

Product Safety Data Sheet



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Revision: February 2016
Original: November 2011

Section 1 – Trade Name and Supplier

Product name 16mm x 45 Signal Cartridge Single Star Red for NICOSIGNAL
Drawing no. 002504
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Section 2 – Hazard Identification

Label elements according to Regulation (EC) No. 1272/2008 (CLP)

Pictogram



Signal word WARNING

Hazard statement H204 Fire or projection hazard.

Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P234 Keep only in original container.
P372 Explosion risk in case of fire.
P370+P380 In case of fire: Evacuate area.

Other Hazards

Physical hazards Flames, heat and shock can ignite the article.
Article contains explosives.
Article contains strong oxidizer. Ingredients burn without air oxygen.
Burning explosives will produce high heat and toxic fumes. Hazard of burnings.

Ingestion Contents of open articles are toxic if swallowed.

Inhalation Combustions products of compositions could be toxic.

Skin contact Skin contact with contents of open articles could cause skin irritations.

Eye contact Contents of open article cause eye irritation.







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Section 3 – Information on Ingredients

Cartridge weight approx. 14.9 g

The compositions contain the hazardous materials listed below.

No.	Material	H-Phrases	Pictograms, Signal Word	Percentage of item weight
1	Sinoxid™ (lead styphnate *) based mixture) CAS# 15245-44-0	H200, H302, H332, H360Df, H373, H400, H410	 DANGER	0.2 – 0.6
2	Black powder	H201	 DANGER	2.5 – 3.5
3	Barium nitrate CAS# 10022-31-8	H272, H302, H332	 DANGER	1.1 – 1.4
4	Aluminium powder CAS# 7429-90-5	H228	 DANGER	0.5 – 0.8
6	Strontium nitrate CAS# 10042-76-9	H271, H318	 DANGER	15.0 – 16.5
7	Magnesium powder CAS# 7439-95-4	H228, H261	 DANGER	12.0 – 13.0

*) Substance is listed on candidate list of SVHC in accordance with Article 59 of the REACH Regulation

Information to comply with Article 33 (1) REACH Regulation: The following substances meeting the criteria in Article 57 and identified in accordance with Article 59 (1) are contained in the product in a concentration above 0.1% weight by weight (measured in reference to the component articles in accordance with ECJ Court ruling C-106/14, issued 10 September 2015): **lead styphnate**.

Section 4 – First Aid Measures

First aid measures apply to compositions and combustion products. It does not apply to the entire article.

IF INHALED:	Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison centre or physician.
IF ON SKIN:	Gently wash with plenty of soap and water. Remove all contaminated clothing. Immediately call a poison centre or physician.
IF IN EYE:	Rinse cautiously with plenty of water for a minimum of 15 minutes. Remove contact lenses, if present and easy to do. Immediately call a poison centre or physician.
IF SWALLOWED:	Do not induce vomiting. Rinse mouth. Immediately call a poison centre or physician.
IN CASE OF BURNINGS:	Immediately cool affected skin for as long as possible with cold water. DO NOT remove clothing adhering to skin. Immediately call a physician.

Section 5 – Fire Fighting Measures

Safety clearance	Public: 100 m Emergency response personnel: 25 m In case of explosions: immediately retreat
Suitable extinguishing methods	Wet articles with water jet and prevent fire from spreading. Work from protected position to reduce risk to personnel. Use unmanned monitors or lances.
Protective equipment	Self-contained breathing apparatus.
Additional information	Thermally exposed articles may auto-ignite. DO NOT FIGHT FIRE when fire reaches articles. Only fight fire in neighbourhood of articles.

Explosive substances and articles which present a slight risk of explosion (Division 1.4)

ERI-Card No. 1-04

Section 6 – Accidental Release Measures

Accidental release measures apply to articles or its ingredients of cartridges.

Remove all ignition sources. No smoking. DO NOT touch the article or escaped components / substances.

Recovery procedures and final disposal procedures shall be conducted only by specialists.

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Section 7 – Handling and Storage

Observe all national laws and regulations.

Fire and explosive Prevention Protect from flames, heat, sparks and electrostatic charges.
Handle ammunition boxes with care. Don't drag, drop or knock.

Storage Store in tightly closed original packaging.
Protect from heat and all ignition sources.
Use only storage facilities specially approved for ammunitions.
Storage conditions: cool and dry
Hazard class for storage: 1.4 G if stored in UN-approved packaging for shipping

Handling Use only outdoors or in well-ventilated rooms. Avoid breathing fumes. In case of malfunctions observe special instructions.

Section 8 – Exposure Control, Personal Protection

General protective measures Use only outdoors or in well-ventilated rooms. Danger zone shall be clear of personnel.

Personal protection Approved single hearing protection is required for all personnel within the noise hazard contour of a 40 m radius of the article. Eye protection and protective clothing are required. In case of broken article avoid skin contact or inhalation of inner components.

