typical of burning organic material.</p>

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

### 6.2. Environmental precautions

See section 12

### 6.3. Methods and material for containment and cleaning up

<b>Minor Spills</b>	<p><b>WARNING! EXPLOSIVE.</b> BLAST and/or PROJECTION and/or FIRE HAZARD</p> <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid inhalation of the material and avoid contact with eyes and skin.</li> <li>▶ Wear impervious gloves and safety glasses.</li> <li>▶ Remove all ignition sources.</li> <li>▶ Use spark-free tools when handling.</li> <li>▶ Sweep into non-sparking containers or barrels and moisten with water.</li> <li>▶ Place spilled material in clean, sealable, labelled container for disposal.</li> <li>▶ Flush area with large amounts of water.</li> </ul>
<b>Major Spills</b>	<p><b>WARNING! EXPLOSIVE.</b></p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ In case of transport accident notify Police, Emergency Authority, Competent Explosives Authority or Manufacturer.</li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> <li>▶ Increase ventilation.</li> <li>▶ Use extreme caution to prevent physical shock.</li> <li>▶ Use only spark-free shovels and explosion-proof equipment.</li> <li>▶ Collect recoverable material and segregate from spilled material.</li> <li>▶ Wash spill area with large quantities of water.</li> </ul>

### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Handle gently. Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Avoid smoking, naked lights, heat or ignition sources.</li> <li>▶ Explosives must not be struck with metal implements.</li> <li>▶ Avoid mechanical and thermal shock and friction.</li> <li>▶ Use in a well ventilated area.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ <b>When handling DO NOT eat, drink or smoke.</b></li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately.</li> </ul>
<b>Fire and explosion protection</b>	See section 5
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store cases in a well ventilated magazine licensed for the appropriate Class, Division and Compatibility Group.</li> <li>▶ Rotate stock to prevent ageing. Use on FIFO (first in-first out) basis.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Store in a cool place in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> <li>▶ Store in an isolated area away from other materials.</li> <li>▶ Keep storage area free of debris, waste and combustibles.</li> <li>▶ Protect containers against physical damage.</li> <li>▶ Check regularly for spills and leaks</li> </ul> <p><b>NOTE:</b> If explosives need to be destroyed contact the Competent Authority.</p> <ul style="list-style-type: none"> <li>▶ Store away from incompatible materials.</li> </ul> <p>Keep out of reach of children.</p>

### 7.2. Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ All packaging for Class 1 Goods shall be in accordance with the requirements of the relevant Code for the transport of Dangerous Goods.</li> <li>▶ Class 1 is unique in that the type of packaging used frequently has a very decisive effect on the hazard and therefore on the assignment to a particular division</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid contact with other explosives, pyrotechnics, solvents, adhesives, paints, cleaners and unauthorized metals, plastics, packing equipment and materials.</li> <li>▶ Avoid contamination with acids, alkalis, reducing agents, amines and phosphorus.</li> <li>▶ Explosion hazard may follow contact with incompatible materials</li> </ul>
<b>Hazard categories in accordance with Regulation (EC) No 1272/2008</b>	P1b: Explosives

Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of

P1b Lower- / Upper-tier requirements: 50 / 200

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 Exposure controls / personal protection

