

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 02-Dec-2019

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## NITROGLYCERIN 2 % IN LACTOSE

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name/designation:

**NITROGLYCERIN 2 % IN LACTOSE**

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

Use of the substance/mixture:

Active agent

#### 1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

**Valsynthese S. A.**

Société Suisse des Explosifs Group

Fabrikstrasse 48

3900 Brig

Switzerland

**Telephone:** +41 27 922 71 11

**Telefax:** +41 27 922 72 00

**E-mail:** info@valsynthese.ch

**Website:** www.valsynthese.ch

**E-mail (competent person):** msds@sse-group.com

#### 1.4. Emergency telephone number

United States of America: Poison control center - national hotline number 1-800-222-1222 Great Britain: National phone number 111 Republic of Ireland: National phone number 01 809 2166 Czech Republic: Toxikologické informační středisko +420 224 919 293, +420 224 915 402 Denmark: Giftlinjen +45 82 12 12 12 France: numéro ORFILA (INRS) : +33 (0)1 45 42 59 59 Italy: 06-3054343 (24h/24h), Centro antiveleni Policlinico Umberto I, Roma Spain: National Emergency Telephone Number: +34 91 562 04 20. The information will be provided in Spanish (24h/365 days). Sweden: +46 112 in case of emergency poisoning and ask for Poison Information both day and night. +46 08-331231 if you have other questions concerning acute poisonings mon-fri 9.00-17.00., +41 27 922 71 11 (Only available during office hours.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (dermal) ( <i>Acute Tox. 4</i> )	H312: Harmful in contact with skin.	

#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



**GHS07**

Exclamation mark

**Signal word:** Warning

**hazard statements for health hazards**

H312 Harmful in contact with skin.

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### Supplemental Hazard information (EU): -

#### Precautionary statements Prevention

P280 Wear protective gloves/protective clothing.

#### Precautionary statements Response

P302 + P352 IF ON SKIN: Wash with plenty of water/Soap.

P312 Call a POISON CENTER/doctor/etc. if you feel unwell.

### 2.3. Other hazards


#### Other adverse effects:

Risk of decomposition in case of contact with acids or alkalines.

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

#### Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 10039-26-6	<b>Lactose</b> The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	98 Wt %
CAS No.: 55-63-0 EC No.: 200-240-8	<b>glycerol trinitrate</b> Acute Tox. 1, Acute Tox. 2, Aquatic Chronic 2, Expl. 1.1, STOT RE 2  <b>Danger</b> H201-H300-H310-H330-H373-H411	2 Wt %

Full text of H- and EUH-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended. Warning First aider: Pay attention to self-protection!

#### Following inhalation:

Provide fresh air. In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. Hazardous decomposition products: Nitrogen oxides (NOx). Call a physician immediately.

#### In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. Get immediate medical advice/attention.

#### After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

#### After ingestion:

Rinse mouth. Let water be drunken in little sips (dilution effect).

#### Self-protection of the first aider:

Wear personal protection equipment (refer to section 8).

### 4.2. Most important symptoms and effects, both acute and delayed

Respiratory paralysis, low blood pressure, accompanied by severe headache, dizziness, narcosis, intoxication, euphoria, nausea, vomiting.

### 4.3. Indication of any immediate medical attention and special treatment needed

No data available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media:**

alcohol resistant foam, Carbon dioxide (CO<sub>2</sub>), Dry extinguishing powder

**Unsuitable extinguishing media:**

Water

#### 5.2. Special hazards arising from the substance or mixture

In contact with water, pure nitroglycerin may separate and there is a risk of subsequent detonation due to heat, shock or friction.

**Hazardous combustion products:**

Carbon dioxide (CO<sub>2</sub>), Carbon monoxide, Nitrogen oxides (NO<sub>x</sub>)

#### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

**Personal precautions:**

Keep away unprotected persons. Avoid contact with eyes and skin. Remove persons to safety.

**Protective equipment:**

Wear protective gloves/protective clothing/eye protection/face protection.

##### 6.1.2. For emergency responders

**Personal protection equipment:**

Personal protection equipment: see section 8

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

#### 6.3. Methods and material for containment and cleaning up

**For containment:**

Take up mechanically, placing in appropriate containers for disposal.

**For cleaning up:**

In contact with water, pure nitroglycerin may separate and there is a risk of subsequent detonation due to heat, shock or friction.

#### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

#### 6.5. Additional information

Use appropriate container to avoid environmental contamination.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Protective measures**

**Advices on safe handling:**

Wear personal protection equipment (refer to section 8). Take off immediately all contaminated clothing and wash it before reuse.

**Fire prevent measures:**

Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

**Advices on general occupational hygiene**

When using do not eat, drink or smoke.

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### 7.2. Conditions for safe storage, including any incompatibilities

#### Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Protect from moisture.

#### Requirements for storage rooms and vessels:

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

#### Hints on storage assembly:

Do not store together with:  
strong acids and alkalis, Water

**Storage class:** 11 - Combustible solids that cannot be assigned to any of the above storage classes

### 7.3. Specific end use(s)

No data available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
ES	glycerol trinitrate CAS No.: 55-63-0	① 0.01 ppm (0.094 mg/m <sup>3</sup> ) ② 0.02 ppm (0.19 mg/m <sup>3</sup> ) ⑤ (puede ser absorbido a través dérmica)
VLA (FR)	glycerol trinitrate CAS No.: 55-63-0	① 0.1 ppm (1 mg/m <sup>3</sup> ) ⑤ (peut être absorbé par la peau)
IOELV (EU)	glycerol trinitrate CAS No.: 55-63-0	① 0.01 ppm (0.095 mg/m <sup>3</sup> ) ② 0.02 ppm (0.19 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
WEL (GB)	glycerol trinitrate CAS No.: 55-63-0	① 0.01 ppm (0.095 mg/m <sup>3</sup> ) ② 0.02 ppm (0.19 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
OSHA (US)	glycerol trinitrate CAS No.: 55-63-0	③ 0.2 ppm (2 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
NIOSH (US)	glycerol trinitrate CAS No.: 55-63-0	② 0.1 mg/m <sup>3</sup> ⑤ (may be absorbed through the skin)
ACGIH (US)	glycerol trinitrate CAS No.: 55-63-0	① 0.05 ppm (0.46 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)

#### 8.1.2. Biological limit values

Limit value type (country of origin)	Substance name	Limit value	① parameter ② Test material ③ Time of sampling ④ Remark
BMGV (GB)	glycerol trinitrate CAS No.: 55-63-0	15 µmol/mol creatinine	① total nitroglycols ② urine ④ At the end of the period of exposure

#### 8.1.3. DNEL-/PNEC-values

No data available

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### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

#### 8.2.2. Personal protection equipment



##### Eye/face protection:

Wear tightly sealed safety glasses in accordance to EN 166.

##### Skin protection:

Use protective gloves in accordance to EN 374. The following material is suitable: NBR Wear protective clothes against chemical agents in accordance to EN 368 or EN465.

##### Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Respiratory protection according to EN 136 or EN 140 with filter ABEK-P3.

#### 8.2.3. Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

Physical state: solid

Colour: white

Odour: Faint smell of lactose

#### Safety relevant basis data

parameter		at °C	Method	Remark
pH	<i>not determined</i>			
Melting point	202 °C			lactose
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature	212 °C			glycerol trinitrate
Flash point	<i>not determined</i>			
Evaporation rate	<i>not determined</i>			
Auto-ignition temperature	390 °C			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	0.00033 hPa	20 °C		glycerol trinitrate
Vapour density	<i>not determined</i>			
Density	0.5 g/cm <sup>3</sup>	20 °C		
Bulk density	<i>not determined</i>			
Water solubility	161 g/l	20 °C		lactose (glycerol trinitrate: Water solubility (g/L) 1.25)
Partition coefficient: n-octanol/water	-5.03	20 °C		
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>			

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reaction with: Acids, alkalines, Oxidising agent, strong, Reducing agent, strong

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### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Heat, flames and sparks. Water, Do not expose to temperatures exceeding 50 °C/122 °F.

### 10.5. Incompatible materials

strong acids and alkalis, Water, Oxidising agent, strong, Reducing agent, strong

### 10.6. Hazardous decomposition products

Nitrogen oxides (NO<sub>x</sub>)

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
55-63-0	glycerol trinitrate	<b>ATE inhalativ Dämpfe:</b> 0.5 mg/l <b>LD<sub>50</sub> oral:</b> 105 mg/kg (Rat) <b>LD<sub>50</sub> dermal:</b> 29.2 mg/kg (Rat)

#### Acute oral toxicity:

Based on available data, the classification criteria are not met.

