

# GHS-Safety Sheet (EG Nr. 1907/2006)

Product Name: Cal. 4 cartridge, red – Art.-No.: 9182000  
Revised: 25.02.2013  
Rev. February 2013

## 1. Product and Company Information

### Type of Product:

Cal. 4 cartridge, red, Art.-No.: 9182000

### Area of Usage:

Sea distress signal

### Manufacturer's Name and Address:

Chemring Defence Germany GmbH  
Vieländer Weg 147  
D-27574 Bremerhaven



### Contact Point for Technical Information:

Telephone Number during office hours: +49 (0)471 393-0, FAX:-94, E-Mail:[info@chemringdefence.com](mailto:info@chemringdefence.com)

Responsible for the Data Sheet: [info@chemringdefence.com](mailto:info@chemringdefence.com)

Accident Information: Tel. +049-(0)178-433-7434 (Consultant Lutz Harder GmbH)

## 2. Hazard Information

Classification: Hazard of Explosion  
Sub Class 1.4

Hazard Symbol:



Key Word:

Warning

### Hazard Advice Documents:

H204 Risk by fire or splinter, explosive pieces.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P240 Earth the container and the device in which it is used.  
P250 Do not scratch, bash or rub device.  
P280 Wearing of protective gloves, clothes, glasses and face mask.  
P370 + P380 During Fire, evacuate immediate area.  
P372 Danger of explosion during fire.  
P374 Fire fighting under normal precautions from a reasonable distance.  
P401 Store according to the following conditions: dry and not over 71°C.  
P501 Product is to be handled as hazardous waste.

### Additional Hazards for People and the Environment:

Hazard Description: Flammable.

Additional Advice: Burn hazard if not used conforming cartridge labeling.  
Do not forcefully open the cartridge and prevent contact with an open fire.  
Do not use damaged cartridge.  
Keep out of reach of children.  
Do not point (and fire) product at people or property.  
Do not fire in confined spaces. Product is designed for outdoor use only.

## 3. Component Information

Chemical Characteristics:

Oxidation and combustible mixture.

Description:

Pressed pyrotechnical powder.

Hazardous Ingredients:

Name	CAS-No.	EG-No.	EG-Index-No.	H- Sets / Content
Lighter composition:				
Magnesium	7939-95-4	231-104-6	012-002-00-9	H228, H261 / 30-60%
Strontium Nitrate	10042-76-9	233-131-9		H272, H319; H335, H315 / 30-60%
PVC	9002-86-2			10-30%
Ignition Composition:				

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Magnesium	7939-95-4	231-104-6	012-002-00-9	H228, H261 / 30-60%
Potassium Nitrate	7757-79-1	231-818-8		H200-H205 / 10-40%
Silicium	7440-21-3	231-130-8		10-30%
Aluminium	7429-90-5	231-072-3		H317 / 5-10%
Propellant:				
Black powder	7757-79-1	231-818-8		H200-H205 / 60-100%

## 4. First Aid Measures

General advice:	Not defined.
After inhalation (Combustion Gases):	Having problems after inhaling smoke, consult a physician.
After skin Contact:	Flush with water.
After contact with eyes:	Flush with lots of water, consult a physician.
After swallowing:	Not possible to swallow product.
After swallowing contents:	Consult a physician immediately. Having problems after swallowing smoke, consult a physician.
Advice for physician:	
<i>Symptoms:</i>	Not defined.
<i>Dangers:</i>	Not defined.
<i>Actions to be taken:</i>	Not defined.

## 5. Fire Fighting Measures

Suitable Extinguishing Method:	Once the signal is ignited, it can not be extinguished. For secondary fires = water.
Inappropriate Extinguishers:	No data available.
Particular dangers due to the use of the product, the products of its combustion or gases:	See point 6 "Personnel related safety issues".
Specific protective equipment:	The usual protective gear in case of fire.
Additional Advice:	
<i>Fire Class:</i>	None.
<i>Temperature Class:</i>	Do not expose to temperatures higher than 71°.

## 6. Accident Prevention Measures

Personnel related safety issues:	Do not point (and fire) product at people or property. Use signal only in emergency cases.
Environmental protection Issues:	Not applicable.
Methods for cleaning:	Not applicable.

## 7. Handling and Storage Issues

### Handling

Advice on Safe Handling:	Conforming instructions printed on the signal. Sold only on presentation of valid firearms licence. Protect from exposure to impacts, friction, heat, fire, sparks, electrostatic charges and other ignition sources. Do not use damaged products, avoid heat sources.
Explosion and Fire Protection Advice:	Not applicable.
Additional Advice:	None.

### Storage

Requirements of Storage Facility and Container:	Store in a cool and dry place. Store only in the original packaging and according to the local regulations regarding the storage of explosive materials.
Collective Storage Advice:	Only store with non-dangerous goods or with goods of the same danger class.
Additional Advice to Storage:	None.
Dangerous Goods Classification:	1.4
Compatibility Group:	G

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## 8. Explosion Limitation and Protective Equipment

Additional advice regarding the assembly of the device:

No data available.

Components of work space oriented threat, to monitor limits:

None (details of pyrotechnic content)

AGW-value (TRGS 900)			
CAS-No.	Substance	character	value
-	-	-	-
BGW-value (TRGS 903)			
CAS-No.	Substance	BGW-value Parameter	material
7429-90-5	Aluminium	200 µg/l	U/ b
CMR- Substance (TRGS 905)			
CAS-No.	Substance	category	note
-	-	-	-

*Breathing Equipment:*

Not required.

