

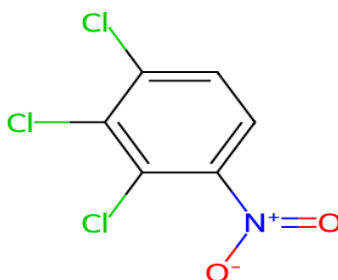
1. General Statement

2,3,4-Trichloronitrobenzene is a light-yellow fibrous powder; it does not mix well with water.

2. Chemical identity

Name : 2,3,4-Trichloronitrobenzene
 CAS number(s) :17700-09-3
 EC number : 241-705-5
 Molecular formula :C₆H₂Cl₃NO₂

structure :



3. Uses and Benefits

2,3,4-Trichloronitrobenzene is used as an industrial use resulting in manufacture of another substance (use of intermediates). This substance is used for the manufacture of: chemicals. Release to the environment of this substance can occur from industrial use: as an intermediate step in further manufacturing of another substance (use of intermediates) and of substances in closed systems with minimal release.

4. Physical / chemical properties

Property	Value
Physical state :	Solid
Colour :	Light yellow
Odour :	No data available
pH :	NA
Melting point :	56 °C
Boiling point :	296.2±35.0 °C at 760 mmHg (predicted)
Flash point :	> 110 °C

GPS Safety Summary

2,3,4-Trichloronitrobenzene

CL-4: PUBLIC

Density :	1.7±0.1 g/cm ³ (predicted)
Solubility in Water:	No data available

5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	Harmful if swallowed, in contact with skin or if inhaled
Irritation / corrosion Skin / eye/ respiratory tract	Causes skin irritation,Causes serious eye irritation,May cause respiratory irritation.
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	No
Fate and behavior	Result
Persistence and degradability	Biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

7. Exposure

Human health

This substance is harmful if swallowed, is harmful in contact with skin, causes serious eye irritation, is harmful if inhaled, causes skin irritation and may cause respiratory irritation. Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compounds. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. The exposure must be kept as minimum as

GPS Safety Summary

2,3,4-Trichloronitrobenzene

CL-4: PUBLIC

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. 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.

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:	Safety glasses
	Skin and body protection:	Wear suitable protective clothing
	Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.
Engineering controls	Do not breathe dust. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure that there is a suitable ventilation system.	
Environment protective measures		
Avoid release to the environment.		

9. First-aid measures

First-aid measures after inhalation: If you feel unwell, seek medical advice. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary.

First-aid measures after skin contact: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Take the victim to a doctor if irritation persists.

GPS Safety Summary

2,3,4-Trichloronitrobenzene

CL-4: PUBLIC

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Take victim to a doctor/medical service if irritation persists.

First-aid measures after ingestion : If swallowed, seek medical advice immediately and show this container or label. Get medical advice/attention.

10. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Carbon dioxide.

Unsuitable extinguishing media : Fight fire from safe distance and protected location.

Special hazards arising from the substance or mixture

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

Advice for firefighters

Precautionary measures fire : Eliminate all ignition sources if safe to do so. Stop leak if safe to do so.

Firefighting instructions : Fight fire from safe distance and protected location.

11. Accidental release measures

Protective equipment : Gloves. Protective clothing. Wear recommended personal protective equipment.

Environmental precautions : Avoid discharge to the atmosphere. Do not allow entrance to enter drains or water courses.

For containment : Stop leak without risks if possible.

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.

13. Handling and storage

GPS Safety Summary

2,3,4-Trichloronitrobenzene

CL-4: PUBLIC

Precautions for safe handling: Avoid contact with skin, eyes and clothing. Clean contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust. Do not discharge the waste into the drain. Do not handle it until all safety precautions have been read and understood. Ensure good ventilation of the work station. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

14. Classification and Labeling

Hazard pictograms (GHS US)

:



Signal word (GHS US)

: Warning

Hazard statements (GHS US)

: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Precautionary statements (GHS US)

: P261 - Avoid breathing dust, fume, gas, mist, vapours, 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.

P280 - Wear protective gloves.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

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.

P312 - Call a poison center or doctor if you feel unwell.

P321 - Specific treatment (see supplemental first aid instruction on this label).

P330 - Rinse mouth.

P332+P313 - If skin irritation occurs: Get medical advice or attention.

P337+P313 - If eye irritation persists: Get medical advice or attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

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

P405 - Store locked up.

P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

15. Conclusion

2,3,4-Trichloronitrobenzene is harmful if swallowed, is harmful in contact with skin, causes serious eye irritation, is harmful if inhaled, causes skin irritation and may cause respiratory irritation, causes skin irritation and may cause respiratory irritation. 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

GPS Safety Summary

2,3,4-Trichloronitrobenzene

CL-4: PUBLIC

antibody-mediated immune reactions. Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. 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 environmental 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.