

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identification**

Product name: SMOKELESS NITROCELLULOSE BASE POWDER without DNT and DBP type F-REX RED, F-REX YELLOW, F-REX GREY, F-REX PURPLE

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

For production of hunting, sporting ammunition. Do not use for other purposes.

1.3 Details of the supplier of the safety data sheet

Fiocchi Munizioni S.p.A
Via S. Barbara, 4 - 23900 Lecco, ITALY
Tel. +39 0341 473 111

1.4 Emergency telephone number

Emergency number: +39 02 66101029 Centro Antiveleni di Milano – ASST Grande Ospedale Metropolitano Niguarda

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****2.1.1 Classification according to Regulation (EC) No 1272/2008**

Expl. 1.3; H203
Aquatic Chronic 3; H412

2.1.2 Additional information

For full text of Hazard- and EU Hazard statements see section 16.

2.2 Label elements**Hazard pictograms:****Signal word:**

Danger.

Components of mixture for introducing on label:

-

Hazard statements:

H203 Explosive; fire, blast or projection hazard.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P250 Do not subject to grinding/shock/friction.
P370 + P380 In case of fire: Evacuate area.

2.3 Other hazards

The product does not meet the criteria for PBT, vPvB. The product does not contain SVHC substances. Raw materials used for production of this product meet the requirements of REACH Regulation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**Description of the mixture:**

Mixture of nitrocellulose, diphenylamine, Centralite I, 2,4-dinitroanisole and other components.

Hazardous ingredients:

Identification name	CAS No ES No Index No Registration No	Content %	Classification according to (ES) 1272/2008 (CLP)
Nitrocellulose	9004-70-0 - 603-037-00-6 -	max. 98	Expl. 1.1; H201
Centralite I	85-98-3 201-645-2 - 01-2119969270-36-0000	max. 6.0	Acute Tox.4; H302 Aquatic Chronic 3; H412
Diphenylamine	122-39-4 204-539-4 612-026-00-5 01-2119488966-13-0003	0 – 2.0	Acute Tox. 3; H301+ H311+ H331 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M=1
2,4-Dinitroanisole	119-27-7 204-310-9 - -	0 - 4.0	Acute Tox.4; H302

For full text of Hazard- and EU Hazard statements see section 16.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General notes:**

In all cases keep the victim at physical and psychic rest and keep warm. Always seek medical advice promptly.

Following inhalation:

Break off the exposition. Move the victim to fresh air. If not breathing, give artificial respiration.

Following skin contact:

Remove contaminated clothing immediately. Wash affected area with plenty of water and soap.

Following eye contact:

Flush eyes with moderate water stream for 15 min at minimum. Never neutralize. If the afflicted person is wearing contact lenses, they must be removed immediately.

Following ingestion:

Rinse the mouth with clean water, do not induce vomiting, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Higher exposure may cause headaches, nausea, slowing the pulse frequency down and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

No data.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: water spray. Adapt extinguishing media to the kind of fire.
Unsuitable extinguishing media: carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Heat, flame, spark, impact or friction, local overheating to the flash point and exposure to aggressive alkaline or acidic chemicals may cause ignition of dry powder. Extreme danger of explosion. Water-cool containers from the safe distance and try to prevent the spread of a fire. If the fire is out of control or involves propellants, then evacuate personnel to a safe distance.
In case of burning, toxic oxides of nitrogen and carbon are formed.

5.3 Advice for fire-fighters

Self-contained breathing apparatus and protective clothing conforming to EN 469.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid the free movement of persons in contaminated area. Wear personal protective equipment. Sprinkle the spilled product with water. Avoid spreading of the product. Avoid contact of spilled material with open fire, electric sparks and aggressive chemical compounds.

6.2 Environmental precautions

Avoid discharge to surface- and groundwater. If it is not possible, inform police and fire-fighters.

6.3 Methods and material for containment and cleaning up

Sprinkle spilled powder with water, sweep up carefully and place into impermeable containers. Use only tools from non-sparking material. Incinerate only in the approved place in accordance with national regulations relating to explosives.

6.4 Reference to other sections

More detailed disposal instructions see section 13, personal protective equipment see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with explosives. Keep away from open flame and hot pieces. Do not eat, drink or smoke. Take precautionary measures against the electrostatic discharges. Use only tools from non-sparking material. Maximum care should be taken during handling (lifting, transferring, opening of containers) and transport. Observe personal hygiene measures, wear suitable protective clothing and gloves. After handling wash thoroughly with water and soap. Ensure drink water for the first-aid.

7.2 Conditions for safe storage, including any incompatibilities

Store according to national regulations relating to explosives. Keep only in original containers under temperature not higher than 35 °C, out of reach of sources of ignition.

