BENZOTRICHLORIDE

GHS SAFETY DATA SHEET

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

BENZOTRICHLORIDE

OTHER NAMES

C7-H5-Cl3, "toluene, alpha, alpha-trichloro-", "benzene, (trichloromethyl)-", "benzenyl chloride", "benzenyl trichloride", "benzoic trichloride", "benzylidyne chloride", "benzyl trichloride", "phenyl chloroform", phenyltrichloromethane, "toluene trichloride", trichloromethylbenzene, 1-(trichloromethyl)benzene, 1 -(trichloromethyl)benzene, trichlorophenylmethane, "omega, omega, omega-trichlorotoluene"

PROPER SHIPPING NAME

BENZOTRICHLORIDE

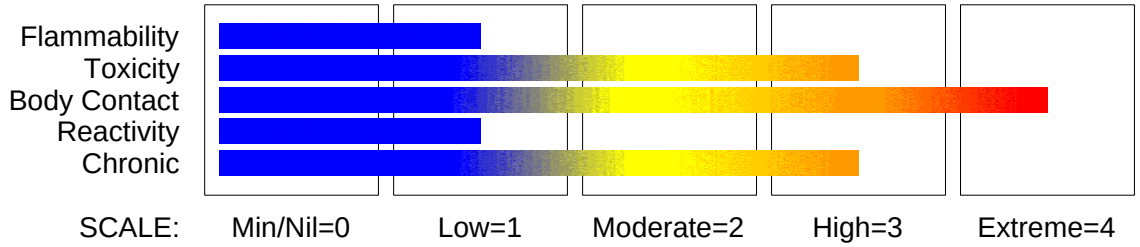
PRODUCT USE

Organic syntheses and in the manufacture of synthetic dyes.
Its most important derivatives are benzoyl chlorides and substituted biphenones used to stabilise plastics in the presence of UV light. Used also to make benzotrifluoride, hydroxybenzophenne, antiseptics and antimicrobial agents.

SUPPLIER

Company: S D FINE- CHEM LIMITED
Address:
315- 317, T.V. INDUSTRIAL ESTATE,
248, WORLI,
MUMBAI- 400030.INDIA.
technical@sdfine.com
Telephone: 91- 22- 24959898
Telephone: 91- 22- 24959899
Fax: 91- 22- 24937232

HAZARD RATINGS



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Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Inhalation) Category 1
Acute Toxicity (Oral) Category 4
Carcinogen Category 1B
Metal Corrosion Category 1
Respiratory Irritation Category 3
Skin Corrosion/Irritation Category 1B

EMERGENCY OVERVIEW

HAZARD

DANGER
Determined by using GHS criteria:
H335 H330 H302 H350 H290 H314
May cause respiratory irritation
Fatal if inhaled
Harmful if swallowed
May cause CANCER
May be corrosive to metals
Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENTS

Prevention

Wear respiratory protection.
Obtain special instructions before use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well ventilated area.
Wash hands thoroughly after handling.
Use personal protective equipment as required.
Do not handle until all safety precautions have been read and understood.
Do not eat, drink or smoke when using this product.

Response

If exposed or concerned: Get medical attention advice.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Keep container tightly closed.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Specific treatment: refer to Label or MSDS.
Absorb spillage to prevent material damage.

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Immediately call a POISON CENTER or doctor/physician.

Storage

Store locked up.
Store in a corrosive resistant container with a resistant inliner.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
benzotrichloride	98-07-7	>98
fumes in air and hydrolyses in water to produce hydrogen chloride	7647-01-0	

Section 4 - FIRST AID MEASURES

SWALLOWED

Rinse mouth out with plenty of water.
For advice, contact a Poisons Information Centre or a doctor.
· If swallowed do NOT induce vomiting.
· If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
· Observe the patient carefully.
· Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
· Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
· Seek medical advice.

EYE

If this product comes in contact with the eyes:
· Immediately hold eyelids apart and flush the eye continuously with running water.
· Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
· Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
· Transport to hospital or doctor without delay.
· Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:
· Immediately flush body and clothes with large amounts of water, using safety shower if available.
· Quickly remove all contaminated clothing, including footwear.
· Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
· Transport to hospital, or doctor.

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INHALED

· If fumes or combustion products are inhaled remove from contaminated area.
· Lay patient down. Keep warm and rested.
· Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
· Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
· Transport to hospital, or doctor.

NOTES TO PHYSICIAN

For acute or short term repeated exposures to strong acids:
· Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
· Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
· Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
· Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the dessicating action of the acid on proteins in specific tissues.