*Hand Protection:*

Not required.

*Eye Protection:*

Not required.

*Body Protection:*

Not required.

Limitation and monitoring of exposure:

Hazard: Hearing damage. Be sure to use ear protection. A safety clearance of 10 meter must be adhered to by people in the vicinity.

## 9. Physical and Chemical Qualities

### Appearance

Form:

Cartridge with pressed explosives.

Colour:

Outer casing: Plastic, red.

Smell:

Pyrotechnical ingredients: Black / grey.

Neutral.

### Safety Data:

character	value	method	comment
pH-Value at 20°			Not applicable
Melting Point (°C)			Not applicable
Boiling Point (°C)			Not applicable
Flashpoint (°C / °F)	160 / 320		
Ignition Temperature (°C)			No data available
Vapour Pressure (hPa at 20°C)			Does not apply
Density (g/cm <sup>3</sup> ) :			No data available
Density of Pyrotechnical Contents (g/cm <sup>3</sup> )			No data available
Apparent Density (Kg/m <sup>3</sup> )			No data available
Water solubility (20°C in g/l)			Indissoluble
Distribution Coefficient n-Oktanol/Water (log Pow)			Does not apply
Viscosity Dynamic (mPa s/20°C)			Does not apply
Lower Explosive Limit :			No data available
Upper Explosive Limit:			No data available

## 10. Stability and Reactivity

Thermal Decomposition / Conditions to avoid:

Temperatures >71°C (160°F).

Strong mechanical impact, e.g. pushing or throwing.

Materials to avoid:

Not defined.

Dangerous reactions:

During intended use: Flames, heat and smoke.

Dangerous Corrosive Products:

No data available.

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## 11. Toxicology Information

(for the products of usage when used in the correct manner)

Acute Toxicity:	Breathing in the combustion gases (air limit 6 mg/m <sup>3</sup> ). Inhalation of flue gases (fine dust of magnesium oxide).
Effects on animals:	None.
Irritation and cauterization effect:	
<i>On the skin:</i>	None.
<i>In the eyes:</i>	None.
Allergisation:	None.
Subacute / chronic toxicity:	Light irritation of the mucus membranes possible.
Usage related observations:	
<i>Classification of relevant observation:</i>	When used in the appropriate manner, no danger exists.
<i>Other observations:</i>	None.
Additional advice about Toxicology:	None.

## 12. Ecological Information

Eco-toxicity:	Not defined.
Mobility:	Not defined.
Persistence and Degradability:	Not defined.
Absorption and accumulation in organisms:	Not defined.
Other damaging characteristics:	None
Additional advice:	No ecologically relevant effects are produced during usage.

## 13. Disposal Information

Disposal / Waste (Product):	Cal. 4 cartridge, red.
Recommendation:	Disposal should be carried out in accordance with local health + safety, waste, environmental and storage / Manufacture of explosives regulations.
AVV-waste key	160403
Appropriate disposal / package Recommendation:	Non-contaminated packages may be recycled. Disposal according to the regulatory guidelines.

## 14. Transport Information

### **Land transport (ADR,RID,GGVSEB)**

Dangerous Goods Class:	1
Division / Compatibility Group:	1.4G
UN-Number:	0312
Danger Notice / Warning Sign:	Yes
Proper Shipping Name:	Cartridges signal.

### **Sea Transport (IMDG-Code/GGVSee)**

Dangerous Goods Class:	1
Division / Compatibility Group:	1.4G
UN-Number:	0312
Danger Notice / Warning Sign:	Yes
Proper Shipping Name:	Cartridges signal.

### **Air Transport (ICAO-IATA/DGR)**

Dangerous Goods Class:	1
Division / Compatibility Group:	1.4G
UN-Number:	0312
Packaging Group:	II
Danger Notice / Warning Sign:	Yes
Proper Shipping Name:	Cartridges signal.
Additional advice:	None



Explosive substances and explosive articles  
Subclass 1.4

## **15. National and Regional Regulations**

Safety Appraisal:	Not applicable.
Labelling:	
<i>ID Letter for Symbol:</i>	E
<i>Indication of Danger:</i>	See point 2 „Hazard Information“.
<i>Special marking of defined preparation:</i>	Not defined.
<i>Hints of marking:</i>	Not defined.
Other EU Regulations:	Not defined.
National Regulations:	
<i>Activity Limitations:</i>	Sold only on presentation of valid firearms licence. Minimum age: 18 Years.
<i>Chemicals prohibition regulation:</i>	Not defined.
<i>Accident/Failure Regulation:</i>	Does not apply
<i>TA-Air:</i>	Does not apply
<i>Water Danger Class:</i>	Not defined.
Other Regulations:	Work Protection Law, Health Protection Law, Explosives Regulations und Explosive Law must be conformed to.
Material Safety Evaluation:	The item is not subject to safety evaluations.

## **16. Other Information**

The information in the material safety data sheet is based on our present knowledge. It is intended to describe our products with regard to safety requirements and is not intended to guarantee any particular properties.

### **Abbreviations and Acronyms**

GHS	Globally Harmonized System of Classification and Labelling of Chemicals
CAS-No.	Registrations Number of the “Chemical Abstract Service”
EG-No.	Registrations Number of the „European Inventory of Existing Chemical Substances” (EINECS)
EG-Index-No.	ID Code for a particular dangerous material
AGW-value	Work Place Safety/Limit Value
BGW-value	Biological Work Place Safety/Limit Value
CMR- Substance	Cancergen, Mutanogen, Fertility Damaging