

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

Product name: SMOKELESS DOUBLE BASE POWDER LOVEX – without DNT and DBP type F-REX GREEN, F-REX BROWN

**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  
Acute Tox. 2; H300+H310+H330  
STOT RE 2; H373  
Aquatic Chronic 2; H411

**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:**

Product contains glycerol trinitrate.

**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.  
P373 DO NOT fight fire when fire reaches explosives.

### 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, glycerol trinitrate, diphenylamine, Centralite I, ethylacetate and other components.

### Hazardous ingredients:

| Identification name | CAS No<br>ES No<br>Index No<br>Registration No                 | Content<br>% | Classification according to<br>(ES) 1272/2008 (CLP)  |
|---------------------|--|--------------|--|
| Nitrocellulose      | 9004-70-0<br>-<br>603-037-00-6<br>-                            | max. 87      | Expl. 1.1; H201  |
| Glycerol trinitrate | 55-63-0<br>2000-240-8<br>603-034-00-X<br>01-2119488893-18-XXXX | max. 51      | Unst. Expl., H200<br>Acute Tox. 1, H310<br>Acute Tox. 2, H300+H330<br>STOT RE 2, H373<br>Aquatic Chronic 2, H411 |
| Centralite I        | 85-98-3<br>201-645-2<br>-<br>01-2119969270-36-0000             | max. 8.0     | Acute Tox.4, H302<br>Aquatic Chronic 3, H412   |
| Diphenylamine       | 122-39-4<br>204-539-4<br>612-026-00-5<br>01-2119488966-13-0003 | max. 1.5     | Acute Tox. 3; H301+ H311+ H331<br>STOT RE 2; H373<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>M=1     |
| Ethylacetate        | 141-78-6<br>205-500-4<br>607-022-00-5<br>01-2119475103-46-XXXX | max. 1.2     | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336<br>EUH066  |

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 mouth with fresh water, give to drink some 0,2-0,3 l water containing active carbon (e.g. 5 tbs Carbsorb) and within not more than one hour induce vomiting (meaningless if induced later). Give active carbon repeatedly, no matter if the vomiting was induced or not. Seek medical advice. Do not induce vomiting in case of unconsciousness, convulsions or bad physical conditions.

### 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<br>mg/m <sup>3</sup> | Short term<br>mg/m <sup>3</sup> |
|--------------------------------------|--------------------------------|---------------------------------|
| Glycerol trinitrate / Czech republic | PEL: 0,5                       | NPK-P: 1,0                      |
| Diphenylamine / Czech republic       | PEL: 10                        | NPK-P: 20                       |
| Ethylacetate / Czech republic        | PEL: 700                       | NPK-P: 900                      |

**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.

**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 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:                        | ca 1.3 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:                    | Fatal if swallowed, in contact with skin or if inhaled. Acute Tox. 2; H300+H310+H330<br>Glycerol trinitrate - LD50: 685 mg.kg <sup>-1</sup> , rat, oral<br>Diphenylamine - LD50: 1165 mg.kg <sup>-1</sup> , 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:            | May cause damage to organs through prolonged or repeated exposure.<br>STOT RE 2; H373   |
| 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

Toxic to aquatic life with long lasting effects. Aquatic Chronic 2; H411  
Glycerol trinitrate LC50 for freshwater fish: 3.48 mg.l<sup>-1</sup>  
Diphenylamine LC50 for freshwater fish: 2.2 mg.l<sup>-1</sup>  
Difenylamin EC50 for daphnia: 2 mg.l<sup>-1</sup>, 48 h  
Diphenylamine EC50 for algae: 2.17 mg.l<sup>-1</sup>, 72 h

#### 12.2 Persistence and degradability

Lack of data.

#### 12.3 Bioaccumulative potential

Lack of data.

#### 12.4. Mobility in soil

Lack of data.

#### 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

|   |   |
|---|---|
| <b>14.1 UN number:</b>  | 0161<br>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.                          |
| <b>14.2 UN proper shipping name:</b>  | POWDER SMOKELESS  |
| <b>14.3 Transport hazard class:</b>   | 1   |
| <b>14.4 Packing group:</b>  |   |
| <b>14.5 Environmental hazards:</b>  | Yes   |
| <b>14.6 Special precautions for user:</b>                                       | No  |
| <b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:</b> | not applicable  |
| <b>14.8 Other applicable information:</b>                                       |   |
| <b>- for ADR/RID</b>  |   |
| Classification code:  | 1.3C  |
| Label:  | 1 + „fish and tree“   |
| <b>- for IMDG</b>   |   |
| EmS   | F-B, S-Y  |
| <b>- for IATA</b>   | Air transport is forbidden with the exception for packaging in the special powder cartridge SPN-01 in quantities 80 g of smokeless powder. The cartridge is classified as follows: UN 0349 ARTICLES, EXPLOSIVE, N.O.S., 1.4S. |

### 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 - Updating according to Regulation No 2015/830/EC.  
- Supplementation of registration numbers

**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. 1 Acute toxicity, Category 1  
Acute Tox. 2 Acute toxicity, Category 2  
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 2  
Aquatic Chronic 2 Hazardous to the aquatic environment chronic, Category 2  
Aquatic Chronic 3 Hazardous to the aquatic environment chronic, Category 3  
Expl. 1.1 Explosive, Division 1.1  
Expl. 1.3 Explosive, Division 1.3  
Eye Irrit. 2 Serious eye damage/eye irritation, Category 2  
Flam. Liq. 2 Flammable liquid, Category 2  
STOT RE 2 Specific target organ toxicity — repeated exposure, Category 2  
STOT SE 3 Specific target organ toxicity — single exposure, Category 3  
Unst. Expl. Unstable Explosive  
EUH066 Repeated exposure may cause skin dryness or cracking.  
H200 Unstable explosives.  
H201 Explosive; mass explosion hazard.  
H203 Explosive; fire, blast or projection hazard.  
H225 Highly flammable liquid and vapour.  
H300+330 Fatal if swallowed or if inhaled  
H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.  
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled  
H302 Harmful if swallowed.  
H310 Fatal in contact with skin.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.  
M Multiplying factor.  
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
P250 Do not subject to grinding/shock/.../friction.  
P370 + P380 In case of fire: Evacuate area.  
P373 DO NOT fight fire when fire reaches explosives.

**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

For handling with the product Safety Regulations shall be elaborated, negotiated with Regional Hygienist. These Regulations shall be available in the workplace. Training by competent person only.

### Other information:

This safety data sheet is valid for the types: D 010, D 013, D 015, D 020, D 023, D 025, D 030, D 032, D 033, D 036, D 037, D 039, D 040-02, D 051-04, D 055, D 060, D 063, D 073-04 (D073.4 as reloading powder), D 073-05 (D073.5 as reloading powder), D 073-06 (D073.6 as reloading powder), D 073-07, D 075-01, D 105, D 250, D 252, D 254, D 256, S-4N, SIPEN, TECNA N, BALISTIT 1, BALISTIT 2.

*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*