

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Nitroglycerin Lingual Aerosol  
**Other means of identification** Not available.  
**Recommended use** Prevention or relief from a sudden attack of angina (chest pain) caused by heart attack.  
**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

**Manufacturer:** Rouses Point Pharmaceuticals, LLC  
11 Commerce Drive  
Cranford, NJ 07016  
**Emergency Telephone:** 1-908-372-0506

## 2. Hazard(s) identification

**Physical hazards** Flammable aerosols Category 2  
**Health hazards** Acute toxicity, dermal Category 3  
Specific target organ toxicity, repeated exposure Category 2 (Blood, Skin, Central nervous system, Cardiovascular system)  
**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger  
**Hazard statement** Flammable aerosol. Toxic in contact with skin. May cause damage to organs (blood, skin, central nervous system, cardiovascular system) through prolonged or repeated exposure.  
**Precautionary statement**  
**Prevention** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not breathe vapor/spray.  
**Response** If on skin: Wash with plenty of water. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse.  
**Storage** Store locked up.  
**Disposal** Dispose of contents in accordance with local/regional/national/international regulations.  
**Hazard(s) not otherwise classified (HNOC)** None known.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Isobutane	75-28-5	58.5 - 60.3
Butane	106-97-8	6.5 - 6.7
Nitroglycerin	55-63-0	0.5 - 2

## 4. First-aid measures

**Inhalation** If symptomatic, move to fresh air. Get medical attention if symptoms persist.  
**Skin contact** Wash with soap and water. Get medical advice/attention if you feel unwell.  
**Eye contact** Immediately flush with plenty of water for at least 15 minutes. Hold eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

<b>Ingestion</b>	Seek medical advice.
<b>Most important symptoms/effects, acute and delayed</b>	Toxic in contact with skin. May cause skin irritation on prolonged or repeated contact. May cause eye irritation on direct contact. May cause damage to organs (blood, skin, central nervous system, cardiovascular system) through prolonged or repeated exposure.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water. Water fog. Foam. Dry chemical. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Aerosol cans may explode in a fire. Thermal decomposition or combustion may liberate toxic gases or fumes.
<b>Special protective equipment and precautions for firefighters</b>	Use water spray to keep fire-exposed containers cool.
<b>Fire-fighting equipment/instructions</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Wear protective clothing as described in Section 8 of this safety data sheet.
<b>Methods and materials for containment and cleaning up</b>	Absorb spill with vermiculite or other inert material, then place in a sealed container for chemical waste.  Large Spills: Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Keep away from heat, sparks and open flame. Do not breathe mist or vapor. Do not get on skin and clothing. Avoid contact with eyes. Use only with adequate ventilation. Wash thoroughly after handling. Observe good industrial hygiene practices. Pressurized container: Do not pierce or burn, even after use.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep container closed. Keep cool. Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Nitroglycerin (CAS 55-63-0)	Ceiling	2 mg/m <sup>3</sup> 0.2 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Isobutane (CAS 75-28-5)	STEL	1000 ppm
Nitroglycerin (CAS 55-63-0)	TWA	0.05 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m <sup>3</sup> 800 ppm
Isobutane (CAS 75-28-5)	TWA	1900 mg/m <sup>3</sup> 800 ppm
Nitroglycerin (CAS 55-63-0)	STEL	0.1 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

## Exposure guidelines

### US - California OELs: Skin designation

Nitroglycerin (CAS 55-63-0) Can be absorbed through the skin.

### US - Minnesota Haz Subs: Skin designation applies

Nitroglycerin (CAS 55-63-0) Skin designation applies.

### US - Tennessee OELs: Skin designation

Nitroglycerin (CAS 55-63-0) Can be absorbed through the skin.

### US ACGIH Threshold Limit Values: Skin designation

Nitroglycerin (CAS 55-63-0) Can be absorbed through the skin.

### US. NIOSH: Pocket Guide to Chemical Hazards

Nitroglycerin (CAS 55-63-0) Can be absorbed through the skin.

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Nitroglycerin (CAS 55-63-0) Can be absorbed through the skin.

**Appropriate engineering controls** Ensure adequate ventilation, especially in confined areas.

## Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

### Skin protection

**Hand protection** Chemical resistant gloves are recommended.

**Other** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**Thermal hazards** Not applicable.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	Aerosol.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid (aerosolized).
<b>Color</b>	Clear, colorless to slight yellow.
<b>Odor</b>	None.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.