### 8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
magnesium	Dermal 5 mg/kg bw/day (Systemic, Chronic) Inhalation 10 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 2.5 mg/cm <sup>2</sup> (Local, Chronic) Inhalation 10 mg/m <sup>3</sup> (Local, Chronic) Dermal 80 mg/kg bw/day (Systemic, Acute) Inhalation 10 mg/m <sup>3</sup> (Systemic, Acute) Dermal 2.5 mg/cm <sup>2</sup> (Local, Acute) Inhalation 10 mg/m <sup>3</sup> (Local, Acute) <i>Dermal 2.5 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 5 mg/m<sup>3</sup> (Systemic, Chronic) *</i> <i>Oral 3.6 mg/kg bw/day (Systemic, Chronic) *</i> <i>Dermal 1.25 mg/cm<sup>2</sup> (Local, Chronic) *</i> <i>Inhalation 5 mg/m<sup>3</sup> (Local, Chronic) *</i> <i>Dermal 40 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 5 mg/m<sup>3</sup> (Systemic, Acute) *</i> <i>Oral 100 mg/kg bw/day (Systemic, Acute) *</i> <i>Dermal 1.25 mg/cm<sup>2</sup> (Local, Acute) *</i> <i>Inhalation 5 mg/m<sup>3</sup> (Local, Acute) *</i>	0.41 mg/L (Water (Fresh)) 0.41 mg/L (Water - Intermittent release) 1.4 mg/L (Water (Marine)) 87.8 mg/kg sediment dw (Sediment (Fresh Water)) 8.78 mg/kg sediment dw (Sediment (Marine)) 28.7 mg/kg soil dw (Soil) 10.8 mg/L (STP) 212 mg/kg food (Oral)
strontium nitrate	Dermal 40.1 mg/kg bw/day (Systemic, Chronic) Inhalation 7.9 mg/m <sup>3</sup> (Systemic, Chronic) <i>Inhalation 2.4 mg/m<sup>3</sup> (Systemic, Chronic) *</i> <i>Oral 1.2 mg/kg bw/day (Systemic, Chronic) *</i>	2.1 mg/L (Water (Fresh)) 1811 mg/kg sediment dw (Sediment (Fresh Water)) 332 mg/kg soil dw (Soil) 4.2 mg/L (STP)
potassium nitrate	Not Available	18 mg/L (STP)
aluminium	Inhalation 3.72 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 3.72 mg/m <sup>3</sup> (Local, Chronic) <i>Oral 3.95 mg/kg bw/day (Systemic, Chronic) *</i>	74.9 µg/L (Water (Fresh)) 20 mg/L (STP)
potassium perchlorate	Dermal 1.967 mg/kg bw/day (Systemic, Chronic) Inhalation 0.082 mg/m <sup>3</sup> (Systemic, Chronic) <i>Dermal 0.983 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 0.02 mg/m<sup>3</sup> (Systemic, Chronic) *</i>	21.5 µg/L (Water (Fresh)) 2.15 µg/L (Water - Intermittent release) 2.08 mg/kg sediment dw (Sediment (Fresh Water)) 0.208 mg/kg sediment dw (Sediment (Marine)) 2.55 mg/kg soil dw (Soil) 3.835 mg/L (STP)
barium chromate	Dermal 28.5 mg/kg bw/day (Systemic, Chronic) Inhalation 5.8 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 0.01 mg/m <sup>3</sup> (Local, Acute) <i>Dermal 17.1 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 1.7 mg/m<sup>3</sup> (Systemic, Chronic) *</i> <i>Oral 2.4 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 0.01 mg/m<sup>3</sup> (Local, Acute) *</i>	0.005 mg/L (Water (Fresh)) 0.005 mg/L (Water - Intermittent release) 0.005 mg/L (Water (Marine)) 31 mg/kg sediment dw (Sediment (Fresh Water)) 31 mg/kg sediment dw (Sediment (Marine)) 3.2 mg/kg soil dw (Soil) 10 mg/L (STP) 17000 g/kg food (Oral)

\* Values for General Population

### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	aluminium	Aluminium metal: respirable dust	4 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	aluminium	Aluminium metal: inhalable dust	10 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
European Union Directive (EU) 2017/2398 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work	barium chromate	Not Available	0,005 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	barium chromate	Chromium (VI) compounds (as Cr)	0.025 mg/m <sup>3</sup>	Not Available	Not Available	Carc, sen, BMGV, process generated - 'Process generated' refers to exposures to Chromium (VI) Compounds generated as a result of a work process, such as fumes from welding
UK Workplace Exposure Limits (WELs)	barium chromate	Chromium (VI) compounds (as Cr)	0.01 mg/m <sup>3</sup>	Not Available	Not Available	Carc, sen, BMGV

### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
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## RED PARACHUTE ROCKET

Ingredient	TEEL-1	TEEL-2	TEEL-3
magnesium	18 mg/m <sup>3</sup>	200 mg/m <sup>3</sup>	1,200 mg/m <sup>3</sup>
strontium nitrate	5.7 mg/m <sup>3</sup>	62 mg/m <sup>3</sup>	370 mg/m <sup>3</sup>
potassium nitrate	9 mg/m <sup>3</sup>	100 mg/m <sup>3</sup>	600 mg/m <sup>3</sup>
potassium perchlorate	6.3 mg/m <sup>3</sup>	69 mg/m <sup>3</sup>	420 mg/m <sup>3</sup>
barium chromate	0.15 mg/m <sup>3</sup>	13 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>


Ingredient	Original IDLH	Revised IDLH
magnesium	Not Available	Not Available
strontium nitrate	Not Available	Not Available
potassium nitrate	Not Available	Not Available
aluminium	Not Available	Not Available
potassium perchlorate	Not Available	Not Available
barium chromate	Not Available	Not Available

## Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
strontium nitrate	E	≤ 0.01 mg/m <sup>3</sup>
potassium nitrate	E	≤ 0.01 mg/m <sup>3</sup>
potassium perchlorate	E	≤ 0.01 mg/m <sup>3</sup>

**Notes:** Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

## 8.2. Exposure controls

<b>8.2.1. Appropriate engineering controls</b>	<p>Engineering controls for explosive articles are designed to reduce or eliminate fragmentation and/or blast effects either by suppression of the source of detonation or by protection at the exposed location, or both. Barricades, shields, contained detonation chambers, and "zero quantity-distance (Q-D)" magazines are examples of engineering controls.</p> <p>Engineering controls are designed and tested in a rigorous fashion. The construction of the engineering control must be carefully duplicated in field applications to assure it will function properly.</p> <p>It is thus imperative that engineering controls be built exactly in accordance with the design package, and that they be used only for the articles (e.g.munitions) for which they are authorised.</p>
<b>8.2.2. Individual protection measures, such as personal protective equipment</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<p>Ear Protection.</p> <ul style="list-style-type: none"> <li>▶ Fire resistant/ heat resistant gloves where practical, otherwise</li> <li>▶ Heavy-duty chemically resistant gloves capable of providing short-term protection against spontaneous ignition.</li> <li>▶ Safety footwear</li> </ul> <p>Hard hat</p>

## Respiratory protection

Respiratory protection not normally required due to the physical form of the product.

## 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Steel tube with orange/yellow plastic outer casing pressed with black/grey polytechnical ingredients.		
<b>Physical state</b>	Manufactured	<b>Relative density (Water = 1)</b>	Not Applicable
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	>160
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature (°C)</b>	Not Applicable
<b>Melting point / freezing point (°C)</b>	Not Applicable	<b>Viscosity (cSt)</b>	Not Applicable

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Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	160	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available
Particle Size	Not Available		

## 9.2. Other information

Not Available

## SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	<ul style="list-style-type: none"> <li>▶ Presence of shock and friction</li> <li>▶ Presence of heat source and ignition source</li> <li>▶ Product is considered stable under normal handling conditions.</li> <li>▶ Stable under normal storage conditions.</li> <li>▶ Hazardous polymerization will not occur.</li> </ul> Avoid contact with other chemicals.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

## SECTION 11 Toxicological information

## 11.1. Information on toxicological effects

Inhaled	Not normally a hazard due to physical form of product. Inhalation of vapour is more likely at higher than normal temperatures. The vapour is discomfoting
Ingestion	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments
Skin Contact	Not normally a hazard due to physical form of product. The vapour is discomfoting
Eye	Not normally a hazard due to physical form of product. The vapour is discomfoting
Chronic	▶ Generally not applicable.