INGESTION:
· Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
· DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.
· Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
· Charcoal has no place in acid management.
· Some authors suggest the use of lavage within 1 hour of ingestion.
SKIN:
· Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
· Deep second-degree burns may benefit from topical silver sulfadiazine.
EYE:
· Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjuctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required.
· Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
· Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).
[Ellenhorn and Barceloux: Medical Toxicology].

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

· Foam.
· Dry chemical powder.
· BCF (where regulations permit).
· Carbon dioxide.
· Water spray or fog - Large fires only.

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FIRE FIGHTING
Alert Fire Brigade and tell them location and nature of hazard.
· Wear full body protective clothing with breathing apparatus.
· Prevent, by any means available, spillage from entering drains or water courses.
Use fire fighting procedures suitable for surrounding area.
Cool fire exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.
Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD
· Combustible.
· Slight fire hazard when exposed to heat or flame.
· Heating may cause expansion or decomposition leading to violent rupture of containers.
· On combustion, may emit toxic fumes of carbon monoxide (CO).
· May emit acrid smoke.
· Mists containing combustible materials may be explosive.
Decomposes on heating and produces toxic fumes of:.
hydrogen chloride.
Decomposition may produce toxic fumes of:.
chlorine.

FIRE INCOMPATIBILITY
Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

Personal Protective Equipment
Breathing apparatus.
Gas tight chemical resistant suit.
Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS
DO NOT touch the spill material.
Clean up all spills immediately.
Wear fully protective PVC clothing and breathing apparatus.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Use soda ash or slaked lime to neutralise.
Collect residues and place in labelled plastic containers with vented lids.

MAJOR SPILLS
DO NOT touch the spill material.
Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Shut off all possible sources of ignition and increase ventilation.
· Wear full body protective clothing with breathing apparatus.
· Prevent, by any means available, spillage from entering drains or water courses.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Use soda ash or slaked lime, mixed and sprayed with water, to neutralise.
DO NOT USE WATER OR NEUTRALISING AGENTS INDISCRIMINATELY ON LARGE SPILLS.
If contamination of drains or waterways occurs, advise emergency services.

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Collect residues and place in labelled plastic containers with vented lids.
Water spray or fog may be used to disperse vapour.
Collect recoverable product into labelled containers for recycling.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:
benzotrichloride 25 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:
benzotrichloride 6 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:
benzotrichloride 0.1 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:
benzotrichloride 0.1 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

X X + X X +

+: May be stored together
O: May be stored together with specific preventions
X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Avoid generating and breathing mist and vapour.
Avoid breathing vapours and contact with skin and eyes.
Avoid physical damage to containers.
Use in a well-ventilated area.
Wear protective clothing and gloves when handling containers.
Handle and open container with care.

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WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.
When handling, DO NOT eat, drink or smoke.
Always wash hands with soap and water after handling. Work clothes should be laundered separately.
Use good occupational work practice. Observe manufacturer's storing and handling recommendations.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

Packaging as recommended by manufacturer.
· Check that containers are clearly labelled.
Packs of 2.5 litres or less require a child-resistant closure.
Glass container or Plastic carboy or Polylined drum.

STORAGE INCOMPATIBILITY

Avoid storage with metals, metal oxides, hydroxides, amines, carbonates, alkaline materials, acetic anhydride, cyanides, sulfides, sulfites, phosphides, acetylides, borides, carbides, silicides, vinyl acetate, formaldehyde and potassium permanganate.
Decomposes in the presence of moist air or water to benzoic acid and hydrochloric acids.

STORAGE REQUIREMENTS

Floors should be covered or coated with acid resistant material.
· Store in original containers.
· Keep containers securely sealed.
· Store in a cool, dry, well-ventilated area.
· Store away from incompatible materials and foodstuff containers.
· Protect containers against physical damage and check regularly for leaks.
· Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

• benzotrichloride:	CAS:98- 07- 7
• hydrogen chloride:	CAS:7647- 01- 0 CAS:7698- 05- 7

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m3)	Revised IDLH Value (ppm)
hydrogen chloride		50

ODOUR SAFETY FACTOR (OSF)

OSF=1.3 (benzotrichloride)
Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.
Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.
The Odour Safety Factor (OSF) is defined as:
OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

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Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV- TWA for example) is being reached, even when distracted by working activities
B	26- 550	As " A" for 50- 90% of persons being distracted
C	1- 26	As " A" for less than 50% of persons being distracted
D	0.18- 1	10- 50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As " D" for less than 10% of persons aware of being tested

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MATERIAL DATA

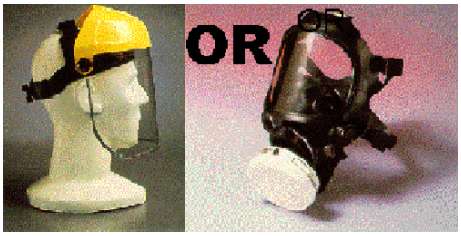
The substance is mutagenic in bacterial test systems and clearly carcinogenic after epicutaneous, intragastric, intraperitoneal and inhalative administration.

