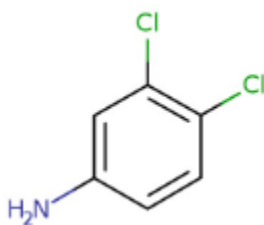


### 1. General Statements

3,4-Dichloroaniline is crystalline solid which is a characteristic odour. It is White to grey-brown in colour. Combustible substance, poorly flammable. Very slightly soluble in water. Sensitive to light. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment.

### 2. Chemical identification.

Name : 3,4-Dichloroaniline  
 CAS number(s) : 95-76-1  
 EC number : 202-448-4  
 Molecular formula : C<sub>6</sub>H<sub>5</sub>Cl<sub>2</sub>N  
 Structure :



### 3. Uses and Benefits

It is used as a Chemical intermediate in the manufacture of dyestuffs, herbicides and pharmaceuticals. Environmental pollutants 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. 3,4-DCA is exclusively used as an intermediate in the chemical industry for the synthesis of 3,4-dichlorophenylisocyanate, the herbicide propanil and an azo dye for polyester fabrics. There are no direct uses of 3,4-DCA without chemical transformation. 3,4-dichlorophenylisocyanate is sold and further used for the production of phenylurea herbicides (diuron, linuron) and the bactericide trichlorocarbanilide by further sites. 3,4-DCA is a biodegradation product of several phenylcarbamates, phenylurea and acylanilide herbicides.

### 4. Physical / chemical properties

Property	Value
Physical state :	Solid
Colour :	White to grey-brown
Odour :	Characteristic odour
pH :	7.1 (0.08 %)
Melting point :	71 °C
Boiling point :	272 °C (1013 hPa)
Flash point :	135 °C

## GPS Safety Summary

### 3,4-Dichloroaniline

CL-4:PUBLIC

Density :	1570 kg/m3 (20 °C)
Solubility in Water:	0.058 g/100ml

#### 5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal )	Toxic if swallowed, in contact with skin or if inhaled
Irritation / corrosion Skin / eye/ respiratory tract	May cause an allergic skin reaction,Causes serious eye damage
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
Toxicity for reproduction	NA

#### 6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	Yes
Fate and behavior	Result
Persistence and degradability	Not readily biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

#### 7. Exposure

##### Human health

3,4-Dichloroaniline is Toxic if swallowed, May cause an allergic skin reaction,Causes serious eye damage. Use collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers. Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals. Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

##### Environment:

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

# GPS Safety Summary

## 3,4-Dichloroaniline

CL-4:PUBLIC

---

### 8. Risk Management Recommendations

#### Human health measures

Organizational	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
Protection	Eye protection:	Face shield (EN 166). In case of dust production: protective goggles (EN 166)
	Skin and body protection:	Protective clothing (EN 14605 or EN 13034). In case of dust production: head/neck protection. In case of dust production: dustproof clothing (EN 13982)
	Respiratory protection:	IDust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus (EN 136 + EN 137)
Engineering controls	Ensure good ventilation of the work station.	
Environment protective measures		
Avoid release to the environment		

### 9. First-aid measures

**First-aid measures after inhalation:**Assure fresh air breathing. Call a POISON CENTER or doctor/physician.

**First-aid measures after skin contact::**Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service.

**First-aid measures after eye contact:**Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

**First-aid measures after ingestion :**Rinse mouth with water. The victim is fully conscious: immediately induce vomiting. Induce vomiting by giving a 0.9 % saline solution. Immediately consult a doctor/medical service. Call Poison Information Centre ([www.big.be/antigif.html](http://www.big.be/antigif.html)). Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital. Doctor: administration of chemical antidote.

### 10. Fire-fighting measures

#### Extinguishing media

# GPS Safety Summary

## 3,4-Dichloroaniline

CL-4:PUBLIC

---

**Suitable extinguishing media:** Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (not alcohol-resistant).

**Unsuitable extinguishing media :** Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

### Special hazards arising from the substance or mixture

**Hazardous decomposition products in case of fire:** On burning: release of toxic and corrosive gases/vapours (chlorine, hydrogen chloride, phosgene, carbon monoxide - carbon dioxide).

### Advice for firefighters

**Precautionary measures fire:** Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

**Firefighting instructions:** Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

## 11. Accidental release measures

**Protective equipment :** Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137). Dust cloud production: dust-tight suit (EN 13982). Reactivity hazard: self-contained breathing apparatus (EN 136 + EN 137). Reactivity hazard: gas-tight suit (EN 943).

**Environmental precautions:** Prevent soil and water pollution. Prevent spreading in sewers.

**For containment :** Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust clouds with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills.

## 12. Disposal consideration

**Regional legislation (waste) :** Disposal must be done according to official regulations.

**Waste treatment methods :** Dispose of contents/container in accordance with licensed collector's sorting instructions.

**Sewage disposal recommendations :** Disposal must be done according to official regulations.

# GPS Safety Summary

## 3,4-Dichloroaniline

CL-4:PUBLIC

### 13. Handling and storage

**Precautions for safe handling:** Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In a finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Keep the container tightly closed.

**Hygiene measures:** Observe very strict hygiene - avoid contact.

### 14. Classification and Labeling

Hazard pictograms (GHS US)

:



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage

Precautionary statements (GHS US)

: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 - If swallowed: Immediately call a poison center or doctor.  
P302+P352 - If on skin: Wash with plenty of water.  
P304+P340 - If inhaled: Remove person to fresh air and keep 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.  
P310 - Immediately call a poison center or doctor.  
P311 - Call a poison center or doctor.  
P312 - Call a poison center or doctor if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P322 - Specific treatment (see supplemental first aid instruction on this label).  
P330 - Rinse mouth.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.  
P363 - Wash contaminated clothing before reuse.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 15. Conclusion

3,4-Dichloroaniline is crystalline solid which is a characteristic odour. It is White to grey-brown in colour. Combustible substance, poorly flammable. Very slightly soluble in water. Sensitive to light. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment. Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates. There is a risk of a dust explosion if the

## GPS Safety Summary

### 3,4-Dichloroaniline

CL-4:PUBLIC

---

following conditions are met: The substance is given in very finely distributed form (powder, dust). The substance is whirled up in sufficient quantity in the air. An ignition source is present (flame, spark, electrostatic discharge, etc.) The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

#### 16. Contact Information within company

##### **Manufacturer**

Aarti Industries Limited

Udyog Kshetra, 2nd Floor, Mulund Goregaon Link Road, Mulund (West)

400080 Mumbai - India

T +91-22-6797-6666 - F +91-22-2565 3234

info@aarti-industries.com - www.aarti-industries.com

This GPS safety summary is intended to give general information about the health, safety and environment and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.