

Issued by: department. telephone K. Nilsson Quality Assurance + 46 571-31511	Date of revision 2005-11-25	Edition number 2	This edition replaces 2005-11-18
Product denomination Cartridges			

1 PRODUCT IDENTIFICATION AND NAME OF THE COMPANY

Product name	Cartridges : . 222 Rem., .223 Rem., .22-250 Rem., .220 Swift., 5,6x52 R., 6x70 R., .243 Win., 6,5 Jap., 6,5 Carc. 6,5x55, 6,5x284 Norma, .270 Win., .270 WSM, 7x57 R, 7x57, 7mm-08 Rem., 7x65 R, .280 Rem., 7x64, 7 mm Rem. Mag., 7,62 Russian, 300 WSM, 300 Win Mag, 30-06, .308 Win., .308 Norma Mag., 7,7 Jap., 7,65 Arg., 8x57 JRS, 8x57 JS, .338 Win. Mag., .358 Norma Mag., 9,3x74 R, .375 H&H Mag., .416 Rigby, .458 Win. Mag. , .470 Nitro Express, 6 mm BR, 7,5x55 swiss, 9,3x57, 9,3x62
Application	Ammunition
Manufacturer	Norma Precision AB S- Åmotfors SWEDEN Tel: 0571-31500 Int. +46-571-31500 Fax: 0571-31540 Int. +46-571-31540
Emergency telephone number	0571-315 00, Int. +46-571-31500

2 COMPOSITION/IDENTITY INFORMATION

2.1 General description:

Content of cartridge: Brass, copper, lead, primer and propellant.

2.2 Chemical characterization of hazardous ingredients:

Hazardous Components	CAS-no	EINECS-no	%	Danger code	Risk phrases
Type of propellant double base				E,T+,N,Xn	1-3-20/21/22- 26/27/28-33-51-53
Nitrocellulose (>12.6 %)	9004-70-0	-	>85		
Nitroglycerine	55-63-0	200-240-8	<5		
Centralite I	85-98-3	201-645-2	<2		
Bismuth (III)oxide	1304-76-3	215-134-7	<1		
Primer charge: SINOXID				E,T	61-3-20/22-33-62
Priming agents			44		
Leadtrinitroresorcinat	15245-44-0				
Trerazen	109-27-3				
Oxidation agents			35		
Barium nitrate	10022-31-8				
Reducing agent and additives			21		
Calcium silicide	12013-56-8				
Antimony sulfide	1345-04-6				

2.3 Additional information:

Original packed articles do not represent a significant risk.
In conformity with the regulations for the usage, no health hazards arise.

3 HAZARDS IDENTIFICATION

General information	In case of free ignition the trajectory and maximum range of the projectile unknown
Hazard information	Heat impact or other mechanical effort , which can carry to damage of the case, or mechanical attempts to remove the propellant or primer charge, may cause an immediate ignition of the cartridge.

3.1 Specific hazards for humans and environment.

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4 FIRST AID MEASURES

Inhalation	Fresh air, rest and warmth. Rinse nose, mouth and throat with water. Call for a doctor if troubles remain.
Skin contact	Take immediately off contaminated clothes/shoes. Wash with soap and water. Call for a doctor if troubles remain.
Eye contact	Rinse carefully with water. Call for a doctor if troubles remain.
Ingestion	Give a few glasses of milk or water if the person is fully conscious and try to cause vomiting. Rinse the mouth with water. Call for a doctor if troubles remain.

5 FIRE FIGHTING MEASURES

Suitable extinguishing media	Water sprinkler or extinguishing powder from secure distance.
Extinguishing media not to be used	Not applicable
Dangerous breaking down-product / gases	After ignition of the cartridge the explosion will occur immediatly. Arising combustion products/gases see point 10. Avoid inhalation of combustion gases.
Special protective equipment for fire-fighters	Protective gloves, face protection and helmet as well as respirator is necessary.
Further information	If fire involves cargo: Fight fire with all available means but only from protected position. A mass explosion is not to expected. Warn people; inform quickly fire department and police. Actions in case of fire in the surrounding: Remove vehicles out of fire zone. Fight fire in the surrounding with all available means. Prevent fire from reaching the cargo.

6 ACCIDENTAL RELEASED MEASURES

Personal precautions	Double base propellant is very toxic by contact with skin, toxic and by inhalation and if swallowed . The propellant is explosive and easily flammable; in small bulk helghts without confinement easy to ignite. The primer charge is very explosive. Inhalation of dust, skin contact as well as ignition sources such as friction, heat, sparks and electrostatic charge are absolutely to be avoided.
Precautions after unintentional exposing	Secure vicinity and keep unauthorized persons away, point out ignition hazards. Put up warning signs. Inform police.
Environmental precautions	Pick up possibly scattered cartridges only by hand, forward to authorized disposal personnel. Exposed explosives have to be carefully wiped up and have to be phlegmatised in a special marked container filled with water. The affected place to be cleaned wet. Do not get into soil, water, sewerage or groundwater.
Precautions at transport accidents	Secure road and warn other road users. Keep unauthorized persons away and point to the risk. Keep away ignition sources and open fire; no smoking.

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7 HANDLING AND STORAGE

7.1 Handling

Recommendation for safe handling	Keep away from heat and open fire. Do not throw the cartridges and do not open or deform by force. Caution – ignition sensitive to impact. Delivery only allowed in closed original packaging. Use only determined and authorized weapons.
Recommendation for protection against fire and explosion	No smoking. Keep away ignition sources and open fire.
Equipment which not will be used with handling	Equipment which cause static electricity.
Other rules and instructions	Permission by storage shall be allowed by the police. Keep in a way that ensures complete safety according handling and import of explosive products.

7.2 Storage

Storage condition	Only to be stored in packages authorized by transportation regulation in appropriate rooms. Store cool and dry. Optimal storage temperature: 20 degrees C (68 degrees F.) Protect against theft and unauthorized take-off.
Hints on storage assembly/prohibition on storage assembly	Do not store together with inflammable and oxidizing substances
Further information on storage conditons	Storage group 1.4 Compatibility group S

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information on design of technical facilities	Only for outdoor use.
Substances with workplace related and controlled limit values	Not applicable.
General protection and hygiene measures	Do not eat, drink and smoke while using. Keep order and cleanness.
Ear protection	Use ear protection if noise level > 75 dB .
Respiratory protection	Not required
Hand protection	Not required
Eye protection	Not required
Protective clothing	Not required

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9 PHYSICAL AND CHEMICAL PROPERTIES

Apperance Cartridge

Safety-relevant data:

Ignition sources: Sensitive to impact

Ignition temperature: Ca. 160 degrees C (ca 320 degrees F)

Other: Another physical dates not applicable

10 STABILITY AND REACTIVITY

Conditions which could affect the product stability Heat and impact on the primer cap leads to the individual ignition of the cartridge.

Substances to avoid Avoid contact with acids, lyes, oils and aromatic hydrocarbons.

Reaction products/ after conversion becoming free gases. The combustion gases contain carbon monoxid and nitrous gases.The fumes contain lead, barium and antimony compounds.

Dangerous polymerization None

11 TOXICOLOGICAL INFORMATION

Classification for LD / LC 50
- values: Not applicable.

12 ECOLOGICAL INFORMATION

Ecological problems: There are no ecological problems to be expected if handled and used properly.

13 DISPOSAL CONSIDERATION

Handling of rest product: Completely fired cartridges may be forwarded to recycling, no hazardous waste.

Further disposal information: Not fired cartridges, wich can not put to the intended use, have to be passed on to authorized persons in observance of local administrative regulations, particulary of the dangerous goods regulations according to point 14 .

EWC-code: 160401 " ammunition "

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14 TRANSPORT INFORMATION

FN/UN number	0012
Class ADR/RID, IMDG, IATA	1.4 S
U.N.-proper shipping name	Cartridges for weapons, inert projectile
Packing regulations/ instructions	Valid packing in conformity with packing directives: According to ADR/RID/IMDG-Code: P130 According to ICAO-TI and IATA-DGR: 130 Inner packaging: Not necessary Intermediate packaging: Not necessary Outer packaging: In a type approved and authorized box of packing group II, e.g. of fireboard (4G) or of natural wood, ordinary (4C1)
Information of mass	Net explosive mass per cartridge: Dependent on the type of cartridge: max 7,5 g Total mass per cartridge: Dependent on the type of cartridge: max 60,0 g
Other information	According to subsection 1.1.3.6 ADR the exemption limit is unlimited. Note in transport document: " LOAD NOT EXCEEDING THE EXEMPTION LIMIT PRESCRIBED IN SECTION 1.1.3.6" . The transport according to ICAO-TI/IATA-DGR is permitted in cargo hold of passenger aircrafts and in cargo aircrafts.

15 REGULATORY INFORMATION

Product name	Cartridge
Limitation/restriction	Permit required for handling and storage.
Permission for transfer and handling	The legislation about flammable substances and explosive products. (Sweden)
Other legislation	Safety adviser for dangerous goods. Legislation about transport of dangerous goods. Legislation and ordinance about manufacturing and sales of war material.
National legislation	SÄIFS 1993:4

16 OTHER INFORMATION

R-phrases from point 2.2	Propellant and primer charge: R22, Harmful if swallowed. R20/21/22, Harmful if inhaled, in contact with skin and if swallowed. R26/27/28, Very toxic by inhalation, in contact with skin and if swallowed. R51/53, Toxic to aquatic organisms, may cause long-term adverse
Training for handling	Yes.
References	Arbetskyddsstyrelsens och Kemikalieinspektionens författningssamling. Kemiska ämnen: Prevent. RIB Integrerat beslutsstöd för skydd och olyckor.
Other	This safety data sheet is a revised edition according to the new chemical rules. The information in this SDS is based in our existing knowledge from a safety point of view. The information in the safety data sheet reflects the current state of knowledge of our products. It serves to describe the handling and safety requirements relevant to the product. No binding statements as to the contractually agreed product characteristics may be inferred there from. This safety data sheet is printed automatically and hence unsigned.

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