

SAFETY DATA SHEET
ACCORDING TO Regulation (EC) No. 1907/2006

Date of Issue: 27.09.2002

Version: 12.0

Revision Date: 12.1.2016

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**Product name: **SMOKELESS DOUBLE BASE POWDER LOVEX – without DNT and with DBP****1.2 Relevant identified uses of the substance or mixture and uses advised against**

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

1.3 Details of the supplier of the safety data sheet

Explosia a.s.	tel.:	+420 466 825 202
530 02 Pardubice - Semtin	fax:	+420 466 822 941
Czech Republic	e-mail:	sds@explosia.cz

1.4 Emergency telephone number

Producer:

tel.: +420 466 824 402

fax: +420 466 824 448

National advisory body:

Toxicological Information Centre (TIS): Hospital for Occupational Diseases, Na Bojišti 1171/1, 128 21 Prague 2, tel. 224 919 293, 224 915 402 or 224 914 575

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. 1; H310

Acute Tox. 2; H300+H330

STOT RE 2; H373

Repr. 1B; H360Df

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 and dibutylphthalate.

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.

Notice: "Restricted to professional users."

2.3 Other hazards

The product does not meet the criteria for PBT, vPvB.

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

Mixture of nitrocellulose, glycerol trinitrate, dibutylphthalate, diphenylamine, Centralite I, ethylacetate 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. 80	Expl. 1.1; H201
Glycerol trinitrate	55-63-0 2000-240-8 603-034-00-X 01-2119488893-18-XXXX	max. 43	Unst. Expl., H200 Acute Tox. 1, H310 Acute Tox. 2, H300+H330 STOT RE 2, H373 Aquatic Chronic 2, H411
Dibutylphthalate	84-74-2 201-557-4 607-318-00-4 01-2119493042-44-XXXX	max. 10.0	Repr. 1B; H360 Df Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M=1
Centralite I	85-98-3 201-645-2 - 01-2119969270-36-0000	max. 9.0	Acute Tox.4, H302 Aquatic Chronic 3, H412
Diphenylamine	122-39-4 204-539-4 612-026-00-5 01-2119488966-13-0003	max. 1.5	Acute Tox. 3; H301+H311+H331 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M=1
Ethylacetate	141-78-6 205-500-4 607-022-00-5 01-2119475103-46-XXXX	max. 1.0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 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 - 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
Glycerol trinitrate / Czech republic	PEL: 0,5	NPK-P: 1,0
Diphenylamine / Czech republic	PEL: 10	NPK-P: 20
Dibutylphthalate / Czech republic	PEL: 5	NPK-P: 10
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

Dibutylphthalate				CAS No 84-74-2			
DNEL							
Users	Route of study	Effects	Time of exposure	Value			
Workers	Inhalation	Systemic effects	Long-term	4,17 mg/m ³			
Workers	Inhalation	Systemic effects	Acute/short term	8,52 mg/m ³			
Workers	Dermal	Systemic effects	Long-term	7,22 mg/kg/day			
General population	Inhalation	Systemic effects	Long-term	0,62 mg/m ³			
General population	Dermal	Systemic effects	Long-term	2,2 mg/kg/day			
General population	Oral	Systemic effects	Long-term	0,22 mg/kg/day			
PNEC							
Freshwater	Marine water	Intermittent releases	STP	Sediment (freshwater)	Sediment (marine water)	Soil	Secondary poisoning
10 µg/l	1 µg/l	4,8 µg/l	0,22 mg/l	1,19 mg/kg	0,119 mg/kg	0,05 mg/kg	1,33 mg/kg food

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	solid (grains + tubules) 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.

Impact sensitivity: 5 to 30 J.

Bulk density: min. 0.92 g.cm⁻³.

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 oxidising 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 (category 2), in contact with skin (category 1) or if inhaled (category 2).
	Glycerol trinitrate LD ₅₀ : 685 mg.kg ⁻¹ , rat, oral
	Diphenylamine LD ₅₀ : 1165 mg.kg ⁻¹ , rat, oral
	Dibutylphthalate LD ₅₀ : 6279 mg.kg ⁻¹ , rat, oral
	Dibutylphthalate LC ₅₀ : ≥15,68 mg.l ⁻¹ , 4h, rat, inhal
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:	May damage the unborn child. Suspected of damaging fertility.

Repr. 1B; H360Df
 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.
 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⁻¹
 Diphenylamine LC₅₀ for freshwater fish: 2.2 mg.l⁻¹
 Diphenylamine EC₅₀ for daphnia: 2 mg.l⁻¹, 48 h
 Diphenylamine EC₅₀ for algae: 2,17 mg.l⁻¹, 72 h
 Dibutylphthalate LC₅₀ for freshwater fish: 0035 mg.l⁻¹
 Dibutylphthalate EC₅₀ for daphnia: ca. 2.99 mg.l⁻¹, 48 h

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(es):	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 + „fish and tree“
- for IMDG	
EmS	F-B, S-Y
- for IATA	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

Authorisation:

Dibutylphthalate contained in the product is subject to authorisation according to the Regulation No. 142/2011/EC, amending the Appendix XIV of the Regulation No. 1907/2006/EC. The manufacturer of the substance has asked ECHA for authorization to use it in smokeless powders.

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)

NPK-P Maximum allowable concentrations of chemicals in the workplace atmosphere, short-term limit

DNEL Derived no-effect level

PNEC Predicted no-effect concentration

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 1
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
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Repr. Cat. 2	Reproductive toxicity, Category 2
Repr. Cat. 3	Reproductive toxicity, Category 3
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.
M	Multiplying factor

H200	Unstable explosives.
H201	Explosive; mass explosion hazard.
H203	Explosive; fire, blast or projection hazard.
H225	Highly flammable liquid and vapour.
H300+H330	Fatal if swallowed 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.
H360Df	May damage the unborn child. Suspected of damaging fertility.
373	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.
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 051-01, D 051-02, D 051-03, D 073-01, D 073-02, D 073-03 and for all designs of powder D 083, D 100 and D 103.

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.