



4-AMINO-2-CYANOTOLUENE

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY UNDERTAKING

Chemical Name: 4-Amino-2-cyanotoluene
Product Code: FA55035
Synonyms: 5-Amino-2-methylbenzonitrile
Recommended uses: For R&D purposes
Supplier: Carbosynth Ltd, 8&9 Old Station Business Park, Compton, Berkshire, RG20 6NE, UK.
Emergency contact numbers: Telephone: +44 (0)1635 578 444
Fax: +44 (0)1635 579 444
Mobile: +44 (0)7887 998 634

2. HAZARDS IDENTIFICATION

Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

Classification:

According to Regulation (EC) No1272/2008.

Acute toxicity, oral (Category 3)
Acute dermal toxicity (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity - single exposure (Category 3)

Labelling and precautionary statements:

Pictogram:



Signal word:

Danger.

Hazard statement(s): H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.

Precautionary statement(s):

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.



4-AMINO-2-CYANOTOLUENE

	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
	P330	Rinse mouth.
	P332 + P313	If skin irritation occurs: Get medical advice/ attention.
	P337 + P313	If eye irritation persists: Get medical advice/ attention.
	P362	Take off contaminated clothing and wash before reuse.
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
	P405	Store locked up.
	P501	Dispose of contents/container in accordance with local/regional/national/international regulation.
Hazard symbol(s):	T Xi	Toxic. Irritant.
R-phrases(s):	R23/24/25 R36/37/38	Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.
S-phrases(s):	S26 S36 S45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Formula:	Molecular weight:	CAS Number:	EINECS Number:
C ₈ H ₈ N ₂	132.16	50670-64-9	-
Synonyms:	5-Amino-2-methylbenzonitrile		

4. FIRST AID MEASURES

Eye contact:	Immediately flush eye with copious amounts of water for at least 15 minutes. Get medical aid immediately.
Skin contact:	In case of contact remove contaminated clothing and immediately wash affected areas with copious quantities of



4-AMINO-2-CYANOTOLUENE

Inhalation:	water and soap for at least 15 minutes. Get medical aid immediately. Wash contaminated clothing before reuse. Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical aid.
Ingestion:	Never give anything by mouth to an unconscious person. Wash out mouth with water provided person is conscious. Call a physician.
Notes to Physician:	Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Personal precautions:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Extinguishing media:	In case of fire use water spray, dry chemical powder, carbon dioxide, or alcohol-resistant foam.
Special hazards arising from the substance or mixture:	Carbon oxides, nitrogen oxides (NOx). Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

6. ACCIDENTAL RELEASE MEASURES

General Information:	Use proper personal protective equipment as indicated in Section 8.
Personal precautions:	Wear self-contained breathing apparatus, eye protection and gloves. Keep personal hygiene. Avoid contact with skin and eyes. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Environmental precautions:	Do not let product enter the drains.
Spills/Leaks:	Sweep up and place the material in appropriate container for disposal without creating dust and dispose of as hazardous waste. Ventilate area, clean up spills and wash spill site after material pickup is complete, observing precautions in the Protective Equipment section.

7. HANDLING AND STORAGE

Handling:	Wear appropriate protective clothing - see Section 8. Wash hands and face thoroughly after handling. Use only under a chemical fume hood. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid
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4-AMINO-2-CYANOTOLUENE

Storage: formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. Store in a cool, dry, well-ventilated area. Keep container tightly closed. Store away from incompatible materials such as oxidizing agents. Store locked up. Protect from light. Store at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protection equipment:

Eye protection: Wear appropriate protective safety glasses with side-shields conforming to EN166, chemical safety goggles or face-shield (min. 8-inch) as described by OSHA's eye and face protection regulations. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Wear appropriate protective gloves to prevent skin exposure, as defined in EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection: Appropriate protective clothing, overalls.

Respiratory protection: Where risk assessment indicates air-purifying respirators are required use a dust mask type P95 (US) or type P1 (EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Respirators and components must be tested and approved under appropriate government standards - NIOSH (US) or CEN (EU).

Hygiene measures: Use good working practices. Wash hands and face thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white/tan crystalline solid.

Odour: Data not available/does not apply.

Odour threshold: Data not available/does not apply.

pH: Data not available/does not apply.

Melting point: 88 - 91 °C (lit.).

Boiling point: 110°C (2.9kPa).

Flash point: Data not available/does not apply.

Evaporation rate: Data not available/does not apply.

Flammability: Data not available/does not apply.

Flammability or explosive limits: Data not available/does not apply.



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Vapor pressure:	Data not available/does not apply.
Vapor density:	Data not available/does not apply.
Relative density:	Data not available/does not apply.
Solubility:	Soluble (methanol).
Partition coefficient: n-octanol/water	Data not available/does not apply.
Auto-ignition temperature:	Data not available/does not apply.
Decomposition temperature:	Data not available/does not apply.
Viscosity:	Data not available/does not apply.

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under proper conditions.
Conditions to avoid:	Data not available.
Incompatibilities with other materials:	Strong oxidizing agents, acids.
Hazardous decomposition products:	Carbon dioxide, nitrogen oxides (NOx).
Hazardous polymerization:	Data not available.

11. TOXICOLOGICAL INFORMATION

RTCS #:	Data not available.
Acute toxicity:	Data not available.
Skin corrosion/irritation:	Data not available.
Serious eye damage/eye irritation:	Data not available.
Respiratory or skin sensitization:	Data not available.
Germ cell mutagenicity:	Data not available.
Carcinogenicity: IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	Data not available.
Specific target organ toxicity - single exposure:	Inhalation - May cause respiratory irritation.
Specific target organ toxicity - repeated exposure:	Data not available.
Aspiration hazard:	Data not available.
Signs and symptoms of exposure:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.



4-AMINO-2-CYANOTOLUENE

Target organs:	Data not available.
Potential health effects:	
Eye:	Causes serious eye irritation.
Skin:	Toxic if absorbed through skin. Causes skin irritation.
Ingestion:	Toxic if swallowed.
Inhalation:	Toxic if inhaled. Causes respiratory tract irritation.
Chronic:	No information found.

12. ECOLOGICAL INFORMATION

Data not available.

13. DISPOSAL CONSIDERATIONS

Observe all federal, state and local environmental regulations. Mix or dissolve the material in a combustible solvent and burn in chemical incinerator equipped with an afterburner and scrubber. Contact a licensed professional waste disposal service to dispose of this material.

14. TRANSPORT INFORMATION

This product is classified as hazardous for transport.

ADR/RID	Proper Shipping Name: NITRILES, SOLID, TOXIC, N.O.S. (4-Amino-2-cyanotoluene) UN Number: 3439 Class: 6.1 Packing Group: III Environmental hazards: No.
IMDG	Proper Shipping Name: NITRILES, SOLID, TOXIC, N.O.S. (4-Amino-2-cyanotoluene) UN Number: 3439 Class: 6.1 Packing Group: III Marine pollutant: No.
IATA	Proper Shipping Name: NITRILES, SOLID, TOXIC, N.O.S. (4-Amino-2-cyanotoluene) UN Number: 3439 Class: 6.1



4-AMINO-2-CYANOTOLUENE

Packing Group: III
Environmental hazards: No.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. ADDITIONAL INFORMATION

Further information on PPE:

European Standard & performance category markings:

EN143 -	Particulates filter.
EN166 -	Standard applicable to all types of personal eye protectors.
EN374 -	Protects hands against chemicals and/or microorganisms.

Gas & vapour protection:

A	Organic vapours
B	Inorganic vapours
E	Acid gases
K	Ammonia and its derivatives

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.