

DICHLOROPHENE

GHS Safety Data Sheet

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DICHLOROPHENE

OTHER NAMES

C13-H10-Cl2-O2, bis(5-chloro-2-hydroxyphenyl)methane, bis(5-chloro-2-hydroxyphenyl)methane, bis(2-hydroxy-5-chlorophenyl)methane, bis(2-hydroxy-5-chlorophenyl)methane, "5, 5'-dichloro-2, 2'-dihydroxydiphenylmethane", "5, 5'-dichloro-2, 2'-dihydroxydiphenylmethane", di-(5-chloro-2-hydroxyphenyl)methane, di-(5-chloro-2-hydroxyphenyl)methane, "4, 4'-dichloro-2, 2'-methylenediphenol", "4, 4'-dichloro-2, 2'-methylenediphenol", "2, 2'-dihydroxy-5, 5'-dichlorodiphenylmethane", "2, 2'-dihydroxy-5, 5'-dichlorodiphenylmethane", "2, 2'-methylenebis(4-chlorophenol)", "2, 2'-methylenebis(4-chlorophenol)"

PROPER SHIPPING NAME

TOXIC SOLID, ORGANIC, N.O.S.

PRODUCT USE

An anthelmintic (worm treatment) used in the treatment of infection caused by tapeworms (*Diphyllobothrium latum* and *Taenia saginata*) and dwarf tapeworm (*Hymenolepis nana*). Also used in the treatment of infection by pork tapeworm (*T. solium*)

Usually administered by mouth as tablets.

Also used against animal ringworm, as a fungicide and as a germicide in soaps. The use of dichlorophene in cosmetics and toiletries is restricted in various jurisdictions.

Also used to prevent fungal and bacterial deterioration of cotton and woollen textiles, paper products, rug backings, cutting oils and canvas lawn and beach furniture.

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

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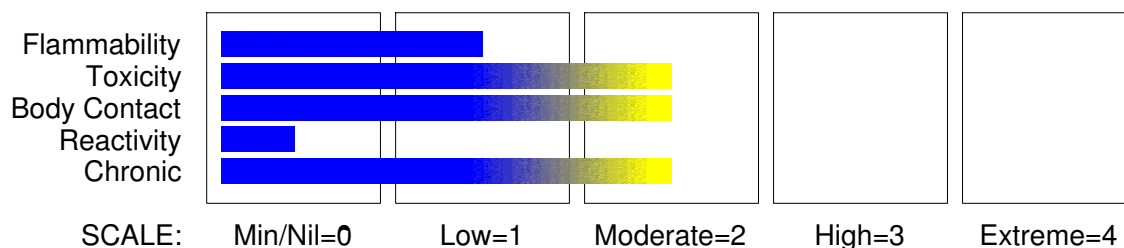
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Fax: 91- 22- 24937232

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Oral) Category 4
Chronic Aquatic Hazard Category 1
Eye Irritation Category 2A
Skin Corrosion/Irritation Category 3
Skin Sensitizer Category 1



EMERGENCY OVERVIEW

HAZARD

WARNING

Determined by using GHS criteria:
H302 H316 H319 H317 H410
Harmful if swallowed
Causes mild skin irritation
Causes serious eye irritation
May cause allergic skin reaction
Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS

Prevention

Wash hands thoroughly after handling.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Contaminated clothing should not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.

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Section 2 - HAZARDS IDENTIFICATION

Response

If skin irritation or rash occurs, seek medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs, seek medical advice/attention.
If eye irritation persists, get medical advice/attention.
Wear eye/face protection.
Specific treatment: refer to Label or MSDS.
IF ON SKIN: Gently wash with plenty of soap and water.
Wash contaminated clothing before reuse.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
dichlorophene	97-23-4	>95

Section 4 - FIRST AID MEASURES

SWALLOWED

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:

- Wash out immediately with fresh 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.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

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.

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Section 4 - FIRST AID MEASURES

INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

Dichlorophene is contra-indicated in the presence of impaired liver function and in conditions in which purgation is undesirable, such as the last few months of pregnancy, in acute fevers or in severe heart disease.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

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

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- 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

- Solid which exhibits difficult combustion or is difficult to ignite.
 - Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
 - Dry dust can also be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
 - Build-up of electrostatic charge may be prevented by bonding and grounding.
 - Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.
 - All movable parts coming in contact with this material should have a speed of less than 1-metre/sec.
- Decomposes on heating and produces toxic fumes of chlorides.

Personal Protective Equipment

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

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Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable labelled container for waste disposal.

MAJOR SPILLS

- Clean up all spills immediately.
- Wear protective clothing, safety glasses, dust mask, gloves.
- Secure load if safe to do so. Bundle/collect recoverable product.
- Use dry clean up procedures and avoid generating dust.
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Water may be used to prevent dusting.
- Collect remaining material in containers with covers for disposal.
- Flush spill area with water.

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:
dichlorophene 500 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:
dichlorophene 125 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:
dichlorophene 15 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:
dichlorophene 6 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

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Section 6 - ACCIDENTAL RELEASE MEASURES

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+ X + X 0 +

+: May be stored together

O: May be stored together with specific precautions

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 dust
- Avoid contact with skin and eyes.
- Wear nominated personal protective equipment when handling.
- Use in a well-ventilated area.
- Use good occupational work practices.
- Observe manufacturer's storing and handling recommendations.

