

TRICLOSAN

GHS Safety Data Sheet

Version No:9.1.1.1

Page 1 of 10

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

TRICLOSAN

OTHER NAMES

C12-H7-Cl3-O2, "Ciba Geigy Irgasan DP-300", "2'-hydroxy-2, 4, 4'-trichlorodiphenyl ether", "ether, 2'-hydroxy-2, 4, 4'-trichlorodiphenyl", "phenol, 5-chloro-2-(2, 4-dichlorophenoxy)-", "phenyl ether, 2'-hydroxy-2, 4, 4'-trichloro-", "CH 3635", "Irgasan CH 3635", TCC, 2,4,4'-trichloro-2'-hydroxydiphenylether

PROPER SHIPPING NAME

TOXIC SOLID, ORGANIC, N.O.S.(contains 2,4,4'-trichloro-2'-hydroxydiphenyl ether)

PRODUCT USE

Bacteriostat and preservative for cosmetic and detergent preparations.
Reagent

SUPPLIER

Company: S D FINE- CHEM LIMITED
Address:
315- 317, T.V.Ind.Estate,
248, Worli Road,
Mumbai- 400030, India
www.sdfine.com
Telephone: 91- 22 24959898/99
Fax: 91- 22 2493 7232
Email: technical@sdfine.com

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity Category 3
Chronic Aquatic Hazard Category 1
Eye Irritation Category 2A
Skin Corrosion/Irritation Category 2
STOT - SE Category 3

**EMERGENCY OVERVIEW****HAZARD
DANGER**

Determined by Chemwatch using GHS criteria
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.

continued...

TRICLOSAN

GHS Safety Data Sheet

Version No:9.1.1.1

Page 2 of 10

Section 2 - HAZARDS IDENTIFICATION

H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

Code

Phrase

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash ... thoroughly after handling.
P271 Use only outdoors or in a well- ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

Code

Phrase

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
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.
P311 Call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
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 re- use.
P391 Collect spillage.

Storage

Code

Phrase

P403+P233 Store in a well- ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal

Code

Phrase

P501 Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
2, 4, 4' - trichloro- 2' - hydroxydiphenyl ether	3380-34-5	100

Section 4 - FIRST AID MEASURES

SWALLOWED

- 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.

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.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.

continued...

-
- 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.

NOTES TO PHYSICIAN

- Treat symptomatically.

Presentation:

A: Acute symptoms related to overexposure to the PCBs and dioxins (PCDDs and PCDFs) and, presumably, other polyhalogenated polyaromatics (PHAHs) include irritation of the skin, eyes and mucous membranes and nausea, vomiting and myalgias.

B: After a latency period which may be prolonged (up to several weeks or more), chloracne, porphyria cutanea tarda, hirsutism, or hyper-pigmentation may occur.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog.
- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.

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 course.
- Use fire fighting procedures suitable for surrounding area.

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).

Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.

PCBs decompose on heating to produce acrid black soot and toxic fumes of aldehydes, hydrogen chlorides (HCl), chlorides and extremely toxic polychlorinated dibenzofurans (PCDF) and polychlorinated dibenzodioxin (PCDD).

Other halogenated analogues may produce corresponding decomposition products.

May emit poisonous fumes.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Environmental hazard - contain spillage.
- Clean up waste regularly and abnormal spills immediately.
- Avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.

MAJOR SPILLS

- Environmental hazard - contain spillage.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by all means available, spillage from entering drains or water courses.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)
- Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.
- Establish good housekeeping practices.
- Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.

PACKAGING MATERIAL INCOMPATIBILITIES

Chemical Name	Container Type
	" Acetal (Delrin)" , " Cast iron" , Neoprene

SUITABLE CONTAINER

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure. <</>.

STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

• 2, 4, 4' - trichloro- 2' -
hydroxydiphenyl ether:

CAS:3380- 34- 5 CAS:112099- 35- 1 CAS:164325- 69- 3
CAS:261921- 78- 2 CAS:88032- 08- 0

MATERIAL DATA

2,4,4'-TRICHLORO-2'-HYDROXYDIPHENYLETHER:

■ Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure.

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

PERSONAL PROTECTION



Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATOR

•Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- 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], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

OTHER

- Overalls.
- Eyewash unit.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White powder with no odour or very slight aromatic odour; does not mix well with water (17 mg/l). May forms cloudy solutions.

Ignition point = > 500 deg C.

PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Sinks in water.

State	Divided solid	Molecular Weight	289.54
Melting Range (°C)	55- 57	Viscosity	Not Applicable
Boiling Range (°C)	185	Solubility in water (g/L)	Partly miscible
Flash Point (°C)	223 (open)	pH (1% solution)	Not available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°C)	> 350	Vapour Pressure (kPa)	4x10- 6mm Hg(20 C)
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	1.2
Lower Explosive Limit (%)	Not applicable	Relative Vapour Density (air=1)	Not available.
Volatile Component (%vol)	Negligible	Evaporation Rate	Not available

continued...

