

## 3,4-DICHLOROANILINE

GHS SAFETY DATA SHEET

Version No:4  
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### Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT NAME

3,4-DICHLOROANILINE

#### OTHER NAMES

C<sub>6</sub>H<sub>5</sub>-Cl<sub>2</sub>-N, Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub>, "aniline, 3, 4-dichloro-", "aniline, 3, 4-dichloro-", "benzenamine, 3, 4-dichloro-", "benzenamine, 3, 4-dichloro-", "1-amino-3, 4-dichlorobenzene", "1-amino-3, 4-dichlorobenzene", DCA, "3, 4-DCA", "3, 4-DCA", "3, 4-dichloraniline", "3, 4-dichloraniline", "4, 5-dichloroaniline", "4, 5-dichloroaniline", "3, 4-dichlorobenzenamine", "3, 4-dichlorobenzenamine"

#### PROPER SHIPPING NAME

DICHLOROANILINES, SOLID  
(contains 3,4-dichloroaniline)

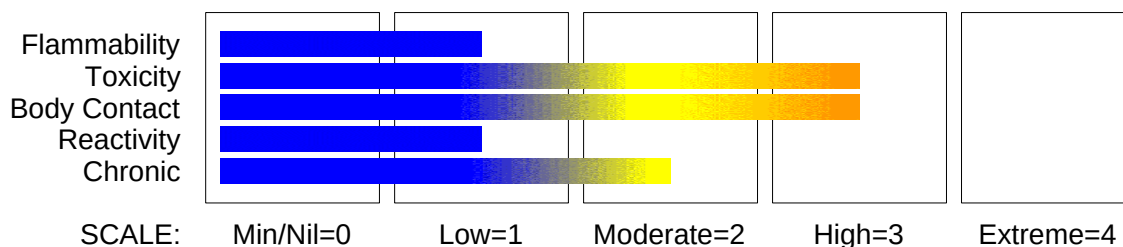
#### PRODUCT USE

Chemical intermediate in the manufacture of dyestuffs, herbicides and pharmaceuticals. Environmental pollutant particularly in sea, river and ground water, in soil and in some root and other crops. Metabolite of N-(3,4-dichlorophenyl)propanamide by mammals and bacteria.

#### 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  
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#### HAZARD RATINGS



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## Section 2 - HAZARDS IDENTIFICATION

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### GHS Classification

Acute Toxicity (Dermal) Category 3  
Acute Toxicity (Inhalation) Category 3  
Acute Toxicity (Oral) Category 3  
Chronic Aquatic Hazard Category 1  
Serious Eye Damage Category 1  
Skin Corrosion/Irritation Category 2  
Skin Sensitizer Category 1



### EMERGENCY OVERVIEW

#### HAZARD

DANGER  
Determined by using GHS criteria:  
H331 H311 H301 H315 H317 H318 H410  
Toxic if inhaled  
Toxic in contact with skin  
Toxic if swallowed  
Causes skin irritation  
May cause allergic skin reaction  
Causes serious eye damage  
Very toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENTS

##### Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray.  
Use only outdoors or in a well ventilated area.  
Wear protective gloves/clothing  
Wash thoroughly after handling.  
Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Contaminated clothing should not be allowed out of the workplace.  
Do not breathe dust/fume/gas/mist/vapours/spray.

##### Response

Immediately call a POISON CENTER or doctor/physician.  
Keep container tightly closed.  
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
Wear eye/face protection.  
If eye irritation persists, get medical advice/attention.  
If skin irritation or rash occurs, seek medical advice/attention.

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Wash contaminated clothing before reuse.  
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.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
Remove/Take off immediately all contaminated clothing  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
Specific treatment: refer to Label or MSDS.  
IF ON SKIN: Gently wash with plenty of soap and water.  
Wash/Decontaminate removed 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  | %   |
|-----------------------|---------|-----|
| 3, 4- dichloroaniline | 95-76-1 | >98 |

## Section 4 - FIRST AID MEASURES

### SWALLOWED

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
  - For advice, contact a Poisons Information Centre or a doctor.
  - Urgent hospital treatment is likely to be needed.
  - In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
  - If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.
  - If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.
  - Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:
  - INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- NOTE: Wear a protective glove when inducing vomiting by mechanical means.

### 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

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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.

## 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, without delay.

## NOTES TO PHYSICIAN

The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.