SUITABLE CONTAINER

Packaging as recommended by manufacturer.

- Check that containers are clearly labelled.

Plastic container.

STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents.

Avoid strong acids, bases.

Be sure container is tightly closed when not in use.

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.
- 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

- dichlorophene:

CAS:97- 23- 4 CAS:8017- 86- 5

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION



EYE

- Safety glasses with side shields; or as required,
- 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].

HANDS/FEET

Rubber gloves.

OTHER

- Overalls.
- Eyewash unit.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult

your

Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Type of Contaminant:
solvent, vapours, degreasing etc., evaporating from tank (in still air).
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

Air Speed:
0.25- 0.5 m/s (50- 100 f/min)

0.5- 1 m/s (100- 200 f/min.)

1- 2.5 m/s (200- 500 f/min.)

2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only.
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White crystalline solid; does not mix with water.
Slight phenolic odour and saline taste.

PHYSICAL PROPERTIES

Solid.
Does not mix with water.

Molecular Weight: 269.12
Melting Range (°C): 177- 178
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable
Volatile Component (%vol): Not applicable.

Boiling Range (°C): Not available.
Specific Gravity (water=1): Not available.
pH (as supplied): Not applicable
Vapour Pressure (kPa): Not applicable.
Evaporation Rate: Not applicable

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Relative Vapour Density (air=1): Not applicable
Lower Explosive Limit (%): Not available.
Autoignition Temp (°C): Not available.
State: Divided solid

Flash Point (°C): Not applicable
Upper Explosive Limit (%): Not available.
Decomposition Temp (°C): Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- 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.

EYE

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

Limited 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, lesions or abrasions.

Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

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Section 11 - TOXICOLOGICAL INFORMATION

The material may cause 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) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

INHALED

The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. 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.

CHRONIC HEALTH EFFECTS

On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals.

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Despite the structural similarity with hexachlorophene no evidence exists that cross-sensitivities occur which give rise to allergic contact dermatitis.

The substance may induce photosensitivity. [Sigma/Aldrich]

Photosensitisation designates an abnormal adverse reaction to ultraviolet (UV) and/or visible radiation and is used to describe phototoxic reactions (those having a non-immunological basis), photoallergic reactions (those having an immunological basis) and other, as yet, unexplained reactions of the skin and eyes to sunlight.

A significant association between soft-tissue sarcoma and exposure to chlorophenols and a significant association between nasal and naso-pharyngeal cancers and exposure to chlorophenols have been reported in case-control studies.

TOXICITY AND IRRITATION

TOXICITY

Oral (rat) LD50: 1506 mg/kg

IRRITATION

Skin (rabbit): 500 mg/24h - Mild

Eye (rabbit): 0.05 mg/24h- SEVERE

Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant:Not Determined

Fish LC50 (96hr.) (mg/l): 3.6

The material is classified as an ecotoxin* because it is NOT readily biodegradable and the Fish LC50 (96 hours) is less than or equal to 1 mg/l.

Substances are considered to be readily biodegradable if the following levels of degradation are achieved in 28 days:

- In tests based on dissolved organic carbon:
- In tests based on oxygen depletion or carbon dioxide generation: theoretical maxima

70%
60% of the

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Section 12 - ECOLOGICAL INFORMATION

These levels of biodegradation must be achieved within 10 days of the start of biodegradation, which point is taken as the time when 10% of the substance has been degraded.

* Classification of Substances as Ecotoxic (Dangerous to the Environment)

Appendix 8, Table 1

Compiler's Guide for the Preparation of International Chemical Safety Cards: 1993

Commission of the European Communities.

Toxicity Fish: LC50(96)3.6-23mg/L

Toxicity invertebrate: LC50(0.25)0.055mg/L

Anaerobic effects: no degradation.

processes Abiotic: slow oxid

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible. Special hazard may exist - specialist advice may be required.
- Consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury or incinerate residue at an approved site.
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Puncture containers to prevent re-use and bury at an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: TOXIC
HAZCHEM: 2X

UNDG:

Dangerous Goods Class:	6.1	Subrisk:	None
UN Number:	2811	Packing Group:	III
Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.			

Air Transport IATA:

ICAO/IATA Class:	6.1	ICAO/IATA Subrisk:	None
UN/ID Number:	2811	Packing Group:	III
ERG Code:	6L		
Shipping name: TOXIC SOLID, ORGANIC, N.O.S.			

Maritime Transport IMDG:

IMDG Class:	6.1	IMDG Subrisk:	None
UN Number:	2811	Packing Group:	III

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Section 14 - TRANSPORTATION INFORMATION

EMS Number:	F- A, S- A	Marine Pollutant:	Not Determined
Shipping name:TOXIC SOLID, ORGANIC, N.O.S.			

Section 15 - REGULATORY INFORMATION

REGULATIONS

No regulations applicable

No data available for dichlorophene as CAS: 97-23-4, CAS: 8017-86-5.

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
dichlorophene	97- 23- 4, 8017- 86- 5

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: 12-May-2018