	TOXICITY	IRRITATION
RED PARACHUTE ROCKET	Not Available	Not Available
magnesium	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available
	Inhalation(Rat) LC50: >2.1 mg/l4h <sup>[1]</sup>	
	Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>	
strontium nitrate	Inhalation(Rat) LC50: >4.5 mg/l4h <sup>[1]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
	Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
potassium nitrate	dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup>	Not Available
	Inhalation(Rat) LC50: >0.527 mg/l4h <sup>[1]</sup>	
	Oral (Rabbit) LD50: 1901 mg/kg <sup>[2]</sup>	



aluminium	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation(Rat) LC50: >2.3 mg/14h <sup>[1]</sup> Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
potassium perchlorate	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation(Rat) LC50: >0.02 mg/L4h <sup>[1]</sup> Oral (Rat) LD50: >50 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
barium chromate	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 57 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50: 0.083 mg/L4h <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	Oral (Rat) LD50: 52 mg/kg <sup>[1]</sup>	
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

<b>STRONTIUM NITRATE</b>	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.
<b>BARIUM CHROMATE</b>	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.  <b>WARNING:</b> This substance has been classified by the IARC as Group 1: <b>CARCINOGENIC TO HUMANS.</b>
<b>ALUMINIUM &amp; POTASSIUM PERCHLORATE</b>	No significant acute toxicological data identified in literature search.

<b>Acute Toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✗	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✗	<b>STOT - Single Exposure</b>	✗
<b>Respiratory or Skin sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## 11.2 Information on other hazards

### 11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

### 11.2.2. Other information

See Section 11.1

## SECTION 12 Ecological information

### 12.1. Toxicity

RED PARACHUTE ROCKET	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
magnesium	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>12mg/l	2
	EC50	48h	Crustacea	344mg/l	2
	EC50	96h	Algae or other aquatic plants	222.37mg/l	2
	LC50	96h	Fish	541mg/l	2
NOEC(ECx)	72h	Algae or other aquatic plants	>=12mg/l	2	



RED PARACHUTE ROCKET

	Endpoint	Test Duration (hr)	Species	Value	Source
	strontium nitrate	EC50	72h	Algae or other aquatic plants	>43.3mg/l
EC50		48h	Crustacea	94mg/L	2
LC50		96h	Fish	>40.3mg/l	2
NOEC(ECx)		480h	Algae or other aquatic plants	15mg/L	2
potassium nitrate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	490mg/l	2
	NOEC(ECx)	144h	Fish	0.1mg/l	4
aluminium	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.017mg/L	2
	EC50	48h	Crustacea	0.736mg/L	2
	EC50	96h	Algae or other aquatic plants	0.005mg/L	2
	LC50	96h	Fish	0.078-0.108mg/l	2
potassium perchlorate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	EC50	48h	Crustacea	>100mg/l	2
barium chromate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	96h	Algae or other aquatic plants	0.32mg/l	2
	EC50	72h	Algae or other aquatic plants	>1.15mg/l	2
	LC50	96h	Fish	>=3.3mg/l	2
Legend:	1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
potassium nitrate	LOW	LOW

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
potassium nitrate	LOW (LogKOW = 0.209)

12.4. Mobility in soil

Ingredient	Mobility
potassium nitrate	LOW (KOC = 14.3)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✘	✘	✘
vPvB	✘	✘	✘
PBT Criteria fulfilled?	No		
vPvB	No		

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.


SECTION 13 Disposal considerations

13.1. Waste treatment methods

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Explosives must not be thrown away, buried, discarded or placed with garbage.</li> <li>▶ Explosives which are surplus, deteriorated or considered unsafe for transport, storage or use shall be destroyed and the statutory authorities shall be notified.</li> <li>▶ This material may be disposed of by burning or detonation but the operation may only be performed under the control of a person trained in the safe destruction of explosives.</li> </ul> <p>Refer to local Waste Disposal Authority and supplier for suitable disposal procedure.</p>
<b>Waste treatment options</b>	Not Available
<b>Sewage disposal options</b>	Not Available

