

SAFETY DATA SHEET

Revision Date 23-Jan-2018

Revision Number 3

1. Identification

Product Name 3,4-Dichloroaniline

Cat No. : AC113110000; AC113110010; AC113110050; AC113112500

CAS-No 95-76-1

Synonyms 1-Amino-3,4-dichlorobenzene; 3,4-DCA; 3,4-Dichloroaniline

Recommended Use Laboratory chemicals.

Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 3
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Combustible dust	Yes

Label Elements

Signal Word

Danger

Hazard Statements

May form combustible dust concentrations in air

Toxic if swallowed

Toxic in contact with skin

May cause an allergic skin reaction

Causes serious eye damage

Toxic if inhaled



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician

Skin

IF ON SKIN: Wash with plenty of soap and water
 Call a POISON CENTER or doctor/physician if you feel unwell
 Remove/Take off immediately all contaminated clothing
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
3,4-Dichloroaniline	95-76-1	98

4. First-aid measures

Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
Inhalation	Remove from exposure, lie down. Move to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.
Ingestion	Call a physician immediately. Clean mouth with water.

Most important symptoms and effects	Causes eye burns. May cause allergic skin reaction. Causes severe eye damage. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam.

Unsuitable Extinguishing Media No information available

Flash Point 166 °C / 330.8 °F

Method - No information available

Autoignition Temperature 265 °C / 509 °F

Explosion Limits

Upper 7.20%

Lower 2.80%

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Dust can form an explosive mixture in air. Containers may explode when heated. Fine dust dispersed in air may ignite. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products

Hydrogen chloride gas Nitrogen oxides (NO_x) Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
1

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. Handling and storage

Handling Do not breathe dust. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Use only in area provided with appropriate exhaust ventilation. Wash thoroughly after handling.

Storage Keep in a dry place. Keep container tightly closed. Keep cool and protect from sunlight. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Store in original container.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
3,4-Dichloroaniline				TWA: 2 ppm TWA: 10 mg/m ³ STEL: 5 ppm STEL: 20 mg/m ³

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

- Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.
- Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Beige
Odor	Odorless
Odor Threshold	No information available
pH	7.1 0.8 g/l aq.sol
Melting Point/Range	69 - 73 °C / 156.2 - 163.4 °F
Boiling Point/Range	272 °C / 521.6 °F @ 760 mmHg
Flash Point	166 °C / 330.8 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	7.20%
Lower	2.80%
Vapor Pressure	1 mmHg @ 80.5 °C
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	265 °C / 509 °F
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	C6 H5 Cl2 N
Molecular Weight	162.02

10. Stability and reactivity

- Reactive Hazard** None known, based on information available
- Stability** Stable under normal conditions.
- Conditions to Avoid** Exposure to air. Exposure to light. Incompatible products.
- Incompatible Materials** Acids, Acid anhydrides, Acid chlorides

Hazardous Decomposition Products Hydrogen chloride gas, Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization No information available.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
3,4-Dichloroaniline	LD50 = 545 mg/kg (Rat)	LD50 > 1000 mg/kg (Rat)	LC50 = 3.3 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
3,4-Dichloroaniline	95-76-1	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
3,4-Dichloroaniline	Group I Chemical	High Exposure Concern	Not applicable

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
3,4-Dichloroaniline	EC50: = 0.45 mg/L, 96h (Phaeodactylum tricornutum) EC50: = 1.1 mg/L, 72h (Phaeodactylum tricornutum)	LC50: 6.99 - 8.06 mg/L, 96h static (Pimephales promelas) LC50: = 8.4 mg/L, 96h static	EC50 = 0.45 mg/L 5 min EC50 = 0.56 mg/L 15 min EC50 = 0.65 mg/L 30 min	EC50: 0.11 - 0.33 mg/L, 48h Static (Daphnia magna) EC50: = 9 mg/L, 48h (Artemia salina)

	EC50: = 4.98 mg/L, 72h static (Pseudokirchneriella subcapitata) EC50: = 15 mg/L, 72h static (Desmodesmus subspicatus) EC50: 0.58 - 0.94 mg/L, 96h static (Pseudokirchneriella subcapitata)	(Brachydanio rerio) LC50: = 3.5 mg/L, 96h static (Poecilia reticulata) LC50: 6.55 - 7.47 mg/L, 96h flow-through (Pimephales promelas)		
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Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility . Is not likely mobile in the environment due its low water solubility.

Component	log Pow
3,4-Dichloroaniline	2.7

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN3442
Hazard Class 6.1
Packing Group II

TDG

UN-No UN3442
Hazard Class 6.1
Packing Group II

IATA

UN-No UN3442
Proper Shipping Name DICHLOROANILINES, SOLID
Hazard Class 6.1
Packing Group II

IMDG/IMO

UN-No UN3442
Proper Shipping Name DICHLOROANILINES, SOLID
Hazard Class 6.1
Packing Group II

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
3,4-Dichloroaniline	X	X	-	202-448-4	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)	Not applicable
SARA 313	Not applicable
SARA 311/312 Hazard Categories	See section 2 for more information
CWA (Clean Water Act)	Not applicable
Clean Air Act	Not applicable
OSHA Occupational Safety and Health Administration	Not applicable
CERCLA	Not applicable
California Proposition 65	This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
3,4-Dichloroaniline	X	-	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade	No information available
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16. Other information

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Revision Date	23-Jan-2018
Print Date	23-Jan-2018
Revision Summary	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS