



MATERIAL SAFETY DATA SHEETS

37

Aniline

1. CHEMICAL IDENTITY

Chemical Name : Aniline

Chemical Classification: Toxic

Trade Name :

Synonyms: Phenylamine, Amino benzene, Aniline oil

Formula : C₆H₇N

CAS No: 62-53-3

UN No: 1547

Regulated Identification

Shipping Name : Aniline

Hazchem Code : 3X

Codes / Label : Class 6.1, Toxic

Hazardous Waste ID No : 9

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 Aniline	62-53-3	3	
2		4	

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: 184-186

Physical State: Liquid

Appearance: Colorless, oily liquid when pure, darkens on exposure to light and air.

Melting Pt °C: -6.2

Vapour Pressure @ 35°C mmHg: 4.9X10⁻¹ mm Hg at 25 deg C

Odour: Musty fishy, amine-like aromatic odour

Vapour Density(Air =1): 3.22

Solubility in water at 30°C g/100ml: 34 g/L

Others: Miscible with alcohol, benzene, chloroform and other organic solvents. Easily acylated and alkylated.

Specific Gravity (Water =1): 1.0217 @ 20 deg C/20 deg C

pH : 8.1 (0.2 M Soln.)

3. FIRE / EXPLOSION HAZARD DATA

Flammability : Moderately flammable.

LEL: 1.3

Flash Point °C in OC:

TDG Flammability:

UEL: 11

Flash Point °C in CC: 70

Autoignition Temperature °C : 615

Explosion sensitivity to impact: Stable

Explosion sensitivity to static Electricity: Stable

Hazardous Combustion Products : Emits toxic fumes of Nox

Hazardous Polymerization : Will not occur.

Combustible Liquid: Yes

Explosive Material: No

Corrosive Material No

Flammable Material: Yes

Oxidiser : No

Others:

Pyrophoric Material: No

Organic Peroxide : No

4. REACTIVITY DATA

- Chemical Stability** : Stable
- Incompatibility with other material** : Strong acids, oxidisers, aluminum, fluorine, formaldehyde, iron, nitric acid.
- Reactivity** : Reacts vigorously with oxidising agents. Violent reaction with boron trichloride, peroxyformic acid, diisopropyl peroxydicarbonate, fluorine, trichloronitromethane, acetic anhydride.
- Hazardous Reaction Products** : Forms heat or shock-sensitive explosive mixtures with anilinium chloride (detonates at 240 deg C / 7.6 bar), nitromethane, hydrogen peroxide.

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, skin, eyes and ingestion

Effects of Exposure / Symptoms:

Acute exposure: Blue discolouration of finger tips, cheeks, lips and nose, nausea, vomiting, headache and drowsiness, followed by delirium, coma and shock. Chronic exposure: Loss of appetite, loss of weight, headache, visual disturbances, skin lesions.

Emergency Treatment :

Inhalation: Remove the victim to fresh air area and seek medical aid at once.

Skin: Immediately flush the skin with plenty of water for 15 mins. If cyanosis persists, shower with soap and warm water with special attention to scalp and finger nails. Administer oxygen until medical aid arrives.

Eyes: Irrigate with plenty of water for 15 min.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

LD50 (oral-rat) mg/kg:	250 mg/kg	STEL:	5 ppm, skin (in UK)
LC50 (rat) mg/kg:	175 ppm/7 hr (Mouse)	Odour Threshold:	0.5 ppm
Permissible Exposure Limit:	5 ppm (19 mg/m ³)	TLV (ACGIH) :	2 (Skin) ppm 10 (Skin) 2 ppm

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	3	2	0	

6. PREVENTIVE MEASURES

- Personal Protective Equipment** : Provide respirator, face shield, safety goggles, rubber hand gloves, boots and overclothing.
- Handling** : Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with heat, sparks and flame. Store protected from light. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
- Storage** : Store in a cool, well ventilated area, away from heat, acids, oxidising agents, flame, hexachloromelamine. Keep well closed and protect it from light.
- Precautions** : Avoid contact with liquid or vapours. Do not eat or drink at work place.

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Alcohol foam, CO₂, dry chemical powder

Special Procedure : Keep the containers cool by spraying water if exposed to heat or flame.

Unusual Hazards : Poisonous gases may be produced in fire.

EXPOSURE: First Aid Measures:

Inhalation: Remove the victim to fresh air area and seek medical aid at once.

Skin: Immediately flush the skin with plenty of water for 15 mins. If cyanosis persists, shower with soap and warm water with special attention to scalp and finger nails. Administer oxygen until medical aid arrives.

Eyes: Irrigate with plenty of water for 15 min.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Antidotes / Dosages:

SPILLS :

Steps To Be Taken : Shut off leaks if without risk. Contain the spillage on sand or earth. Wash the surface with soap and water

Waste Disposal Method: Seal all the waste in vapour tight plastic bags for eventual disposal.

8. ADDITIONAL INFORMATION / REFERENCES

The substance is toxic by absorption through skin, inhalation and ingestion. Symptoms may develop after several hours. Consumption of alcohol increases the toxic effect. Spontaneously explosive reaction occurs with Benzene diazonium - 2 - carboxylate, Dibenzoyl peroxide, Fluorine nitrate, Nitrocyll perchlorate, Red fuming nitric acid, Peroxodisulfuric acid and Tetranitromethane. Reaction with Perchloryl fluoride, Perchloric acid and Ozone forms explosive products.

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :	Contact person
MAILING ADDRESS :	in Emergency :
TELEPHONE / TELEX NOS :	Local Bodies involved :
TELEGRAPHIC ADDRESS :	Standard Packing :
OTHERS :	Trem Card Details / Ref :

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