## SECTION 14 Transport information

### Labels Required

	
<b>Marine Pollutant</b>	NO

### Land transport (ADR-RID)

14.1. UN number or ID number	0505	
14.2. UN proper shipping name	SIGNALS, DISTRESS, ship	
14.3. Transport hazard class(es)	Class	1.4G
	Subsidiary risk	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Hazard identification (Kemler)	Not Applicable
	Classification code	1.4G
	Hazard Label	1.4
	Special provisions	Not Applicable
	Limited quantity	0
	Tunnel Restriction Code	2 (E)

### Air transport (ICAO-IATA / DGR)

14.1. UN number	0505	
14.2. UN proper shipping name	Signals, distress ship	
14.3. Transport hazard class(es)	ICAO/IATA Class	1.4G
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	1L
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	A802
	Cargo Only Packing Instructions	135
	Cargo Only Maximum Qty / Pack	75 kg
	Passenger and Cargo Packing Instructions	Forbidden
	Passenger and Cargo Maximum Qty / Pack	Forbidden
	Passenger and Cargo Limited Quantity Packing Instructions	Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	Forbidden

### Sea transport (IMDG-Code / GGVSee)

14.1. UN number	0505	
14.2. UN proper shipping name	SIGNALS, DISTRESS ship	
14.3. Transport hazard class(es)	IMDG Class	1.4G
	IMDG Subrisk	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	

14.6. Special precautions for user	EMS Number	F-B, S-X
	Special provisions	Not Applicable
	Limited Quantities	0

**Inland waterways transport (ADN)**

14.1. UN number	0505	
14.2. UN proper shipping name	SIGNALS, DISTRESS, ship	
14.3. Transport hazard class(es)	1.4G	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Classification code	1.4G
	Special provisions	Not Applicable
	Limited quantity	0
	Equipment required	PP
	Fire cones number	1

**14.7. Maritime transport in bulk according to IMO instruments****14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

Product name	Group
magnesium	Not Available
strontium nitrate	Not Available
potassium nitrate	Not Available
aluminium	Not Available
potassium perchlorate	Not Available
barium chromate	Not Available

**14.7.3. Transport in bulk in accordance with the IGC Code**

Product name	Ship Type
magnesium	Not Available
strontium nitrate	Not Available
potassium nitrate	Not Available
aluminium	Not Available
potassium perchlorate	Not Available
barium chromate	Not Available

**SECTION 15 Regulatory information****15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture****magnesium is found on the following regulatory lists**

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

**strontium nitrate is found on the following regulatory lists**

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2A: Probably carcinogenic to humans

**potassium nitrate is found on the following regulatory lists**

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2A: Probably carcinogenic to humans

**aluminium is found on the following regulatory lists**

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

**potassium perchlorate is found on the following regulatory lists**

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

**barium chromate is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 12) Restricted substances and maximum concentration limits by weight in homogeneous materials

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

European Union Directive (EU) 2017/2398 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

**Information according to 2012/18/EU (Seveso III):**

Seveso Category	P1b

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**ECHA SUMMARY**

Ingredient	CAS number	Index No	ECHA Dossier
magnesium	7439-95-4	012-001-00-3 012-002-00-9	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Pyr. Sol. 1; Water-react. 1	GHS02; Dgr	H250; H260
2	Pyr. Sol. 1; Water-react. 1; Flam. Sol. 1; Self-heat. 1; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 4	GHS02; Dgr; GHS07	H250; H260; H228; H251; H315; H319; H335; H413

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
strontium nitrate	10042-76-9	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
2	Ox. Sol. 1; Eye Dam. 1; Acute Tox. 4; Skin Irrit. 2; STOT SE 3	GHS03; GHS05; Dgr; GHS02	H271; H318; H302; H315; H335
1	Ox. Sol. 1; Eye Dam. 1	GHS03; GHS05; Dgr	H271; H318