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

Acute toxicity	Acute Tox. (inhal) 3
Skin corrosion/irritation	Skin Irrit. 2
Serious eye damage/irritation	Eye Irrit. 2A
Respiratory or skin sensitization	Not applicable
Germ cell mutagenicity	Not applicable
Carcinogenicity	Not applicable
Reproductive toxicity	Not applicable
STOT- single exposure	STOT SE 3
STOT- repeated exposure	Not applicable
Aspiration hazard	Not applicable

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Accidental ingestion of the material may be damaging to the health of the individual.
 - At sufficiently high doses the material may be hepatotoxic(i.e. poisonous to the liver).
 - Digestion of PCBs and related substances can lead to nausea and vomiting, abdominal pain, loss of appetite, jaundice, liver damage, coma and death.
- Headache, dizziness, lethargy, depression, nervousness, loss of libido and muscle and joint pain may also occur.

EYE

- Vapours of PCBs may be irritating and may be absorbed by the eye.
 - There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation.
- Severe inflammation may be expected with pain.

SKIN

- The material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time.
- Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.
- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
 - Open cuts, abraded or irritated skin should not be exposed to this material.
 - Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
- Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
- Chlorinated diphenyl ethers may produce skin irritation; systemic toxicity may occur following absorption.

INHALED

- Inhalation of vapours, aerosols (mists, fumes) or dusts, generated by the material during the course of normal handling, may produce toxic effects.
 - The material can cause respiratory irritation in some persons.
- The body's response to such irritation can cause further lung damage.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
- If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.
- Inhalation of vapours containing PCBs may cause respiratory irritation, eczema and skin burns.

CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

This material can be regarded as being able to cause cancer in humans based on experiments and other information.

There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby.

Based on experience with similar materials, there is a possibility that exposure to the material may reduce fertility in humans at levels which do not cause other toxic effects.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.

Prolonged contact with chlorinated diphenyl ethers may cause skin irritation, weight loss and liver injury. Repeated absorption has produced liver damage in animals.

Exposure to polychlorinated biphenyls (PCBs) over a long time can cause eczema and internal effects; various systems may be affected. On the skin, there may be thickening, swelling of the eyelids, feet and hands, itchy red eruptions, discolouration of nails and changes in hair follicles, hair loss, acne, eye discharge, and discolouration of the oral cavity. Effects on the digestive system include nausea and vomiting, abdominal pain and loss of appetite. There may be damage to the liver indicated by jaundice, which can be fatal. Nervous system effects include headache, dizziness, fatigue, impotence, joint and muscle pain. The airways may also be irritated and lung capacity reduced. PCBs cross the placenta and cause a variety of defects in the foetus and newborn including browning of the skin and liver damage. Growth may be retarded for many years with learning difficulties. The risk of miscarriages and stillbirths is increased. There may be a relationship between exposure to PCBs and the risk of developing various cancers, including melanomas, growths of the digestive system, lymphomas and leukaemias.

TOXICITY AND IRRITATION

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

For triclosan: Triclosan is readily absorbed by the skin, through the mouth lining and digestive tract, and through the mucosal tissues if given through the vagina. It is excreted in the urine and stools, mostly unchanged; it has been detected in the liver and fat. Testing in humans showed that triclosan did not sensitise or irritate the skin. Animal testing showed that triclosan did not cause reproductive toxicity and did not cause abnormalities in development below exposure levels of 150 mg/kg/day; swallowing 50mg/kg of the substance was harmful to both the foetus and the mother. There have not been reports of birth defects occurring. Triclosan has been detected in human breast milk. Triclosan has been shown to inhibit the growth of cancer cells, resulting in their death. Only one out of eighteen tests showed triclosan to cause mutations, and a repeat of that study was negative. Studies have shown that triclosan can have both male- and female-like hormonal effects.

Side-reactions during manufacture of the parent compound may result in the production of trace amounts of polyhalogenated aromatic hydrocarbon(s). Halogenated phenols, and especially their alkali salts, can condense above 300 deg. C. to form polyphenoxyphenols or, in a very specific reaction, to form dibenzo-p-dioxins.

Polyhalogenated aromatic hydrocarbons (PHAHs) can cause effects on hormones and mimic thyroid hormone. Acne, discharge in the eye, eyelid swellings and visual disturbances may occur. Babies born to exposed mothers can also exhibit these effects. There is an increased risk of liver cancer among those who have taken PHAHs.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

SKIN

2, 4, 4' - trichloro-
2' - hydroxydiphenyl
ether

GESAMP/EHS Composite List - GESAMP Hazard
Profiles

D1: skin
irritation/corrosion

1

Section 12 - ECOLOGICAL INFORMATION

May cause long-term adverse effects in the environment.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient

Persistence:
Water/Soil

Persistence: Air

Bioaccumulation

Mobility

continued...

