



MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**
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Ashokpuram School Road
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Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

1 IDENTIFICATION OF SUBSTANCE:

Product details:

Product name: 4-Fluorobenzaldehyde

Stock number: F030

Manufacturer/Supplier:

LEONID CHEMICALS

62/A-2 2nd Stage, Industrial Suburb

Yeshwanthpur, Bangalore -22, INDIA

Ph- +91-80-23378354

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 characterization:

Description: (CAS#)

4-Fluorobenzaldehyde (CAS# 459-57-4): 100%

Identification number(s):

EINECS Number: 207-293-6

3 HAZARDS IDENTIFICATION

Hazard description: Xi Irritant

Information pertaining to particular dangers for man and environment

R 10 Flammable.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 1

Flammability = 3

Reactivity = 1



• 4 FIRST AID MEASURES

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin 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.

After swallowing

Seek immediate medical advice.

5 FIRE FIGHTING MEASURES

Suitable extinguishing agents

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

For safety reasons unsuitable extinguishing agents

Water

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

Hydrogen fluoride (HF)

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

Keep away from ignition sources

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).

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Keep away from ignition sources.

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:

Handle under dry protective gas.

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.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from air.

Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

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

Eye protection: Safety glasses

Body protection: Protective work clothing.

• **9 PHYSICAL AND CHEMICAL PROPERTIES:**

General Information

Form: Liquid

Color: Colorless

Odor: Not determined

	<u>Value/Range</u>
Unit Method	
Change in condition	
Melting point/Melting range	: Not determined
Boiling point/Boiling range	: 180-181 ° C
Sublimation temperature / start	: Not determined
Flash point	: 56 ° C
Ignition temperature	: Not determined
Decomposition temperature	: Not determined
Explosion limits	:
Lower	: Not determined
Upper	: Not determined
Vapor pressure	: Not determined
Density	: at 20 ° C 1.157 g/cm ³
Solubility in / Miscibility with Water	: Not determined

• **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:

Air

Oxidizing agents

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition:

Carbon monoxide and carbon dioxide

Hydrogen fluoride

• **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.

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 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.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

14 TRANSPORT INFORMATION

DOT regulations	•:
Hazard class	•: 3
Identification number	•: UN1989
Packing group	•: III
Proper shipping name (technical name)	•: ALDEHYDES, N.O.S. (4-Fluorobenzaldehyde)
	•
Label	•: 3
Land transport ADR/RID (cross-border)	•
ADR/RID class	•: 3 Flammable liquids
Danger code (Kemler)	•: 30
UN-Number	•: 1989
Packaging group	•: III
Description of goods	•: 1989 ALDEHYDES, N.O.S. (4-

	Fluorobenzaldehyde)
Maritime transport IMDG	• :
IMDG Class	• : 3
UN Number	• : 1989
Label	• :3
Packaging group	• : III
Proper shipping name	• : ALDEHYDES, N.O.S. (4-Fluorobenzaldehyde)
Air transport ICAO-TI and IATA-DGR	• :
ICAO/IATA Class	• : 3
UN/ID Number	• : 1989
Label	• : 3
Packaging group	• : III
Proper shipping name	• : ALDEHYDES, N.O.S. (4-Fluorobenzaldehyde)

15 REGULATIONS

Product related hazard informations:

Hazard symbols: Xi Irritant

Risk phrases:

10 Flammable.
36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

7 Keep container tightly closed.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
33 Take precautionary measures against static discharges.
37 Wear suitable gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
60 This material and its container must be disposed of as hazardous waste.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on 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.



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