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
potassium nitrate	7757-79-1	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Ox. Sol. 2; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3	GHS03; GHS07; Dgr	H272; H315; H319; H335
2	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Ox. Sol. 1; Aquatic Chronic 3; Acute Tox. 4; Repr. 2; STOT SE 2; STOT RE 2	GHS03; Dgr; GHS08	H315; H319; H335; H271; H412; H302; H361; H371; H373

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
aluminium	7429-90-5	013-001-00-6 013-002-00-1	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Sol. 1; Water-react. 2	GHS02; Dgr	H228; H261
2	Flam. Sol. 1; Water-react. 2; Pyr. Sol. 1; STOT RE 1; Aquatic Chronic 4; Aquatic Acute 1; Skin Sens. 1	Dgr; GHS01; GHS08; GHS09; GHS05; GHS06	H228; H261; H250; H372; H413; H302; H311; H315; H331; H400; H317

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier

## RED PARACHUTE ROCKET

Ingredient	CAS number	Index No	ECHA Dossier
potassium perchlorate	7778-74-7	017-008-00-5	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Ox. Sol. 1; Acute Tox. 4	GHS03; GHS07; Dgr	H271; H302
2	Ox. Sol. 1; Acute Tox. 4; Eye Irrit. 2; STOT RE 2	GHS03; Dgr; GHS08	H271; H302; H319; H373

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
barium chromate	10294-40-3	056-002-00-7	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 4; Acute Tox. 4	GHS07; Wng	H302; H332
2	Acute Tox. 3; Acute Tox. 3; Skin Sens. 1A; Acute Tox. 2; Resp. Sens. 1; Muta. 1B; Carc. 1A; Repr. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Ox. Sol. 1; Flam. Liq. 3	GHS08; GHS09; GHS06; Dgr; GHS03; GHS02	H301; H311; H317; H330; H334; H340; H350; H361; H372; H400; H410; H315; H319; H335; H271; H226

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

## National Inventory Status

National Inventory	Status
Australia - AIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (magnesium; strontium nitrate; potassium nitrate; aluminium; potassium perchlorate; barium chromate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (magnesium; aluminium)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## SECTION 16 Other information

Revision Date	11/07/2023
Initial Date	15/08/2016

## Full text Risk and Hazard codes

H226	Flammable liquid and vapour.
H228	Flammable solid.
H250	Catches fire spontaneously if exposed to air.
H251	Self-heating: may catch fire.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H261	In contact with water releases flammable gases.
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

#### SDS Version Summary

Version	Date of Update	Sections Updated
5.1	23/12/2022	Classification review due to GHS Revision change.
6.1	11/07/2023	Hazards identification - Classification, Identification of the substance / mixture and of the company / undertaking - Synonyms

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection  
 EN 340 Protective clothing  
 EN 374 Protective gloves against chemicals and micro-organisms  
 EN 13832 Footwear protecting against chemicals  
 EN 133 Respiratory protective devices

#### Definitions and abbreviations

PC - TWA: Permissible Concentration-Time Weighted Average  
 PC - STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 ES: Exposure Standard  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level  
 TLV: Threshold Limit Value  
 LOD: Limit Of Detection  
 OTV: Odour Threshold Value  
 BCF: BioConcentration Factors  
 BEI: Biological Exposure Index  
 AIIC: Australian Inventory of Industrial Chemicals  
 DSL: Domestic Substances List  
 NDNL: Non-Domestic Substances List  
 IECSC: Inventory of Existing Chemical Substance in China  
 EINECS: European INventory of Existing Commercial chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 NLP: No-Longer Polymers  
 ENCS: Existing and New Chemical Substances Inventory  
 KECI: Korea Existing Chemicals Inventory  
 NZIoC: New Zealand Inventory of Chemicals  
 PICCS: Philippine Inventory of Chemicals and Chemical Substances  
 TSCA: Toxic Substances Control Act  
 TCSI: Taiwan Chemical Substance Inventory  
 INSQ: Inventario Nacional de Sustancias Químicas  
 NCI: National Chemical Inventory  
 FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

#### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Explosives Division 1.4, H204	On basis of test data

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