INGREDIENT DATA

HYDROGEN CHLORIDE:
Odour Threshold Value: 0.262 ppm (detection), 10.06 ppm (recognition)
NOTE: Detector tubes for hydrochloric acid, measuring in excess of 1 ppm, are available commercially.
Hydrogen chloride is a strong irritant to the eyes, mucous membranes and skin. Chronic exposure produces a corrosive action on the teeth. Reports of respiratory irritation following short-term exposure at 5 ppm have lead to the recommended TLV-C. There is no indication that skin contact with hydrogen chloride elicits systemic poisoning and a skin designation has not been applied.
Exposure of humans to hydrogen chloride at 50 to 100 ppm for 1 hour is reported to be barely tolerable; 35 ppm caused irritation of the throat on short exposure and 10 ppm was the maximal concentration for prolonged exposure. It has been stated that hydrogen chloride at concentrations of 5 ppm is immediately irritating.

PERSONAL PROTECTION



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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE
· Chemical goggles.
· Full face shield.
· Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET
· Barrier cream and Neoprene gloves or Elbow length PVC gloves.
Nitrile gloves.
PVC boots or PVC safety gumboots.

OTHER
Operators should be trained in procedures for safe use of this material.
Acid-resistant overalls or PVC apron or · PVC protective clothing.
· Eyewash unit.
Ensure there is ready access to an emergency shower.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
For further information consult site specific
data (if available), or your
Occupational Health and Safety Advisor.

ENGINEERING CONTROLS
Use in a well-ventilated area and Local exhaust ventilation may be required for safe working, i.e. to keep exposures below required standards, otherwise PPE is required.
If risk of inhalation or overexposure exists, wear SAA approved respirator or work in fume hood.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Semi-viscous colourless or yellowish liquid; hydrolyses in water to produce hydrochloric acid. Soluble in alcohol, ether and benzene.
Fumes in air.

PHYSICAL PROPERTIES
Liquid.
Corrosive.
Acid.
Toxic or noxious vapours/gas.

Molecular Weight: 195.48 Boiling Range (°C): 219- 223

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Melting Range (°C): - 7
Solubility in water (g/L): Reacts
pH (1% solution): Not available
Volatile Component (%vol): Not available
Relative Vapour Density (air=1): 6.77
Lower Explosive Limit (%): 2.1
Autoignition Temp (°C): 210.56
State: Liquid

Specific Gravity (water=1): 1.38
pH (as supplied): Not applicable
Vapour Pressure (kPa): 0.0266 @ 20 C
Evaporation Rate: Not available
Flash Point (°C): 97
Upper Explosive Limit (%): 6.5
Decomposition Temp (°C): Not available
Viscosity: Not available

log Kow : 2.92

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Contact with alkaline material liberates heat.
Presence of incompatible materials.
Product is considered stable under normal handling conditions.
Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Considered an unlikely route of entry in commercial/industrial environments.

EYE
When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
The material may produce severe irritation to the eye causing pronounced inflammation.
Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN
Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.
Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds,

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lesions or abrasions.
if exposure is prolonged.
Bare unprotected skin should not be exposed to this material.
The material may accentuate any pre-existing skin condition.
The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

INHALED
Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.
Inhalation hazard is increased at higher temperatures.
Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

CHRONIC HEALTH EFFECTS
On the basis, primarily, of animal experiments, the material may be regarded as carcinogenic to humans. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in cancer on the basis of:
- appropriate long-term animal studies
- other relevant information.

Highly corrosive. and Considered toxic by all exposure routes.
Principal routes of exposure are usually by.
skin contact / eye contact.
with the liquid and inhalation of vapour.
As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.
Repeated exposure to low vapour concentrations can cause skin tenderness, bleeding of the nose and gums, chronic bronchitis, gastritis.
When administered by gavage, benzotrichloride induced squamous cell carcinomas of the forestomach and adenocarcinomas of the lung in female mice. When applied to the skin, benzotrichloride induced squamous cell carcinomas of the skin and lung adenomas and upper digestive tract tumors (carcinomas of the lips, tongue, oesophagus or stomach) and lymphomas in female mice.
There is evidence that employment in the production of chlorinated toluenes, which involves potential exposure to benzotrichloride, increases the risk of respiratory cancer.

