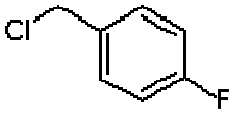
NAVIN FLUORINE INTERNATIONAL LTD		web: http://www.nfil.in mailto: speciality@nfil.in
		2nd Floor, Suntek Centre, 37/40, Subhash Road, Vile Parle (East), Mumbai-400057. India.

PRODUCT SPECIFICATION	
Title: 4 - FLUORO BENZYL CHLORIDE (C_7H_6FCl)	Document No. : NFIL/QC /SPEC/FP/018/00
	Effective Date : 05/11/2008

Material Code	:	SPE005053
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	:	C7H6ClF
Molecular Weight	:	144.57
Synonyms	:	alpha-Chloro-4-fluorotoluene;p-Fluorobenzyl chloride; 1-(chloromethyl)-4-fluoro-benzene

Sr. No.	TEST	SPECIFICATION
Product Specification:		
1	Appearance / Description	Clear, colourless liquid
2	Purity (By GC)	99.00% Min.
3	Moisture (By KF)	00.20% Max.
4	Total Impurities	01.00% Max.

- Customer should discuss with business unit at speciality@nfil.in for the other requirements than specified.
- Analytical Method No. **NFIL/QC/WI/FP/018**

NAVIN FLUORINE INTERNATIONAL LIMITED

MATERIAL SAFETY DATA SHEET (MSDS)

4-Fluorobenzoyl chloride

1. CHEMICAL IDENTITY	
Chemical name	4-Fluorobenzoyl Chloride
Synonym	
Chemical Formula	C_7H_4ClFO

2. COMPOSITION / INFORMATION ON INGREDIENTS		
Ingredients Name	4-Fluorobenzoyl Chloride, 98%	CAS No.: 403-43-0 EC No : 206-961-4

3. PHYSICAL / CHEMICAL DATA			
Boiling Point @ 20 mmHg	82 ^{0}C	Vapour Pressure	1 mbar @ 20 ^{0}C
Melting Point	9 ^{0}C	Solubility in water	decomposes
Vapour Density	Not available.	Appearance	clear colorless to light yellow
Specific Gravity	1.3420g/cm3	Odour	None reported.
pH	Not available.	Other	
Physical State	Liquid		

4. FIRE / EXPLOSION HAZARD DATA			
Flammability	Yes	Flash Point	82 ^{0}C (179.60 ^{0}F)
Auto ignition temperature	Not available.	LEL	Not available.
Explosion sensitivity to impact		UEL	Not available.
Explosion sensitivity to static electricity			
Hazardous Combustion products			
Hazardous Polymerization	Has not been reported.		
Pyrophoric material		Corrosive	Yes
Organic Peroxide		Oxidizer	
Explosive material		Other	
NFPA Rating (estimated)	Health: 3; Flammability: 2; Instability: 0		

5. STABILITY & REACTIVITY DATA	
Chemical Stability	Stable under normal temperatures and pressures.
Incompatibility	Oxidizing agents, strong bases, alcohols.
Conditions to avoid	Incompatible materials, ignition sources, excess heat.
Hazardous reaction / decomposition products.	Hydrogen chloride, phosgene, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen fluoride gas.

6. HEALTH HAZARD DATA	
Effects of exposure / symptoms	**Eye:** May cause eye irritation and possible burns. The toxicological properties of this material have not been fully investigated. **Skin:** May cause skin irritation and possible burns. The toxicological properties of this material have not been fully investigated.

	Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated. **Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. **Chronic:** No information found.
7. TOXICOLOGICAL INFORMATION	
LD 50 / LC 50	Not available.
Exposure Limit	No OSHA Vacated PELs are listed for this chemical.
8. ECOLOGICAL INFORMATION	
No information available.	
9. PREVENTIVE MEASURES / EXPOSURE CONTROL / PERSONAL PROTECTION	
Engineering Control	Use adequate ventilation to keep airborne concentrations low.
Personal Protective Equipment	**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.
10. HANDLING & STOROGE	
Normal handling	Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. 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	Do NOT use water directly on fire. Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide. Use agent most appropriate to extinguish fire.

Exposure / First Aid Measure	Skin	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
	Eyes	Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
	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		

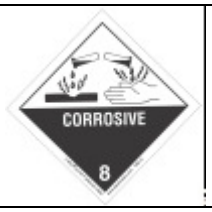
12. ACCIDENTAL RELEASE MEASURE

Spills/Leaks	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. 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. TRASPORT INFORMATION

Proper shipping Name	CORROSIVE LIQUIDS, WATER-REACTIVE, N.O.S.
Hazard Class	8
UN Number	3094
Packing Group	II
Hazard Label	

15. REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases: R 34 Causes burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water.

16. NAME OF FIRM - NAVIN FLUORINE INTERNATIONAL LIMITED	
Mailing address	Post Office - Bhestan, Surat, PIN 395 023, Gujarat, India
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