#### Acute dermal toxicity:

Harmful in contact with skin.

#### Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

#### Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation:

Based on available data, the classification criteria are not met.

#### Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

#### Carcinogenicity:

Based on available data, the classification criteria are not met.

#### Reproductive toxicity:

Based on available data, the classification criteria are not met.

#### STOT-single exposure:

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure:

Based on available data, the classification criteria are not met.

#### Aspiration hazard:

Based on available data, the classification criteria are not met.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

CAS No.	Substance name	Toxicological information
55-63-0	glycerol trinitrate	<b>LC<sub>50</sub></b> : 1.28 mg/l 4 d (Fish) <b>LC<sub>50</sub></b> : 32 mg/l 2 d (shellfish) <b>EC<sub>50</sub></b> : 46 mg/l 2 d (shellfish) <b>EC<sub>50</sub></b> : 0.4 mg/l 4 d (Alga) <b>EC<sub>50</sub></b> : 55 mg/l 2 d (Daphnia magna (Big water flea))

#### Aquatic toxicity:

Based on available data, the classification criteria are not met.

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

##### Partition coefficient: n-octanol/water:

-5.03 at °C: 20

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
10039-26-6	Lactose	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
55-63-0	glycerol trinitrate	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

#### 12.6. Other adverse effects

No data available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

The product may not be eliminated as municipal solid waste nor allowed to end up in the drainage system. These packs can be delivered packaging-specific to the existing collection points for hazardous waste.

##### 13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

##### Waste code product:

07 05 13 \* Solid wastes containing hazardous substances

\*: Evidence for disposal must be provided.

##### Remark:

Wastecode according to regulation EU 2014/955

##### Waste code packaging:

15 01 10 \* packaging containing residues of or contaminated by dangerous substances

\*: Evidence for disposal must be provided.

##### Remark:

Wastecode according to regulation EU 2014/955

#### Waste treatment options

##### Appropriate disposal / Product:

Pick up product with sawdust in a ratio of 1:10 and return to the manufacturer. Burn in an open hearth only in accordance with local government regulations.

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### Appropriate disposal / Package:

Residues of the product and packaging have to be collected as hazardous waste.

## SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN-No.</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.2. UN proper shipping name</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.3. Transport hazard class(es)</b>			
not relevant			
<b>14.4. Packing group</b>			
not relevant			
<b>14.5. Environmental hazards</b>			
not relevant			
<b>14.6. Special precautions for user</b>			
not relevant			

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not relevant

## SECTION 15: Regulatory information

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

#### 15.1.1. EU legislation

##### Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.

#### 15.1.2. National regulations

No data available

### 15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1. Indication of changes

This material safety data sheet has been revised completely and is considered new without any previous version.



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### 16.2. Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR European agreement concerning the international carriage of dangerous goods by road  
CAS Chemical Abstract Service  
CLP Classification, labelling and Packaging  
EC50 Effective Concentration 50%  
EN European norm  
IATA International Air Transport Association  
IMDG-Code International Maritime Dangerous Goods Code  
LC50 Lethal Concentration 50%  
LD50 Lethal Dose 50%  
OECD Organization for Economic Cooperation and Development  
PBT persistent, bioaccumulative, toxic  
PNEC Predicted No Effect Concentration  
REACH Registration, Evaluation and Authorization of Chemicals  
RID Regulations concerning the international carriage of dangerous goods by rail  
SVHC Substance of Very High Concern  
UN United Nations  
VOC Volatile organic compounds  
vPvB very persistent, very bioaccumulative

### 16.3. Key literature references and sources for data

Security safety data sheet of the ingredients. GESTIS database. Inventory of substances of the European Chemical Agency (ECHA).

### 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (dermal) ( <i>Acute Tox. 4</i> )	H312: Harmful in contact with skin.	

### 16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H201	Explosive; mass explosion hazard.
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure. (...)
H411	Toxic to aquatic life with long lasting effects.

### 16.6. Training advice

Persons charged with the handling and cleaning of the product must be trained prior to start their work and in regular intervals. They must be informed about the risks using the product and the measures to take for efficient prevention. This concerns particularly working security, first aid, health and environment protection.

### 16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.