TOXICITY AND IRRITATION

TOXICITY
Oral (rat) LD50: 736 mg/kg
Oral (rabbit) LD50: 6000 mg/kg
Inhalation (rat) LC50: 19 ppm/2h
Oral (mouse) LD50: 807 mg/kg
Inhalation (mouse) LC50: 8 ppm/2h
Dermal (rabbit) LD50: 4000 mg/kg
Inhalation (mammal) LC50: 60 mg/m^3

IRRITATION
Skin (rabbit): 10 mg/24h - SEVERE
SKIN (RABBIT): 20 MG/24H - Moderate
Eye (rabbit):0.05 mg(open)- SEVERE
Eye (rabbit):0.05 mg/24h - SEVERE

continued...

IARC Cancer Review: Animal Sufficient Evidence.
IARC CAncer Review: Human Inadequate Evidence.
Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen
[National Toxicology Program: U.S. Dep. of Health & Human Services 2002].

HYDROGEN CHLORIDE:

TOXICITY	IRRITATION
Inhalation (human) LCLo: 1300 ppm/30m	Eye (rabbit): 5 mg/30s - Mild
Inhalation (human) LCLo: 3000 ppm/5m	
Inhalation (rat) LC50: 3124 ppm/60m	
4701 ppm/30m	

Section 12 - ECOLOGICAL INFORMATION

Hazardous Air Pollutant:	Yes
Half- life Soil - High (hours):	0.05
Half- life Soil - Low (hours):	0.00305
Half- life Air - High (hours):	1737
Half- life Air - Low (hours):	173.7
Half- life Surface water - High (hours):	0.05
Half- life Surface water - Low (hours):	0.00305
Half- life Ground water - High (hours):	0.05
Half- life Ground water - Low (hours):	0.00305
Aqueous biodegradation - Aerobic - High (hours):	168
Aqueous biodegradation - Aerobic - Low (hours):	24
Aqueous biodegradation - Anaerobic - High (hours):	672
Aqueous biodegradation - Anaerobic - Low (hours):	96
Photolysis maximum light absorption - High (nano- m):	274
Photolysis maximum light absorption - Low (nano- m):	225
Photooxidation half- life air - High (hours):	1737
Photooxidation half- life air - Low (hours):	173.7
First order hydrolysis half- life (hours):	0.00305
Acid rate constant [M(H+)- HR]- 1:	0.05

log Kow : 2.92
Half-life (hr) air: 48
Half-life (hr) H2O surface water: 0.03056-0.05
Half-life (hr) H2O ground: 0.03056-0.05
BCF: 98
Toxicity Fish: LC50(48)4140mg/L
Toxicity invertebrate: cell mult. inhib.56-<100mg/L
Bioacculmulation: not likely
Effects on algae and plankton: cell mult. inhib.<100mg/L
processes Abiotic: nophotol,vfast hydrol,some Rxn OH*

Section 13 - DISPOSAL CONSIDERATIONS

Recycle wherever possible.
Consult manufacturer for recycling options.
Consult State Land Waste Management Authority for disposal.
Treat and neutralise at an effluent treatment plant.
Bury residue in an authorised landfill.

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Section 13 - DISPOSAL CONSIDERATIONS

Decontaminate empty containers with a lime slurry.
Return empty containers to supplier or bury empty containers at an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: CORROSIVE
HAZCHEM: 2X

UNDG:

Dangerous Goods Class:	8	Subrisk:	None
UN Number:	2226	Packing Group:	II

Shipping Name:BENZOTRICHLORIDE

Air Transport IATA:

ICAO/IATA Class:	8	ICAO/IATA Subrisk:	None
UN/ID Number:	2226	Packing Group:	II
ERG Code:	8L		

Shipping name:BENZOTRICHLORIDE

Maritime Transport IMDG:

IMDG Class:	8	IMDG Subrisk:	None
UN Number:	2226	Packing Group:	II
EMS Number:	F- A, S- B		

Shipping name:BENZOTRICHLORIDE

Section 15 - REGULATORY INFORMATION

REGULATIONS

benzotrichloride (CAS: 98-07-7) is found on the following regulatory lists;
International Agency for Research on Cancer (IARC) Carcinogens
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established

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Section 16 - OTHER INFORMATION

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 16-Jun-2018