

**Material Safety Data Sheet**  
acc. to OSHA and ANSI

Printing date 11/11/2008

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Reviewed on 11/11/2008

**1 Identification of substance:**

**Product details:**

**Product name:** DL-Nornicotine  
**Stock number:** L10809  
**Manufacturer/Supplier:**  
Alfa Aesar, A Johnson Matthey Company  
Johnson Matthey Catalog Company, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Emergency Phone: (978) 521-6300  
CHEMTREC: (800) 424-9300  
Web Site: www.alfa.com

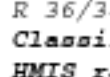
**Information Department:** Health, Safety and Environmental Department  
**Emergency information:**  
During normal hours the Health, Safety and Environmental Department.  
After normal hours call Chemtrec at (800) 424-9300.

**2 Composition/Data on components:**

**Chemical characterisation:**  
**Description: (CAS#)**  
DL-Nornicotine (CAS# 5746-86-1): 100%

**3 Hazards identification**

**Hazard description:**



Xn Harmful

**Information pertaining to particular dangers for man and environment**  
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R 36/38 Irritating to eyes and skin.

**Classification system**

**HMS ratings (scale 0-4)**  
(Hazardous Materials Identification System)

HEALTH	2	Health (acute effects) = 2
FIRE	1	Flammability = 1
REACTIVITY	1	Reactivity = 1

**4 First aid measures**

**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

**After skin contact**  
Seek immediate medical advice.

**After eye contact**  
Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.

**After eye contact**  
Rinse opened eye for several minutes under running water. Then consult a doctor.

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**Product name:** DL-Nornicotine

**After swallowing** Seek immediate medical advice.

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**5 Fire fighting measures**

**Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards caused by the material, its products of combustion or resulting gases:**  
In case of fire, the following can be released:

Carbon monoxide and carbon dioxide  
Nitrogen oxides (NOx)

**Protective equipment:**  
Wear self-contained respirator.  
Wear fully protective impervious suit.

**6 Accidental release measures**

**Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation

**Measures for environmental protection:**  
Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**Additional information:**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

**Handling**

**Information for safe handling:**  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**  
Keep ignition sources away.

**Storage**  
**Requirements to be met by storerooms and receptacles:**  
No special requirements.

**Information about storage in one common storage facility:**  
Store away from water/moisture.  
Store away from oxidizing agents.

**Further information about storage conditions:**  
This product is hygroscopic.  
Keep container tightly sealed.  
Protect from humidity and water.

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**Product name:** DL-Nornicotine

Refrigerate

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**8 Exposure controls and personal protection**

**Additional information about design of technical systems:**  
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with limit values that require monitoring at the workplace:**  
Not required.

**Additional information:** No data

**Personal protective equipment**

**General protective and hygienic measures**  
The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

**Breathing equipment:**  
Use suitable respirator when high concentrations are present.

**Protection of hands:**  
Impervious gloves  
Check protective gloves prior to each use for their proper condition.

**Material of gloves**  
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

**Eye protection:** Safety glasses  
**Body protection:** Protective work clothing.

**9 Physical and chemical properties:**

**General Information**

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Pale yellow
<b>Odor:</b>	Not determined

**Change in condition**

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	107-108°C (225-226°F) (2 mmHg)
<b>Sublimation temperature / start:</b>	Not determined

**Flash point:** 101°C (214°F)

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined

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**Product name:** DL-Nornicotine

<b>Vapor pressure:</b>	Not determined
<b>Density at 20°C (68°F):</b>	1.074 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with Water:</b>	Fully miscible

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**10 Stability and reactivity**

**Thermal decomposition / conditions to be avoided:**  
Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:**  
Water/moisture  
Oxidizing agents

**Dangerous reactions** No dangerous reactions known

**Dangerous products of decomposition:**  
Carbon monoxide and carbon dioxide  
Nitrogen oxides

**11 Toxicological information**

**Acute toxicity:**

**Primary irritant effect:**  
**on the skin:** Irritant to skin and mucous membranes.  
**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Subacute to chronic toxicity:**  
Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available.

**Additional toxicological information:**  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
Danger through skin absorption.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:**

**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations**

**Product:**

**Recommendation**  
Consult state, local or national regulations to ensure proper disposal.

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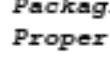
**Product name:** DL-Nornicotine

**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.  
**Recommended cleansing agent:** Water, if necessary with cleansing agents.

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**14 Transport information**

**DOT regulations:**



**Hazard class:** 6.1  
**Identification number:** UN2810  
**Packing group:** III  
**Proper shipping name (technical name):** TOXIC LIQUID, ORGANIC, N.O.S. (DL-Nornicotine)  
**Label:** 6.1

**Land transport ADR/RID (cross-border)**



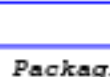
**ADR/RID class:** 6.1 (T1) Toxic substances  
**Danger code (Kemler):** 60  
**UN-Number:** 2810  
**Packing group:** III  
**Description of goods:** 2810 TOXIC LIQUID, ORGANIC, N.O.S. (DL-Nornicotine)

**Maritime transport IMDG:**



**IMDG Class:** 6.1  
**UN Number:** 2810  
**Label:** 6.1  
**Packing group:** III  
**Proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (DL-Nornicotine)

**Air transport ICAO-TI and IATA-DGR:**



**ICAO/IATA Class:** 6.1  
**UN/ID Number:** 2810  
**Label:** 6.1

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**Product name:** DL-Nornicotine

**Packaging group:** III  
**Proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (DL-Nornicotine)

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**15 Regulations**

**Product related hazard informations:**

**Hazard symbols:**  
Xn Harmful

**Risk phrases:**  
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
36/38 Irritating to eyes and skin.

**Safety phrases:**  
9 Keep container in a well-ventilated place.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
36/37 Wear suitable protective clothing and gloves.

**National regulations**  
This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.  
Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

**Information about limitation of use:**  
For use only by technically qualified individuals.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.  
**Contact:** Paul V. Connolly

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