- Most produce a peak effect within 30 minutes.
- Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated conclusive benefits.
- Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

### BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

| Determinant                | Index               | Sampling Time          | Comments  |
|----------------------------|---------------------|------------------------|-----------|
| 1. Methaemoglobin in blood | 1.5% of haemoglobin | During or end of shift | B, NS, SQ |

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also observed after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

Symptoms of vasodilation and reflex tachycardia may present following organic nitrate overdose; most organic nitrates are extensively metabolised by hydrolysis to inorganic nitrites. Organic nitrates and nitrites are readily absorbed through the skin, lungs, mucosa and gastro-intestinal tract.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

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

### 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.
- 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

- Combustible solid which burns but propagates flame with difficulty.
- 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 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-meter/sec.

Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), hydrogen chloride, phosgene, nitrogen oxides (NO<sub>x</sub>), other pyrolysis products typical of burning organic material.

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.

### 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

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- 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.
- Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).
- Dampen with water to prevent dusting before sweeping.
- Place in suitable containers for disposal.

#### MAJOR SPILLS

- 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 any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

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### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



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+: 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.**

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## Section 7 - HANDLING AND STORAGE

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### 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.

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- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- 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

- Lined metal can, lined metal pail/ can.
  - Plastic pail.
  - Polyliner drum.
  - Packing as recommended by manufacturer.
  - Check all containers are clearly labelled and free from leaks.
- All inner and sole packagings for substances that have been assigned to Packaging Groups I or II on the basis of inhalation toxicity criteria, must be hermetically sealed.

## STORAGE INCOMPATIBILITY

- Avoid oxidising agents, acids, acid chlorides, acid anhydrides.

## 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.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

The following materials had no OELs on our records

- 3, 4- dichloroaniline: CAS:95- 76- 1

### MATERIAL DATA

OEL-STEL (Russia): 0.5 mg/m<sup>3</sup> (skin)

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.

Limited under EC Directive on Drinking Water Quality 80/778/EEC

Organochlorines: guide level 1 ug/l

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## PERSONAL PROTECTION



### 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].

### HANDS/FEET

Suitability and durability of glove type is dependent on usage. Factors such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity,

are important in the selection of gloves.

Wear chemical protective gloves, eg. PVC.

Wear safety footwear or safety gumboots, eg. Rubber.

NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

### OTHER

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

### 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.

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For further information consult  
your  
Occupational Health and Safety Advisor.

## ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
  - (a): particle dust respirators, if necessary, combined with an absorption cartridge;
  - (b): filter respirators with absorption cartridge or canister of the right type;
  - (c): fresh-air hoods or masks
- Build-up of electrostatic charge on the dust particle, 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.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to efficiently remove the contaminant.

| Type of Contaminant:                                                                                                                                           | Air Speed:                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1- 2.5 m/s (200- 500 f/min.)   |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).           | 2.5- 10 m/s (500- 2000 f/min.) |

Within each range the appropriate value depends on:

| Lower end of the range                                    | Upper end of the range            |
|-----------------------------------------------------------|-----------------------------------|
| 1: Room air currents minimal or favourable to capture     | 1: Disturbing room air currents   |
| 2: Contaminants of low toxicity or of nuisance value only | 2: Contaminants of high toxicity  |
| 3: Intermittent, low production.                          | 3: High production, heavy use     |
| 4: Large hood or large air mass in motion                 | 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 4-10 m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres 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.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

Light-brown crystalline solid; does not mix well with water.  
Soluble in alcohol, benzene, and dilute hydrochloric acid.

### PHYSICAL PROPERTIES

Solid.  
Does not mix with water.

Molecular Weight: 162.02  
Melting Range (°C): 70- 72.5  
Solubility in water (g/L): Partly miscible  
pH (1% solution): Not applicable  
Volatile Component (%vol): Not available  
Relative Vapour Density (air=1): 5.59  
Lower Explosive Limit (%): 2.8 @ 153 C  
Autoignition Temp (°C): 265.00  
State: Divided solid

Boiling Range (°C): 272  
Specific Gravity (water=1): Not available  
pH (as supplied): Not applicable  
Vapour Pressure (kPa): 0.13 @ 80.5 C  
Evaporation Rate: Not available  
Flash Point (°C): Not available  
Upper Explosive Limit (%): 7.2 @ 179  
Decomposition Temp (°C): Not Available  
Viscosity: Not Available

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.

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.

The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of oxygen starvation (anoxia).

Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure.

At about 15% concentration of blood methaemoglobin there is observable cyanosis of the

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lips, nose and earlobes. Symptoms may be absent although euphoria, flushed face and headache are commonly experienced. At 25-40%, cyanosis is marked but little disability occurs other than that produced on physical exertion. At 40-60%, symptoms include weakness, dizziness, lightheadedness, increasingly severe headache, ataxia, rapid shallow respiration, drowsiness, nausea, vomiting, confusion, lethargy and stupor. Above 60% symptoms include dyspnea, respiratory depression, tachycardia or bradycardia, and convulsions. Levels exceeding 70% may be fatal.