Section 9 – Physical and Chemical Properties

Appearance	solid object
Odour	odourless
Minimal temperature of ignition	not available
Maximal burning temperature	not available for this article
Vapour density (Air = 1)	not applicable for this article
Density	not applicable for this article
Sound intensity	not available
Light intensity	not available for this article
Physical state	solid
Solubility	not available
pH	not available for compositions

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Section 10 – Stability and Reactivity

Thermal decomposition	Ingredients are stable under recommended storage and handling conditions.
Hazardous reactions	Article may be ignited by heat, impact and friction.

Section 11 – Toxicological Information

No toxicological hazards due to the entire article are known at this time.

Combustion products contain toxic components.

Fired article, residue of combustion or rests resulting of reactions not intended, may contain toxic substances. Appropriated protection equipment is required (e.g. gloves) during handling of used articles or components.

Section 12 – Ecological Information

Issues such as eco-toxicity, persistence and bioaccumulation are not applicable for articles.

Section 13 – Disposal Considerations

Dispose of according to all applicable federal, state and local regulations. Only qualified personnel shall conduct disposal procedures. Observe special safety instructions.

European-Waste-Code (EWC): 16 04 01* (waste ammunition) and 16 04 03* (other waste explosives)

* The waste classified under this EWC number is considered to be hazardous!

Section 14 – Transport Information

Proper Shipping Name	Cartridges, signal
DG Hazard Group	1.4 G
UN Number	0312
ADR/ RID/ GGVSEB	Chapter 3.2, dangerous goods list
IMDG Code (GGVSee)	Part 3, dangerous goods list
IATA	Part 4, Chapter 4.2, List of Dangerous Goods
Classified by	BAM

Section 15 – Regulatory Information

European-Waste-Code (EWC): 16 04 01* (waste ammunition) and 16 04 03* (other waste explosives)

* The waste classified under this EWC number is considered to be hazardous!

Section 16 – Other Information

As a courtesy to our customers, Rheinmetall Waffe Munition GmbH has prepared copyrighted "Article Safety Datasheets" to provide information on the different products we manufacture and sell.

According to Article 31 of Regulation (EC) No 1907/2006 (REACH), the supplier of a substance or a mixture shall provide the recipient with a safety data sheet compiled in accordance with Annex II. However, the supplied product meets the criteria to be classified as an article according to the definitions set out in Article 3 REACH regulation. The present Article Safety Data Sheet was therefore compiled by Rheinmetall Waffe Munition GmbH on a voluntary basis and to our best knowledge and ability. There is no guarantee either for the effectiveness of the precautions mentioned in the text or for completeness of presented information, whether explicit or implicit.

Should technical data be mentioned in the text, they reflect the current state of our knowledge, but no warranty or assurance is given with respect to product features, technical data or specifications.

There may be inherent hazards beyond the information presented in this document due to ageing or extreme storage conditions of the product in the past. Consequently, this information may not be sufficient or appropriate in all cases, and Rheinmetall Waffe Munition GmbH and the authors are not liable for the results of any misinterpretation or misuse of this information by any persons. It is self-evident, that the recipients of our products are responsible for their compliance with all national laws and regulations in their country.

Fire fighting and emergency measures are taken from Emergency Response Intervention Cards (ERI-Cards). <http://www.ericards.net>

List of H- and P-phrases as cited in Sections 2 and 3

Hazard statements	H200	Unstable Explosives.
	H201	Explosive; mass explosion hazard.
	H204	Fire or projection hazard.
	H228	Flammable solid.
	H261	In contact with water releases flammable gases.
	H271	May cause fire or explosion; strong oxidiser.
	H272	May intensify fire; oxidiser.
	H302	Harmful if swallowed.
	H318	Causes serious eye damage.
	H332	Harmful if inhaled.
	H360Df	May damage the unborn child. Assumedly may influence fertility.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H400	Very toxic to aquatic life.

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Precautionary statements	H410	Very toxic to aquatic life with long lasting effects.
	P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
	P234	Keep only in original container.
	P372	Explosion risk in case of fire.
	P370+P380	In case of fire: Evacuate area.

Abbreviations

ADR: Accord européen relative au transport international des marchandises dangereuses par route
BAM: Bundesanstalt für Materialforschung und –prüfung (Federal Institute for Materials Research and Testing)
CAS: Chemical abstracts service
GGVSEB: Gefahrgutverordnung Straße, Eisenbahn und Binnenschifffahrt
GGVSee: Gefahrgutverordnung See
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
NEQ: Net Explosive Quantity
NO: Nitrogen monoxide
REACH: Registration, Evaluation, Authorization and Restriction of Chemicals
RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses
SVHC: Substances of Very High Concern
UN: United Nations