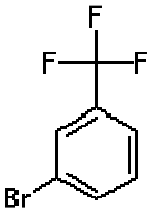
NAVIN FLUORINE INTERNATIONAL LTD		web: http://www.nfil.in mailto: speciality@nfil.in 2nd Floor, Suntek Centre, 37/40, Subhash Road, Vile Parle (East), Mumbai-400057. India.

PRODUCT SPECIFICATION	
Title: 3-BROMO BENZOTRIFLUORIDE ($C_7H_4F_3Br$)	Document No. : NFIL/QC /SPEC/FP/019/00
	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	Moisture (By KF)	00.50% Max.
3	Purity (By GC)	99.50% Min.
4	Total Other 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/019**.

NAVIN FLUORINE INTERNATIONAL LIMITED

MATERIAL SAFETY DATA SHEET (MSDS)

3-Bromobenzotrifluoride

1. CHEMICAL IDENTITY

Chemical Name	3-Bromobenzotrifluoride
Synonym	m-Bromobenzotrifluoride; Benzene, 1-bromo-3-(trifluoromethyl)
Formula	C7H4BrF3

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients name - -Bromobenzotrifluoride	C.A.S. No 401-78-5 EC No :206-932-6

3. PHYSICAL / CHEMICAL DATA

Boiling Point	151-152°C	Vapour Pressure at 21.1 deg C	Not available
Melting Point	Not available	Solubility in water	Not available
Vapour Density (Air = 1)	Not available	Appearance	Clear slightly yellow
Specific Gravity (Water=1)	1.613 g/cm3	Odour	None reported
pH (5% Soln.)	Not available	Other	----
Physical state	liquid		

4. FIRE / EXPLOSION HAZARD DATA

Flammability	Flammable	LEL%	Not available	Flash Point :	43°C
Auto Ignition Temp.	Not available	UEL%	Not available		
TDG Flammability		NA			
Explosion Sensitivity to Impact		NA			
Explosion Sensitivity to static electricity		NA			
Hazardous Combustion Product		NA			
Hazardous Polymerization		Has not been reported			
Combustible liquid		NA	Oxidizer		NA
Flammable material		Yes	Organic Peroxide		NA
Pyrophoric material		NA	Corrosive		NA
Explosive material		NA	Other		--

5. STABILITY & REACTIVITY DATA

Chemical stability	Stable at room temperature in closed containers under normal storage and handling conditions.
Incompatibility	Strong oxidizing agents
Conditions to avoid	Incompatible materials, ignition sources, excess heat, strong oxidants.
Hazardous reaction/decomposition products	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen fluoride gas, hydrogen bromide.

6. HEALTH HAZARD DATA

Effects of exposure/ Symptoms	Skin, Eyes, Inhalation ,Ingestion
	Eye: Causes eye irritation. May cause chemical conjunctivitis and corneal damage. **Skin:** Causes skin irritation. May cause cyanosis of the extremities. **Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts may cause CNS depression. **Inhalation:** May cause respiratory tract irritation. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. Can produce delayed pulmonary edema. May cause burning sensation in the chest. **Chronic:** Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed.

7. TOXICOLOGICAL INFORMATION			
	LD 50 / LC50		Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 500 mg/24H Mild
	Permissible Exposure Limit-OSHA(PEL)		NA
8. ECOLOGICAL INFORMATION			
	No information available		
9. PREVENTIVE MEASURES/EXPOSURE CONTROL/PERSONAL PROTECTION			
	Engineering Controls		Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
	Personal Protective Equipments		Protective gloves, protective goggles, lab coat, aprons, respirators.
10. HANDLING & STORAGE			
	Normal Handling		Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. 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. Flammables-area.
11. EMERGENCY / FIRST AID MEASURE			
	Fire	Fire extinguishing medium	For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.
	Exposure/first aid measures	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.
		Skin / Eyes	Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Skin: 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.
	Special procedure	Use NIOSH approved self contained positive pressure breathing apparatus with full face piece and protective clothing.	
12. ACCIDENTAL RELEASE MEASURES			
	General Information	Use proper personal protective equipment as indicated in section 9	
	Spills / Release	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. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.	

13. DISPOSAL CONSIDERAIONS

Seal all waste in vapour tight plastic bags. Dispose of in a manner consistent with federal, state, and local regulations.

14. TRANSPORT INFORMATION

	US (DOT)
Shipping Name	FLAMMABLE LIQUIDS, N.O.S.
Hazard Class	Class 3
UN Number	1993
Packing Group	III
Hazard Class label	

15. REGULATORY INFORMATION

Federal, state & International Regulations.

16. NAME OF FIRM - NAVIN FLUORINE INTERNATIONAL LIMITED

Mailing address	Post Office - Bhestan, Surat, PIN 395 023, Gujarat, India
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