

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: Parachlorobenzotrifluoride
Chemical name	: Benzene, 1-chloro-4-(trifluoromethyl)-
CAS No	: 98-56-6
Product code	: SMC Spec 900
Formula	: C7H4ClF3

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: VOC-exempt organic solvent; industrial uses; uses advised against not determined
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1.3. Details of the supplier of the safety data sheet

Special Materials Company
70 West 40th Street, 2nd Floor
New York, NY 10018

1.4. Emergency telephone number

Emergency number	: CHEMTREC - (800) 424-9300 Outside the US: (703) 527-3887
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

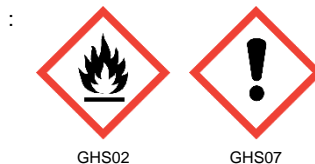
Flam. Liq. 3 H226
Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H336

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS02

GHS07

Signal word (GHS-US)

: Warning

Hazard statements (GHS-US)

: H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US)

: P210 - Keep away from heat, open flames, sparks, hot surfaces. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing mist, spray, vapors
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
M900_PARACHLOROBENZOTRIFLUORIDE	(CAS No) 98-56-6	>= 99	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
- First-aid measures after skin contact : Take off contaminated clothes, wash skin with plenty of water or have a shower (during minimum 15 minutes) and if necessary take medical advice. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water (for at least 15 minutes). If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause drowsiness, dizziness, nausea, and headache.
- Symptoms/injuries after skin contact : May cause irritation to skin. May cause dermatitis by skin contact.
- Symptoms/injuries after eye contact : Vapors may cause painful eye irritation.
- Symptoms/injuries after ingestion : May be harmful if swallowed and enters airways. May cause gastric irritation. May cause stomach cramps and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂), water spray, sand, earth.
- Unsuitable extinguishing media : None to our knowledge. If there is a fire close by, use suitable extinguishing agents.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Will not normally support combustion. PCBTF exhibits a flash point of 109° F (42.8° C), however, it does not sustain combustion. It will produce a flash before self-extinguishing. PCBTF has a Fire Point of 207 °F (97.2 °C) TOC.
- Explosion hazard : On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray. Intense heat may cause container to burst.
- Reactivity : When heated to decomposition, emits toxic fumes.

5.3. Advice for firefighters

- Firefighting instructions : Eliminate all ignition sources if safe to do so. Evacuate area. Fight fire with normal precautions from a reasonable distance.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Special protective equipment for fire fighters : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate the personnel away from the fumes.

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6.1.1. For non-emergency personnel

- Protective equipment : Impervious protective suit with gloves, boots, and full head and face protection must be worn. Respiratory protection equipment may be necessary.
- Emergency procedures : Avoid contact with skin, eyes and clothing. Keep upwind.

6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Remove ignition sources. Stop release. Prevent entry to sewers and public waters.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Dike for recovery or absorb with appropriate material. Prevent entry to sewers and public waters. Stop leak if safe to do so.
- Methods for cleaning up : Collect spillage. Use suitable disposal containers.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing mist, spray, vapors.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Incompatible materials : Strong oxidizers. Strong acids.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

M900_PARACHLOROBENZOTRIFLUORIDE (98-56-6)	
ACGIH	Not applicable
OSHA	Not applicable
Special Materials Company	Recommended CEL of 25 ppm (185 mg/m ³)

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves. North Silver Shield® or Viton® Gloves are recommended. Nitrile or PVC gloves can be used for short periods of time.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Colorless liquid.
- Color : Colorless.
- Odor : Naphthalenic odor.
- Odor threshold : 0.1 ppm (0.8 mg/m³)

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pH	: Not determined
Relative evaporation rate (butyl acetate=1)	: 0.9
Melting point	: No data available
Freezing point	: - 36.0 ^o F (- 32.8 ^o C)
Boiling point	: 281.5 ^o F (138.6 ^o C)
Flash point	: 109 ^o F (42.8 ^o C) TCC
Auto-ignition temperature	: > 932 ^o F (>500 ^o C)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 706.61 Pa
Relative vapor density at 20 °C	: 6.2
Relative density	: 1.33 - 1.35
Solubility	: Water: 29 mg/l
Log Pow	: No data available
Log Kow	: 3.70 (measured)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.79 cP @25 °C
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 0.9 - 10.5 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

When heated to decomposition, emits toxic fumes.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Extremely high temperatures.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Corrosive vapors. irritating fumes. Carbon monoxide. Chlorine. Fluorine.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

M900_PARACHLOROBENZOTRIFLUORIDE (98-56-6)	
LD50 oral rat	13000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	33 mg/l

Skin corrosion/irritation : Causes skin irritation.
pH: Not determined

Serious eye damage/irritation : Causes serious eye irritation.
pH: Not determined

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

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Reproductive toxicity	: PCBTF is not considered to be a reproductive hazard as demonstrated by the results of a modified 90-day subchronic oral toxicity and reproduction study.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Repeated dose, inhalation	: 90 day (13 week) inhalation toxicity and neurobehavioral study: there were no PCBTF-related macroscopic observations. Microscopically, PCBTF-related centrilobular hypertrophy was present only in the livers of males and females at the high dose (250 ppm) after 13-weeks of exposure. No centrilobular hypertrophy was observed at any level among recovery animals. There were no PCBTF effects on the nervous system, as measured by FOB, M.A, and neuropathology.
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause drowsiness or dizziness. Nausea. Headache.
Symptoms/injuries after skin contact	: May cause irritation to skin. May cause dermatitis by skin contact.
Symptoms/injuries after eye contact	: Vapors may cause painful eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed and enters airways. May cause gastric irritation. May cause stomach cramps and vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - air : Not dangerous for the ozone layer.

M900_PARACHLOROBENZOTRIFLUORIDE (98-56-6)

LC50 fish 1	11.5 - 15.8 mg/l <i>Lepomis macrochirus</i>
EC50 <i>Daphnia</i> 1	12.4 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

M900_PARACHLOROBENZOTRIFLUORIDE (98-56-6)

Log Kow	3.7
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	: Not considered harmful to the ozone layer.
Effect on the global warming	: No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with DOT : Chlorobenzotrifluorides , UN 2234, 3, PG III

Additional information

Other information : Not applicable

ADR

No additional information available

Transport by sea

Proper Shipping Name (IMDG) : Chlorobenzotrifluorides , UN 2234, 3, PG III; EMS-No.: F-E, S-D

Air transport

Proper Shipping Name (IATA) : Chlorobenzotrifluorides , UN 2234, 3, PG III

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SECTION 15: Regulatory information

15.1. US Federal regulations

paraChlorobenzotrifluoride (98-56-6)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	None known
SARA Section 302 Threshold Planning Quantity (TPQ)	None known
SARA Section 311/312 Hazard Classes	Immediate health hazard.
SARA Section 313 - Emission Reporting	None known

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory). A TSCA 4 test rule which includes PCBTF was finalized on October 21, 2011 (76FR65385 10/21/2011). TSCA 12(b) export notification is required for paints and other fluids if they have more than 1% (by weight or volume) of PCBTF. The 12(b) notice is effective November 21, 2011. Refer to 40 CFR 707 for the export notification regulation. Articles containing PCBTF are not included.

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

paraChlorobenzotrifluoride (98-56-6)	
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory	

15.3. US State regulations

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No

SECTION 16: Other information

Revision date : 02/11/2015

Full text of H-phrases:

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

SDS US (GHS HazCom 2012)

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.