TRICLOSAN

GHS Safety Data Sheet

Version No:9.1.1.1

Page 8 of 10

Section 12 - ECOLOGICAL INFORMATION

2, 4, 4' - trichloro- 2' - hydroxydiphenyl ether	HIGH	No Data Available	LOW	LOW
--	------	-------------------	-----	-----

GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / Cas No / RTECS No	EHS	TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
/	702	282	5	—	5	NR	4	NI	0	0	0	—	1	—	(T)	S	1
CAS:3380-34-5 /																	

Legend:

EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships) NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation, B1=Acute aquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg), C2=Acute mammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation & corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities,
For column A2: R=Readily biodegradable, NR=Not readily biodegradable.
For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lung injury, N=Neurotoxic, I=Immunotoxic.
For column E1: NT=Not tainting (tested), T=Tainting test positive.
For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances.
The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard.
(GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.
- Otherwise:
 - If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
 - Where possible retain label warnings and MSDS and observe all notices pertaining to the product.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
- A Hierarchy of Controls seems to be common - the user should investigate:
 - Reduction.
 - DO NOT allow wash water from cleaning or process equipment to enter drains.
 - It may be necessary to collect all wash water for treatment before disposal.
 - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
 - Where in doubt contact the responsible authority.
 - Due to their environmental persistence and potential health hazards, PCBs, PBBs, dioxins and their derivatives or congeners (including chlorinated diphenyl ethers), cannot be disposed of in landfills or dumped at sea.
 - Environmentally acceptable method of disposal include high temperature incineration. However this option is costly and uncertain.
 - Other acceptable disposal technologies include base-catalysed dechlorination in the BCD (Base-Catalyzed Decomposition) Process.
 - Currently, most wastes must be stored in an approved manner until satisfactory arrangements can be made for their disposal. All wastes and residues containing these substances (e.g. wiping clothes, absorbent materials, used disposable protective gloves, contaminated clothing, etc.) should be collected, placed in proper containers, labelled and disposed of in the manner prescribed by government regulations.
 - Recycle wherever possible.
 - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 - Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
 - Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

continued...

Section 14 - TRANSPORTATION INFORMATION



Labels Required: TOXIC

HAZCHEM:
2X

Land Transport UNGD:

Class or division:	6.1	Subsidiary risk:	None
UN No.:	2811	UN packing group:	III
Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. (contains 2,4,4'-trichloro-2'-hydroxydiphenyl ether)			

Air Transport IATA:

ICAO/IATA Class:	6.1	ICAO/IATA Subrisk:	None
UN/ID Number:	2811	Packing Group:	III
Special provisions:	A3		

■ Air transport may be forbidden if this material is flammable, corrosive or toxic gases may be released under normal conditions of transport.

Shipping name: TOXIC SOLID, ORGANIC, N.O.S. (contains 2,4,4'-trichloro-2'-hydroxydiphenyl ether)

Maritime Transport IMDG:

IMDG Class:	6.1	IMDG Subrisk:	None
UN Number:	2811	Packing Group:	III
EMS Number:	F- A, S- A	Special provisions:	223 274
Limited Quantities:	5 kg	Marine Pollutant:	Yes
Shipping name: TOXIC SOLID, ORGANIC, N.O.S. (contains 2,4,4'-trichloro-2'-hydroxydiphenyl ether)			

GESAMP hazard profiles for this material can be found in section 12 of the MSDS.

Section 15 - REGULATORY INFORMATION

REGULATIONS

2,4,4'-trichloro-2'-hydroxydiphenyl ether (CAS: 3380-34-5, 112099-35-1, 164325-69-3, 261921-78-2, 88032-08-0) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "India Hazardous Wastes (Management, Handling and Transboundary Movement) Rules - Schedule 2: List of Wastes Constituents with Concentration Limits", "International Chemical Secretariat (ChemSec) SIN List (*Substitute It Now!)", "International Fragrance Association (IFRA) Survey: Transparency List", "Sigma-Aldrich Transport Information"

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
2, 4, 4' - trichloro- 2' - hydroxydiphenyl ether	3380- 34- 5, 112099- 35- 1, 164325- 69- 3, 261921- 78- 2, 88032- 08- 0

continued...

TRICLOSAN

GHS Safety Data Sheet

Version No:9.1.1.1

Page 10 of 10

Section 16 - OTHER INFORMATION

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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: 15-May-2018