7.3 Specific end use(s)

Manufacturing and using ammunition and in automotive industry - observe safety regulations for production and processing of explosives. When using, do not eat, drink or smoke. Observe general personal hygiene measures.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****8.1.1 Exposition limits according to Czech government statute No. 361/2007 Sb. in actual version**

Occupational exposure limit values:

Substance / State	Long term mg/m ³	Short term mg/m ³
Diphenylamine / Czech republic	PEL: 10	NPK-P: 20

8.1.2 Monitoring procedures

To ensure observance of Czech government statute 361/2007 Sb. and to observe obligations included.

8.1.3 Biological limit values

Not determined in Czech Republic and European Union.

8.1.4 DNEL and PNEC values

DNEL a PNEC values for diphenylamine at registration are not determined.

Centralite I:

DNEL: Workers - Hazard via inhalation route - long term exposure – 0.196 mg/m³

Workers - Hazard via dermal route - long term exposure – 0.056 mg/kg bw/day

General Population- Hazard via inhalation route - long term exposure – 0.048 mg/m³

General Population - oral route - long term exposure – 0.028 mg/kg bw/day

PNEC: Aqua (freshwater) – 0.014 mg/l

Aqua (marine water) – 0.143 mg/l

Aqua (intermittent releases) – 0.143 mg/l

Sediment (freshwater) – 0.784 mg/kg

Sediment (marine water) – 0.791 mg/kg

Soil – 0.174 mg/kg

STP - 10 mg/l

8.2 Exposure controls**8.2.1 Appropriate engineering controls**

Process enclosures, local exhaust, general ventilation.

8.2.2 Personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. All used personal protective equipment should conform Regulation 89/686/EEC.

Eye and face protection - chemical goggles;

Skin protection - rubber gloves depending on operation, conforming EN 374, protective clothing, boots, cap;

Respiratory protection – dust filter mask if needed; in case of exceeding PEL use the respirator with filter protecting from organic vapours.

8.2.3 Environmental exposure controls

Do not exceed emission limits. Avoid release to the environment. If it is impossible, substance should be removed safely from the place of leakage. In case of leakage of the mixture to the air or water sources, soil or sewer system, inform relevant authorities about leakage.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance:	solid – grains of grey-black or yellow-brown colour
Odour:	odourless
Odour threshold:	not applicable
pH :	not available
Melting point/freezing point:	not available
Initial boiling point and boiling range:	not available
Flash point:	not applicable
Evaporation rate:	not applicable
Flammability:	not applicable - explosive
Upper flammability or explosive limits:	not applicable
Lower flammability or explosive limits:	not applicable
Vapour pressure:	not applicable
Vapour density:	not applicable
Relative density:	1.10 – 1.65 g.cm-3 (20 °C)
Solubility:	insoluble in water
Partition coefficient: n-octanol/water:	not available
Auto-ignition temperature:	not applicable - explosive
Decomposition temperature:	not applicable
Viscosity:	not applicable
Explosive properties:	Expl. 1.3C
Oxidising properties:	not applicable – explosive

9.2 Other information
Flash point: 165 to 175 °C.
Bulk density: 0.4 – 1.0 g.cm-3.
Impact sensitivity: 5 to 30 J.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity**

Explosive.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Unknown.

10.4 Conditions to avoid

Effects of heat, flame, mechanical or electric sparks, direct sun light and artificial ultraviolet radiation.

10.5 Incompatible materials

Strong oxidizing agents, acids, alkalis and amines.

10.6 Hazardous decomposition products

Oxides of nitrogen and carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	Diphenylamine - LD50: 1165 mg.l ⁻¹ , rat, oral Centralite I - LD50: 780.9 mg.l ⁻¹ , rat, oral
Skin corrosion/irritation:	not containing these substances (or less than classification limit)
Serious eye damage/irritation:	not containing these substances (or less than classification limit)
Respiratory or skin sensitisation:	not containing these substances (or less than classification limit)
Germ cell mutagenicity:	not containing these substances (or less than classification limit)
Carcinogenicity:	not containing these substances (or less than classification limit)
Reproductive toxicity:	not containing these substances (or less than classification limit)
STOT-single exposure:	not containing these substances (or less than classification limit)
STOT-repeated exposure:	not containing these substances (or less than classification limit)
Aspiration hazard :	not containing these substances (or less than classification limit)

11.2 Likely routes of exposure

Skin exposure and ingestion.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Mixture is classified as Aquatic Chronic 3; H412.
Diphenylamine - LC50: 2.2 mg.l⁻¹, fish
Diphenylamine - EC50: 2 mg.l⁻¹, 48 h, daphnia magna
Diphenylamine - EC50: 2.17 mg.l⁻¹, 72 h, Pseudokirchnerella subcapitata
Centralite I - LC50: 15.6 mg.l⁻¹, 96 h, fish
Centralite I - EC50: 14.3 mg.l⁻¹, 48 h, daphnia magna
Centralite I - EC50: 37.8 mg.l⁻¹, 72 h, Desmodemus subspicatus

12.2 Persistence and degradability

Not established

12.3 Bioaccumulative potential

Not established

12.4. Mobility in soil

Not established

12.5 Results of PBT and vPvB assessment

Assessment was not carried out.

