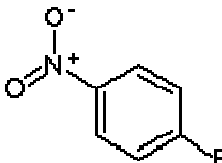


NAVIN FLUORINE INTERNATIONAL LTD		web: http://www.nfil.in mailto: speciality@nfil.in
		2nd Floor, Suntek Centre, 37/40, Subhash Road, Vile Parle (East), Mumbai-400057. India.

PRODUCT SPECIFICATION	
Title: 4-FLUORO NITROBENZENE (C ₆ H ₄ FNO ₂)	Document No. : NFIL/QC /SPEC/FP/009/00 Effective Date : 05/11/2008

Material Code	: SPE005009
Major Packing	: UN-Certified /MS-HDPE drum 200 / 250Kg
Storage Specifications	: Stored in dry condition at room temperature in well closed container.
Structural Formula	: 
Molecular Formula	: C ₆ H ₄ FNO ₂
Molecular Weight	: 141.10
Synonyms	: p-Nitrofluorobenzene ;4-Fluoro-1-nitrobenzene

Sr. No.	TEST	SPECIFICATION		
		Grade 1	Grade 2	Grade 3 Not Generated
Product Specification:				
1	Appearance / Description	Clear Colorless to yellow liquid	Clear Colourless to yellow liquid	--
2	Moisture (By KF By w/w)	00.50% Max.	00.50% Max.	--
3	Density (At 20 °C)	--	1.120 to 1.310 g/ml.	--
4	Purity (By GC)	99.00% Min.	98.00% Min.	--
5	Total impurity	01.00% Max.	02.00% Max.	--

- Customer should discuss with business unit at speciality@nfil.in for the other requirements than specified.
- Analytical Method No. **NFIL/QC/WI/FP/009**

1-Fluoro-4-nitrobenzene, 99%

1. CHEMICAL IDENTITY

Chemical name	1-Fluoro-4-nitrobenzene, 99%		
Synonym	p-Fluoronitrobenzene; 4-Fluoronitrobenzene; p-Nitrofluorbenzene; 4-Nitrofluorobenzene.		
Chemical Formula	C6H4FNO2		

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients Name	1-Fluoro-4-nitrobenzene, 99%	CAS No.: 350-46-9
		EINECS: 206-502-8

3. PHYSICAL / CHEMICAL DATA

Boiling Point	214 - 216 °C	Vapour Pressure	5.5 mm Hg @ 70 °C
Melting Point	27 °C	Solubility in water	insoluble
Vapour Density	>1.0 (air=1.0)	Appearance	yellow
Specific Gravity	1.34	Odour	None reported
pH	Not available	Other	-
Physical State	Clear liquid		

4. FIRE / EXPLOSION HAZARD DATA

Flammability	No	Flash Point	83 °C
Auto ignition temperature	Not available	LEL	Not available
Explosion sensitivity to impact	NA	UEL	Not available
Explosion sensitivity to static electricity	NA		
Hazardous Combustion products	NA		
Hazardous Polymerization	Has not been reported		
Pyrophoric material	NA	Corrosive	NA
Organic Peroxide	NA	Oxidizer	NA
Explosive material	NA	Other	-
NFPA Rating (estimated)	Not published		


5. STABILITY & REACTIVITY DATA

Chemical Stability	Stable under normal temperatures and pressures.
Incompatibility	Strong oxidizing agents, strong bases.
Conditions to avoid	Incompatible materials.
Hazardous reaction / decomposition products.	Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, fluoride fumes.

6. HEALTH HAZARD DATA

Effects of exposure / symptoms	<p>Eye: May cause eye irritation.</p> <p>Skin: May cause skin irritation. May be absorbed through the skin. Absorption into the body may cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Effects may be delayed.</p> <p>Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Causes effects similar to those of acute skin absorption. Effects may be delayed 2 to 4 hours.</p>
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	<p>Inhalation: May cause respiratory tract irritation. Chronic: Laboratory experiments have resulted in mutagenic effects.</p>	
7. TOXICOLOGICAL INFORMATION		
LD 50 / LC 50	Inhalation, rat: LC50 = 2600 mg/m ³ /4H;	
Exposure Limit	None listed	
8. ECOLOGICAL INFORMATION		
No information available.		
9. PREVENTIVE MEASURES / EXPOSURE CONTROL / PERSONAL PROTECTION		
Engineering Control		
Personal Protective Equipment	<p>Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure. Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.</p>	
10. HANDLING & STORAGE		
Normal handling	Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.	
Storage Recommendation	Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.	
11. EMERGENCY / FIRST AID MEASURES		
Fire	Fire Extinguishing Medium	Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Exposure / First Aid Measure	Skin	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
	Eyes	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
	Ingestion	If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
	Inhalation	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Special Procedure	For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.	

12. ACCIDENTAL RELEASE MEASURE	
Spills/Leaks	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wash area with soap and water. Remove all sources of ignition. Provide ventilation.
13. DISPOSAL CONSIDERATIONS	
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.	
14. TRANSPORT INFORMATION	
Proper shipping Name	TOXIC SOLIDS, ORGANIC, N.O.S.
Hazard Class	6.1
UN Number	2811
Packing Group	III
Hazard Label	
15. REGULATORY INFORMATION	
European/International Regulations European Labeling in Accordance with EC Directives Hazard Symbols: Not available. Risk Phrases: - Safety Phrases: S 24/25 Avoid contact with skin and eyes. S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.	
16. NAME OF FIRM - NAVIN FLUORINE INTERNATIONAL LIMITED	
Mailing address	Post Office - Bhestan, Surat, PIN 395 023, Gujarat, India
Telephone	+91-261-2890325 to 2890329
Fax	+91-261-2890288
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