## 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.

Evidence exists, or practical experience predicts, that the material may cause severe 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. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate. Repeated or prolonged exposure to irritants may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

## SKIN

Skin contact with the material may produce toxic effects; systemic effects may result following absorption.

Skin contact with the material may be harmful; systemic effects may result following absorption.

The material produces severe skin irritation; evidence exists, or practical experience predicts, that the material either:

- produces severe inflammation of the skin in a substantial number of individuals following direct contact, and/or
- produces significant and severe 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.

NOTE: Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

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.

## INHALED

Inhalation of dusts, generated by the material, during the course of normal handling, may produce toxic effects.

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

## CHRONIC HEALTH 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

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lung. A prime symptom is breathlessness. Lung shadows show on X-ray.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.

Most arylamines are powerful haemopoietic poisons producing methaemoglobinaemia in humans. High chronic doses cause splenic congestion and in turn sarcoma formation. Single ring aromatic amines are relatively weak carcinogens requiring large doses to produce any effect in animal experiments. The polycyclic aromatic amines exhibit a wide range of carcinogenic activity which appear, in part, to be dependent on the position on which benzene rings are substituted and the nature of the substituent.

## TOXICITY AND IRRITATION

### TOXICITY

Oral (rat) LD50: 545 mg/kg

Intraperitoneal (ta) LD50: 280 mg/kg

Oral (mouse) LD50: 740 mg/kg

Intraperitoneal (mouse) LD50: 310 mg/kg

Dermal (cat) LD50: 700 mg/kg

Oral (rabbit) LD50: 675 mg/kg

Oral (g.pig) LD50: 675 mg/kg

### IRRITATION

Skin (rabbit): 2 mg/24h - SEVERE

Eye (rabbit): 0.25 mg/24h- SEVERE

Eye (rabbit): 10 mg - Mild

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

The material may produce severe irritation to the eye causing pronounced inflammation.

Repeated or prolonged exposure to irritants may produce conjunctivitis.

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.

Flaccid paralysis, convulsions, excitement, cyanosis, respiratory tract changes recorded.

## Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant:Yes

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways.

The material is classified as an ecotoxin\* because it is NOT readily biodegradable and

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the Daphnia EC50 (48 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: 70%
- In tests based on oxygen depletion or carbon dioxide generation: 60% of the theoretical maxima

· 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.

Photolysis is judged to be an important degradation process for chloroanilines in estuarine water. Microbial rates are lower.

## Section 13 - DISPOSAL CONSIDERATIONS

- 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 licenced land-fill 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.
  - 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.
- Removed from pharmaceutical wastes by adsorption on polymeric absorbants such as Wofatil EP61 and FP14.

## Section 14 - TRANSPORTATION INFORMATION



Labels Required: TOXIC  
HAZCHEM: 2X

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## Section 14 - TRANSPORTATION INFORMATION

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### UNDG:

|                                                                          |      |                |      |
|--------------------------------------------------------------------------|------|----------------|------|
| Dangerous Goods Class:                                                   | 6.1  | Subrisk:       | None |
| UN Number:                                                               | 3442 | Packing Group: | II   |
| Shipping Name: DICHLOROANILINES, SOLID<br>(contains 3,4-dichloroaniline) |      |                |      |

### Air Transport IATA:

|                                                                          |      |                    |      |
|--------------------------------------------------------------------------|------|--------------------|------|
| ICAO/IATA Class:                                                         | 6.1  | ICAO/IATA Subrisk: | None |
| UN/ID Number:                                                            | 3442 | Packing Group:     | II   |
| ERG Code:                                                                | 6L   |                    |      |
| Shipping name: DICHLOROANILINES, SOLID<br>(contains 3,4-dichloroaniline) |      |                    |      |

### Maritime Transport IMDG:

|                                                                          |            |                   |      |
|--------------------------------------------------------------------------|------------|-------------------|------|
| IMDG Class:                                                              | 6.1        | IMDG Subrisk:     | None |
| UN Number:                                                               | 3442       | Packing Group:    | II   |
| EMS Number:                                                              | F- A, S- A | Marine Pollutant: | Yes  |
| Shipping name: DICHLOROANILINES, SOLID<br>(contains 3,4-dichloroaniline) |            |                   |      |

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## Section 15 - REGULATORY INFORMATION

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### REGULATIONS

3,4-dichloroaniline (CAS: 95-76-1) is found on the following regulatory lists;  
OECD Representative List of High Production Volume (HPV) Chemicals  
OSPAR List of Substances of Possible Concern

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## Section 16 - OTHER INFORMATION

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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.

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