



SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Company : EXSA S.A.
 Address : Antigua Panamericana Sur km 38,5 Lurín - Lima 16
 Emergency phone : 315 7000 (local) – 01/315 7000 (national) - ++ 51-1/315 7000 (international)
 Product name : GELATINA ESPECIAL
 Product generic : Gelatin dynamite
 N° N.U. : 0081
 N° Class : 1.1 D
 N° MSDS : EX-100
 Edition : 01
 Issued : 2009-01-10
 Prepared by : Operation Manager

SECTION 2 – INGREDIENTS AND COMPOSITION

◆ Ingredients	N° CAS	PEL (OSHA)	TLV (ACGIH)
Ammonium nitrate	6484-52-2	Not established	Not established
Nitroglicerín	55-63-0	0,1 mg/m ³	0,05 ppm
Nitrocellulose	9004-70-0	Not established	Not established
Nitroglycol	628-96-6	0,2 mg/m ³	0,05 ppm

CAS : Chemical Abstrac Service
 PEL : Permissible Exposure Limit
 OSHA : Occupational Safety and Health Administration
 TLV : Threshold Limit Value
 ACGIH : American Conference of Governmental Industrial Hygienists

SECTION 3 – HAZARD IDENTIFICATION

Health hazard data

- ◆ Inhalation : Can cause headache, nauseates and dilation of blood vessel.
- ◆ Eye contact : Can cause headache, nauseates and dilation of blood vessel.
- ◆ Swallowing : Can cause headache, nauseates and dilation of blood vessel.
- ◆ Skin absorption : Not known currently
- ◆ Effects of repeated exposure : Can cause headache, nauseates and dilation of blood vessel.

SECTION 4 – FIRST AID MEASURES

- ◆ Inhalation : Remove from exposure to fresh air, to help the breathing with oxygen or artificial breathing if is required.
- ◆ Skin contact : Wash skin with soap and water.
- ◆ Eye contact : Wash eyes with soap and water.
- ◆ Swallowing : Induce vomiting. Get medical attention immediately. Treat symptomatically

SECTION 5– FIRE FIGHTING MEASURES

- ◆ *Special fire fighting procedures:*
 - Remove the personnel to a safety place.
 - Fight fires alone the state of incipient initiation. Of being possible it removes or transfer the containers or near recipients that contain explosive material to a place far from the fire area.
 - In the event of fires already declared not fight fires involving explosives.
 - Use water as fire extinguishing media. The other fire extinguishing media are limitedly troops for incipient fires because the explosive materials contain in their composition the necessary oxygen for their combustion.
 - Avoid inhalation the fumes involve fire. Wear full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus if it is indispensable to enter in places with presence of these fumes.
- ◆ *Hazard explosion :*
 May explode under certain conditions of fire or impacts. Avoid any exhibition to these conditions.



SECTION 6– ACCIDENTAL RELEASE MEASURES

Steps to continue in the event of Spills:

- ◆ Sweep and gather immediately the spilled material.
- ◆ Not allow to smoke or to generate open fire near the place of the spill.
- ◆ Inform the specialized personnel and the pertinent authorities.
- ◆ Single trained personnel will act in emergencies.

SECTION 7– HANDLING AND STORAGE

- ◆ Storage : According to legal dispositions, the warehouses of explosive should be ambient fresh, dry and well ventilated that they have the infrastructure of established security and dedicated for this exclusive use. The explosive should never be placed next to sources of heat, machines or vehicles in operation, combustible or inflammable materials, electric lines.
- ◆ Handling : All the explosive without exception some, should only be manipulated for personal competent. To be washed the hands before eating, to drink and to smoke.

SECTION 8– EXPOSURE CONTROL/PERSONAL PROTECTION

- ◆ Ventilation : Ventilate all closed area, before entering or during the permanency.
- ◆ Hand protection : Absorbent of cotton to manipulate containers or material in their original packing. Use neoprene gloves to manipulate the explosive mass directly.
- ◆ Other caution : The inhalation and the contact with the skin should be minimized to avoid headaches, nauseates and dilation of blood vessel.

SECTION 9– PHYSICAL AND CHEMICAL PROPERTIES

- ◆ Appearance : Gelatinous mixture, cinnamon to white color
- ◆ Density, g/cm³ : 1,25 – 1,50
- ◆ Boiling point : Not aplicable
- ◆ Flash point : Not aplicable

SECTION 10– STABILITY AND REACTIVITY

- ◆ Stability : Stable under ordinary conditions of use and storage.
- ◆ Descomposition products : Emits toxic nitrogen oxides fumes and carbon oxides.
- ◆ Incompatible materials : Acids, alkalis, peroxides and chlorates.

SECTION 11– TOXICOLOGICAL INFORMATION

- ◆ Toxicity : Data don't exist on toxicity levels for inhalation or cutaneous absorption.

SECTION 12– ECOLOGICAL INFORMATION

- ◆ Persistente/degradation : Not applicable
- ◆ Ecotoxicity : Presents no ecological problems provided any waste is correctly disposed.

SECTION 13– DISPOSAL CONSIDERATIONS

- ◆ Waste : Incineration of the very dispersed material on a channel of combustible material (not inflammable) in open spaces, without any confined type and permanent supervision.
- ◆ Polluted packings : Incineration in open spaces

SECTION 14– TRANSPORT INFORMATION

- ◆ DOT : Explosive
- ◆ N° NU : 0081
- ◆ N° Class : 1.1 D

SECTION 15– REGULATORY INFORMATION

- ◆ Applicable international norms : None
- ◆ Applicable national norms : Regulation of control of explosive of civil use (D.S. 019-71/IN).
Regulation of security and mining hygiene (D.S. 046-2001-EM).

SECTION 16– OTHER INFORMATION

All the information, fact or apparent suggestion for EXSA S.A. regarding their products, it is based on the best knowledge in this in the moment. EXSA S.A. doesn't have influence in the use, process and application of the same ones on the part of the buyers and consumers.

EXSA S.A. won't accept in any case, responsibility some for the obtained results, neither for the inconveniences, damages and direct and indirect damages, as well as for the resulting consequences of the use of the same ones. For such reasons, the buyers and consumers, they assume all the risks, responsibilities and obligations for losses and derived damages of the handling and use of our products without exception some and they will be the only responsible for the obtained results of the storage, handling or use of the product as well as of the handling of the information or the relating recommendations to the same one, be alone or in combination with other substances.