

# Material Safety Data Sheet

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## Manufacturer's Information

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**Product Name (Trade Name):** Salonpas® pain relieving JET SPRAY

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## Material Identification

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Single product or mixture: Mixture  
Main components: l-Menthol 3.0 g  
(in 100 g of Stock solution) Methyl salicylate 10.0 g  
Additives: ethanol  
Propellant: Liquefied petroleum gas (LPG: Propane, iso-Butane, normal-Butane)  
Description of product: Anti-inflammatory and analgesic drug for external use (aerosol form)

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## Classification of Danger and Harm

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Class: Combustible gas, inflammable liquid

Danger:

- High pressure gas is contained. Heating or shock may cause explosion.
- Inflammable gas is contained. Accumulation of gas may cause explosion.
- Product is inflammable liquid ready to ignite. Accumulation of vapor may cause a fire.

Health hazard:

- Inhalation may cause such symptoms as dizziness, nausea, etc.
  - When used around allergic (asthmatic) person, asthmatic reactions may be induced.
  - Hypersensitivity (for example, eruption, rubor, pruritus, rash, etc.) may appear.
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## First Aid

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Eye contact: Flush eyes immediately with water or tepid water.  
If symptoms are serious, obtain medical treatment of ophthalmologist.

Inhalation: In case of inhalation of vapor or gas in a large quantity, move affected person to the place in fresh air, keep him quiet and obtain medical care.

Ingestion: In case of accidental ingestion, rest and obtain medical care immediately.

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### **Fire Fighting Procedures**

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Extinguishing measures:

- Wear suitable protections (such as heat-resistant clothing).
- Remove all the combustibles around fire quickly.
- Use proper extinguishing agents.
- As containers may explode at high temperatures, combat fire out of the place far enough.

Extinguishing agents:

Powder, carbon dioxide.

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### **Spill and Leak Procedures**

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- Wear suitable protections (such as gloves, filter respirator) for spill control works.
- Shut off fire in the surroundings and remove immediately all the ignition sources and hot substances.
- Provide appropriate fire extinguishers for possible ignition.
- In case of spillage, wipe out spilled liquid immediately.

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### **Cautions for Handling and Storage**

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Handling:

- Use in a well-ventilated place.
- Keep away from open flames, sparks and fire.
- Do not use in large quantities in indoor places where fire is used.
- Never put the product into fire.

Storage:

- For preventing explosion due to rust of cans, do not store near water system nor in humid place.
- As there is risk of explosion at high temperatures, avoid exposure to direct rays of the sun and do not keep in a place where temperature may rise above 40°C such as vicinity of stoves and fan-heaters.
- Dispose of after exhausted.
- Upon disposal, discharge gas completely in fireless outside until jet sound disappears.

## Prevention of Exposure

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Control limits: Not established.

Facilities requirements:

- Use explosion-proof equipments.
- Establish local exhaust for preventing accumulation of vapors.
- Facilities should deny access of hot substances and ignition sources near to handling place.
- Strictly prohibit use of fire during handling.
- Washstand for hands and face should be established.

Protections:

- Eye protection: Wear protective goggles.
- Skin protection: Wear protective gloves for avoiding mass contact.
- Breathing protection: Wear suitable filter respirator.

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## Physical and Chemical Properties

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Appearance, etc.:	Colorless transparent liquid
Odor:	Pungent odor
Boiling point:	Stock solution: No available data. Propane: -42.0°C (Reference value) iso-Butane: -11.7°C (Reference value) normal-Butane: -0.5°C (Reference value)
Vapor pressure:	No available data.
Density (specific gravity):	Stock solution: 0.820 (Reference value) Propane: 0.501 (Reference value) iso-Butane: 0.557 (Reference value) normal-Butane: 0.579 (Reference value)
pH:	No available data.
Others:	None in particular.

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## Information on Danger

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Flash point:	Stock solution: 14.7°C Propane: -90°C (Reference value) iso-Butane: -81°C (Reference value) normal-Butane: -72°C (Reference value)
Auto-ignition temperature:	Stock solution: No available data. Propane: 493°C (Reference value)

iso-Butane: 405°C (Reference value)  
normal-Butane: 550°C (Reference value)  
Explosive limits: Propane: 2.2 – 9.5% (Reference value)  
iso-Butane: 1.8 – 8.5% (Reference value)  
normal-Butane: 1.8 – 8.5% (Reference value)  
Combustibility and reactivity: Inflammable at ambient temperature.

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### Health Hazard Information

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Skin irritation: Almost none or slightly irritant.  
Eye irritation: Irritant to eyes.  
Sensitization: No available data.  
Acute toxicity: No available data.  
Subacute toxicity: No available data.  
Chronic toxicity: No available data.  
Carcinogenicity: No available data.  
Mutagenicity: No available data.  
Remark: Information exists for each of 4 components, but no data available for mixture.

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### Environmental Effect Information

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No available data.  
Take care, however, of handling since the product may affect environment.

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### Precautions for Disposal

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Disposal should be done after gas has been completely discharged until jet sound disappeared.  
Stock solution should be subjected to incineration disposal as industrial waste.

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### Precautions for Transportation

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Common precautions:

- Respect the Cautions for Handling and Storage.
- Make sure of no leakage from containers. Load avoiding fall, drop and damaging of containers.  
Take measures for prevention of break of the load.
- During transportation, keep containers at temperature below 40°C.

Land transport: If falls under Fire Service Law and/or Industrial Safety and Health Law, conform to the provisions for transportation in applicable laws respectively.

Marine transport: Conform to the regulations of Law for Safety of Vessels.

Air transport: Conform to IATA regulations. UN#: 1950

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#### **Applicable Laws (In Japan)**

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Industrial Safety and Health Law:	Hazardous Substance; Inflammables, Combustible gas
High Pressure Gas Safety Law:	Object of Application Escape Item; Liquefied gas, Combustible gas
Fire Service Law:	Hazardous Substance; Category IV, Class I petroleum
Law for Safety of Vessels:	Hazardous Substance (High pressure gas)

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#### **Interpretation of the Description**

For the preparation of this data sheet, not all the data and literatures have been investigated exhaustively, and, therefore, it may include any lack and/or omission of information. In addition, contents may be modified according to the publication of new findings or correction of established theory. If you make any important decision based on the descriptions herein, it is recommended to fully examine the information sources or to confirm them through your own experimentation. Numerical data of contents, physical and chemical properties, etc. are not of guaranteed values. Cautions are intended for general handlings, and it is requested to take this point into consideration for special handlings.

