

Aniline

SECTION 1. IDENTIFICATION

Product Identifier	Aniline
Other Means of Identification	Aminobenzene, Benzenamine
Product Code(s)	AN1010
Product Family	Organic solution
Recommended Use	Industrial.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	1173

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 4; Acute toxicity (Oral) - Category 3; Acute toxicity (Dermal) - Category 3; Acute toxicity (Inhalation) - Category 2; Serious eye damage - Category 1; Skin sensitization - Category 1; Germ cell mutagenicity - Category 2; Specific target organ toxicity (repeated exposure) - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Combustible liquid.
Harmful if swallowed.
Toxic in contact with skin.
Fatal if inhaled.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Causes damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:

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Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Do not breathe dust/fume/gas/mist/vapours/spray.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.
In case of fire: Use carbon dioxide, dry chemical powder, appropriate foam to extinguish.

Storage:

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

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Very toxic to aquatic life.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Aniline	62-53-3	> 99	Aminobenzene, Benzenamine	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Avoid mouth-to-mouth contact by using a barrier device.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Call a Poison Centre or doctor if you feel unwell.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Immediately call a Poison Centre or doctor. Rinse mouth with water. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can cause severe irritation of the nose and throat. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. If in eyes: contact causes severe burns with redness, swelling, pain and

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blurred vision. Permanent damage including blindness can result. If on skin: skin sensitizer. May cause an allergic skin reaction in some people.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Combustible liquid. Can ignite if heated. Releases vapour that can form explosive mixture with air at or above the flash point. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: corrosive, oxidizing nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. Use water spray to flush spills away from ignition sources. Use water spray to dilute spills to non-flammable mixtures. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.

A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials. Eliminate all ignition sources if safe to do so.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Contain spill with earth, sand, or absorbent material which does not react with spilled material. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area. Dike and recover contaminated water for appropriate disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Avoid generating vapours or mists. Prevent accidental contact with incompatible chemicals. Avoid release to the environment. Never return unused or contaminated product to its original container. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Keep amount in storage to a minimum. Store in the original, labelled, shipping container. Comply with all applicable health and safety regulations, fire and

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building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Aniline	2 ppm A3 Skin		5 ppm Skin			

Aniline:

TLV Definitions:

"SKIN" NOTATION: Contact with skin, eyes, and mucous membranes can contribute to the overall exposure and may invalidate the TLV. Consider measures to prevent absorption by these routes.

CARCINOGENICITY DESIGNATION A3 - Animal Carcinogen: Substance is carcinogenic in laboratory animals under conditions that are not considered relevant to worker exposure. Available human studies and evidence suggest that the substance is not likely to cause cancer in humans except under unusual or unlikely routes or levels of exposure. Worker exposure to an A3 carcinogen should be controlled to levels as low as reasonably achievable below the TLV.

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Butyl rubber, Polyvinyl alcohol (PVAL), Viton(R)/Butyl rubber, Barrier(R) - PE/PA/PE, Silver Shield(R) - PE/EVAL/PE, Saranex(R), ChemMAX(R) 3, Frontline(R) 500, Microchem(R) 4000, Trelchem(R) HPS, Trelchem(R) VPS, Tychem(R) CPF 3, Tychem(R) F, Tychem(R) ThermoPro, Tychem(R) BR/LV, Tychem(R) Responder(R) CSM, Tychem(R) TK, Zytron(R) 300, Zytron(R) 500.

The following materials should NOT be used: Natural rubber, Neoprene rubber, Nitrile rubber, Polyvinyl chloride (PVC), Viton(R).

Respiratory Protection

In case of insufficient ventilation, wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Colourless oily liquid.
Odour	Musty
Odour Threshold	0.58 - 10 ppm (detection)
pH	8.1 (0.2 M solution)
Melting Point/Freezing Point	-6.03 °C (21.15 °F) (melting); -6.03 °C (21.15 °F) (freezing)
Initial Boiling Point/Range	184.0 - 184.5 °C (363.2 - 364.1 °F)
Flash Point	70 °C (158 °F)
Evaporation Rate	< 1 (n-butyl acetate = 1)
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	11.0% (upper); 1.3% (lower)
Vapour Pressure	0.04 kPa (0.30 mm Hg) at 20 °C

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Vapour Density (air = 1)	3.22
Relative Density (water = 1)	1.022 at 20 °C
Solubility	Moderately soluble in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	0.90 - 0.98
Auto-ignition Temperature	615 °C (1139 °F)
Decomposition Temperature	Not available
Viscosity	4.26 mm ² /s at 20 °C (calculated) (kinematic); 4.35 mPa.s at 20 °C (dynamic)
Other Information	
Physical State	Liquid
Molecular Weight	93.13
Other Physical Property 1	Above Vapour Density measured at 164 deg C.

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid). Alkaline Earth Metals.

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Aniline	~ 250 ppm (rat) (4-hour exposure)	250 mg/kg (rat)	840 mg/kg (rabbit)

Skin Corrosion/Irritation

Animal tests show very mild irritation.

Serious Eye Damage/Irritation

Causes serious eye damage.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Toxic, can cause death May cause severe nose and throat irritation.

Ingestion

Toxic, can cause death based on animal tests.

Aspiration Hazard

No information was located.

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STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

Skin sensitizer.

Not known to be a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Aniline	Group 3	A3	Not Listed	Not Listed

Group 3 – Not classifiable as to its carcinogenicity to humans. A3 – Confirmed animal carcinogen.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Animal tests show evidence of mutagenicity.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Burn in an approved incinerator according to federal, provincial/state, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN1547	Aniline	6.1	II
Canadian TDG	UN1547	Aniline	6.1	II

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

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Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating	Health - 2	Flammability - 2	Instability - 0
SDS Prepared By	Alphachem Limited		
Phone No.	(905)-821-2995		
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References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).		
Disclaimer	This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.		

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