12.6 Other adverse effects

Lack of data.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Substance/mixture: Sprinkle spilled powder with water, sweep up carefully and place into impermeable containers. Use only non-sparking tools. Incinerate only in the place approved for explosives burning according to national regulations relating to explosives.
Packaging: Disposal by burning only in the place approved for this purpose according to national regulations relating to explosives.

Waste codes / waste designations according to EWC:

16 04 03 N Other waste explosives

SECTION 14: TRANSPORT INFORMATION

14.1 UN number:	0161 Note: This classification is valid only for the trade marks of smokeless powders in original packages classified this way by the Resolution on classification of dangerous goods of class 1.			
14.2 UN proper shipping name:	POWDER SMOKELESS			
14.3 Transport hazard class:	1			
14.4 Packing group:				
14.5 Environmental hazards:	yes			
14.6 Special precautions for user:	no			
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	not applicable			
14.8 Other applicable information:				
- for ADR/RID				
Classification code:	1.3C			
Label:	1			
- for IMDG				
EmS	F-B, S-Y			
- for IATA				
Air transport is forbidden with the exception for packaging in the special powder cartridge SPN according to the following table:				
Type of SPN	UN No.	Classification Code	Proper Shipping Name	Applies to
SPN-01	0349	1.4S	ARTICLES, EXPLOSIVE, n.o.s.	80 g of all types of smokeless powders
SPN-02	0349	1.4S	ARTICLES, EXPLOSIVE, n.o.s.	2 x 150 g of smokeless powder S 501 or S 503
SPN-03	0479	1.4C	SUBSTANCES, EXPLOSIVE, n.o.s.	2 x 150 g of smokeless powder S 501
SPN-04	0479	1.4C	SUBSTANCES, EXPLOSIVE, n.o.s.	2 x 300 g of smokeless powder S 501 or S 503

SECTION 15: REGULATORY INFORMATION

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

EU Regulations:

Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), in the wording of later regulations

Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP), in the wording of later regulations

European Waste Catalogue (EWC)

Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances – Annex 1, Part II

15.2 Chemical safety assessment

Assessment was not carried out.

SECTION 16: OTHER INFORMATION**Changes to the previous version:**

Version 11.0 – Product classified in accordance with Regulation no. 1272/2008/EC.
Version 12.0 - Section 3 – Composition of the mixture, updating according to the Regulation no. 1272/2008/EC.
Version 13.0 – Section 8, 11, 12 – values for Centralite I were added
- Updating according to the Regulation (EU) 2015/830
- Section 16, Other information

Abbreviations:

CAS Chemical Abstracts Service
EN European standard
EWC The European Waste Catalogue
PEL Permissible Exposure Limit, long-term limit (8 hours)
DNEL derived no-effect level
PNEC predicted no-effect concentration
NPK-P Maximum allowable concentrations of chemicals in the workplace atmosphere, short-term limit
CLP Regulation No. 1272/2008/EC
REACH Regulation No. 1907/2006/EC
PBT Persistent, bioaccumulative and toxic
vPvB very persistent and very bioaccumulative
ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road
RID Regulations concerning the International Transport of Dangerous Goods by Rail
IMDG The International Maritime Dangerous Goods
IATA The International Air Transport Association

Full text of data used for classification:

Acute Tox. 3 Acute toxicity, Category 3
Acute Tox. 4 Acute toxicity, Category 4
Aquatic Acute 1 Hazardous to the aquatic environment acute, Category 1
Aquatic Chronic 1 Hazardous to the aquatic environment chronic, Category 1
Aquatic Chronic 3 Hazardous to the aquatic environment chronic, Category 3
Expl. 1.1 Explosive, Division 1.1
STOT RE 2 Specific target organ toxicity — repeated exposure, Category 2
H201 Explosive; mass explosion hazard.
H203 Explosive; fire, blast or projection hazard.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H302 Harmful if swallowed.
H373 May cause damage to organs.
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.
M multiplying factor

Key literature references and sources for data

legislation, chemical databases and tables

Relevant data for classification

The mixture is classified on the basis of the calculation method.

Instructions for training

To use information from this SDS, to emphasize explosiveness, careful handling, professional and health qualification.

Other information:

This safety data sheet is valid for the types: S 010, S 011, S 012, S 015, S 016, S 020, S 022, S 030, S 032, S 035, S 040, S 050, S 053, S 055, S 060, S 062, S 065, S 070-04, S 070-05 (S 070 as reloading powder), S 070-06, S 071-03 (S 071 as reloading powder), S 082, S 100, S102-03, S102-04, S 104, S105-01, S 106-02, S 106-03, S110-01, S 180, S 200, S 500, S 501, S 502, S 503.

The information provided in this Safety Data Sheet is based on the present state of our knowledge and experience and are intended to describe our product with respect to possible safety demands. The information is not to be considered a warranty of quality specification. Recipients of our product must take responsibility for observing existing laws and regulations