<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	No data available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization will not occur.
<b>Conditions to avoid</b>	Pressurized container: Must not be exposed for temperatures above 50°C.
<b>Incompatible materials</b>	Strong oxidizing agents. Acids.
<b>Hazardous decomposition products</b>	Carbon oxides. Nitrogen oxides.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	May be harmful if swallowed.
<b>Inhalation</b>	In high concentrations, mists/vapors may irritate throat and respiratory system and cause coughing.
<b>Skin contact</b>	Toxic in contact with skin.
<b>Eye contact</b>	May cause eye irritation on direct contact.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	May cause skin irritation on prolonged or repeated contact. May cause eye irritation on direct contact. May cause damage to organs (blood, skin, central nervous system, cardiovascular system) through prolonged or repeated exposure.
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### Information on toxicological effects

<b>Acute toxicity</b>	Toxic in contact with skin. May be harmful if swallowed.
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Components	Species	Test Results
Butane (CAS 106-97-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 13023 ppm, 4 Hours 658 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	> 3990 mg/kg
Isobutane (CAS 75-28-5)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 2 Hours
Nitroglycerin (CAS 55-63-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 9 mg/kg
<i>Oral</i>		
LD50	Mouse	1055 mg/kg
	Rat	685 mg/kg

<b>Skin corrosion/irritation</b>	May cause skin irritation on prolonged or repeated contact.
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**Serious eye damage/eye irritation** May cause eye irritation on direct contact.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not assigned.

**Skin sensitization** Not assigned.

**Germ cell mutagenicity** Not assigned.

**Carcinogenicity** Not assigned.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** Not assigned.

**Specific target organ toxicity - single exposure** Not assigned.

**Specific target organ toxicity - repeated exposure** May cause damage to organs (blood, skin, central nervous system, cardiovascular system) through prolonged or repeated exposure.

**Aspiration hazard** Not applicable.

**12. Ecological information**

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results	
Nitroglycerin (CAS 55-63-0)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	38 - 55 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.87 - 3.25 mg/l, 96 hours

**Persistence and degradability** No data available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

Butane (CAS 106-97-8)	2.89
Isobutane (CAS 75-28-5)	2.8, at 20 °C
Nitroglycerin (CAS 55-63-0)	1.62

**Bioconcentration factor (BCF)**

Isobutane (CAS 75-28-5)	30.8, L/kg wet weight
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**Mobility in soil** Not available.

**Other adverse effects** Not available.

**13. Disposal considerations**

**Disposal instructions** Do not discharge into drains, water courses or onto the ground.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste P List: Reference**

Nitroglycerin (CAS 55-63-0)	P081
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**Waste from residues / unused products** Recover and recycle, if practical.

**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	2.1

**Packing group** Not applicable.  
**Environmental hazards**  
**Marine pollutant** Yes  
**Special precautions for user** Not available.  
**Special provisions** N82  
**Packaging exceptions** 306  
**Packaging non bulk** None  
**Packaging bulk** None

**IATA**

**UN number** UN1950  
**UN proper shipping name** Aerosols, flammable  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Packing group** Not applicable.  
**Environmental hazards** No.  
**ERG Code** 10L  
**Special precautions for user** Not available.

**IMDG**

**UN number** UN1950  
**UN proper shipping name** AEROSOLS, flammable  
**Transport hazard class(es)**  
**Class** 2  
**Subsidiary risk** -  
**Packing group** Not applicable.  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** Not available.  
**Special precautions for user** Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This substance/mixture is not intended to be transported in bulk.

**15. Regulatory information**

**US federal regulations** This product is hazardous according to OSHA 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Butane (CAS 106-97-8)	LISTED
Isobutane (CAS 75-28-5)	LISTED
Nitroglycerin (CAS 55-63-0)	LISTED

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - Yes  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Nitroglycerin	55-63-0	0.5 - 2

## Other federal regulations

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)

Isobutane (CAS 75-28-5)

### Safe Drinking Water Act (SDWA)

Not regulated.

## US state regulations

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### US. Massachusetts RTK - Substance List

Butane (CAS 106-97-8)

Isobutane (CAS 75-28-5)

Nitroglycerin (CAS 55-63-0)

### US. New Jersey Worker and Community Right-to-Know Act

Butane (CAS 106-97-8)

Isobutane (CAS 75-28-5)

Nitroglycerin (CAS 55-63-0)

### US. Pennsylvania Worker and Community Right-to-Know Law

Butane (CAS 106-97-8)

Isobutane (CAS 75-28-5)

Nitroglycerin (CAS 55-63-0)

### US. Rhode Island RTK

Butane (CAS 106-97-8)

Isobutane (CAS 75-28-5)

Nitroglycerin (CAS 55-63-0)

### US. California Proposition 65

#### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	14-August-2014
Revision date	-
Version #	01
Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**NFPA ratings****Disclaimer**

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