

N-METHYLANILINE

MAN

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Anilinomethane N-Methylaminobenzene Methylaniline (mono) Methylphenylamine		Liquid	Yellow to light brown	Chemical odor
		May float or sink in water.		
<p>Keep people away. Avoid contact with liquid. Call fire department. Notify local health and pollution control agencies.</p>				
Fire	Combustible. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.			
Exposure	CALL FOR MEDICAL AID. LIQUID Irritating to skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.			
Water Pollution	Effect of low concentrations on aquatic life is unknown. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.			

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Contain
Collection Systems: Skim
Chemical and Physical Treatment:
Absorb
Clean shore line

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: C₆H₅NHCH₃
2.3 IMO/UN Designation: Not listed
2.4 DOT ID No.: 2294
2.5 CAS Registry No.: 100-61-8
2.6 NAERG Guide No.: 153
2.7 Standard Industrial Trade Classification: 51454

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Approved respirator; rubber gloves; splash proof goggles
 3.2 **Symptoms Following Exposure:** Inhalation causes dizziness and headache. Ingestion causes bluish discoloration (cyanosis) of lips, ear lobes, and fingernail beds. Liquid irritates eyes. Absorption through skin produces same symptoms as for ingestion.
 3.3 **Treatment of Exposure:** INHALATION: remove victim to fresh air and call a physician at once; administer oxygen until physician arrives. INGESTION: give large amount of water; get medical attention at once. EYES or SKIN: flush with plenty of water for at least 15 min.; if cyanosis is present, shower with soap and warm water, with special attention to scalp and finger nails; remove any contaminated clothing.
 3.4 TLV-TWA: 0.5 ppm
 3.5 TLV-STEL: Not listed.
 3.6 TLV-Ceiling: Not listed.
 3.7 Toxicity by Ingestion: Currently not available
 3.8 Toxicity by Inhalation: Currently not available.
 3.9 Chronic Toxicity: Currently not available
 3.10 Vapor (Gas) Irritant Characteristics: Currently not available
 3.11 Liquid or Solid Characteristics: Currently not available
 3.12 Odor Threshold: Currently not available
 3.13 IDLH Value: 100 ppm
 3.14 OSHA PEL-TWA: 2 ppm
 3.15 OSHA PEL-STEL: Not listed.
 3.16 OSHA PEL-Ceiling: Not listed.
 3.17 EPA AEGL: Not listed

4. FIRE HAZARDS

- 4.1 Flash Point: 175°F C.C.
 4.2 Flammable Limits in Air: Currently not available
 4.3 Fire Extinguishing Agents: Dry chemical, foam, carbon dioxide
 4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.
 4.5 Special Hazards of Combustion Products: Toxic vapors are generated when heated.
 4.6 Behavior in Fire: Currently not available
 4.7 Auto Ignition Temperature: Currently not available
 4.8 Electrical Hazards: Currently not available
 4.9 Burning Rate: 3.65 mm/min.
 4.10 Adiabatic Flame Temperature: Currently not available
 4.11 Stoichiometric Air to Fuel Ratio: 48.8 (calc.)
 4.12 Flame Temperature: Currently not available
 4.13 Combustion Molar Ratio (Reactant to Product): 12.5 (calc.)
 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

5. CHEMICAL REACTIVITY

- 5.1 Reactivity with Water: No reaction
 5.2 Reactivity with Common Materials: May attack some forms of plastics
 5.3 Stability During Transport: Stable
 5.4 Neutralizing Agents for Acids and Caustics: Not pertinent
 5.5 Polymerization: Not pertinent
 5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION

- 6.1 Aquatic Toxicity: Currently not available
 6.2 Waterfowl Toxicity: Currently not available
 6.3 Biological Oxygen Demand (BOD): Currently not available
 6.4 Food Chain Concentration Potential: None
 6.5 GESAMP Hazard Profile:
 Bioaccumulation: -
 Damage to living resources: -BC2
 Human Oral hazard: I
 Human Contact hazard: X
 Reduction of amenities:

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: Technical; Pure, 99+%
 7.2 Storage Temperature: Ambient
 7.3 Inert Atmosphere: No requirement
 7.4 Venting: Open
 7.5 IMO Pollution Category: Currently not available
 7.6 Ship Type: Currently not available
 7.7 Barge Hull Type: Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Keep Away From Food
 8.2 49 CFR Class: 6.1
 8.3 49 CFR Package Group: III
 8.4 Marine Pollutant: No
 8.5 NFPA Hazard Classification: Not listed
 8.6 EPA Reportable Quantity: Not listed.
 8.7 EPA Pollution Category: Not listed.
 8.8 RCRA Waste Number: Not listed
 8.9 EPA FWPCA List: Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 Physical State at 15° C and 1 atm: Liquid
 9.2 Molecular Weight: 107.2
 9.3 Boiling Point at 1 atm: 384.6°F = 195.9°C = 469.1°K
 9.4 Freezing Point: -71°F = -57°C = 216°K
 9.5 Critical Temperature: 802.4°F = 428°C = 701.2°K
 9.6 Critical Pressure: 754 psia = 51.3 atm = 5.20 MN/m²
 9.7 Specific Gravity: 0.989 at 20°C (liquid)
 9.8 Liquid Surface Tension: 39.6 dynes/cm = 0.0396 N/m at 20°C
 9.9 Liquid Water Interfacial Tension: Currently not available
 9.10 Vapor (Gas) Specific Gravity: 3.70
 9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
 9.12 Latent Heat of Vaporization: 180 Btu/lb = 100 cal/g = 4.20 X 10⁵ J/kg
 9.13 Heat of Combustion: -16,350 Btu/lb = -9,085 cal/g = -380.1 X 10⁵ J/kg
 9.14 Heat of Decomposition: Not pertinent
 9.15 Heat of Solution: Not pertinent
 9.16 Heat of Polymerization: Not pertinent
 9.17 Heat of Fusion: Currently not available
 9.18 Limiting Value: Currently not available
 9.19 Reid Vapor Pressure: Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
34	62.680	34	0.510	51	1.282	55	2.833
36	62.620	36	0.510	52	1.282	60	2.633
38	62.570	38	0.510	53	1.282	65	2.450
40	62.510	40	0.510	54	1.282	70	2.283
42	62.460	42	0.510	55	1.282	75	2.131
44	62.400	44	0.510	56	1.282	80	1.991
46	62.350	46	0.510	57	1.282	85	1.862
48	62.290	48	0.510	58	1.282	90	1.744
50	62.230	50	0.510	59	1.282	95	1.636
52	62.180	52	0.510	60	1.282	100	1.535
54	62.120	54	0.510	61	1.282	105	1.443
56	62.070	56	0.510	62	1.282	110	1.358
58	62.010	58	0.510	63	1.282	115	1.279
60	61.960	60	0.510	64	1.282	120	1.206
62	61.900	62	0.510	65	1.282		
64	61.850	64	0.510	66	1.282		
66	61.790	66	0.510	67	1.282		
68	61.740	68	0.510	68	1.282		
70	61.680	70	0.510	69	1.282		
72	61.620	72	0.510	70	1.282		
74	61.570	74	0.510	71	1.282		
76	61.510	76	0.510	72	1.282		
78	61.460	78	0.510	73	1.282		
80	61.400	80	0.510	74	1.282		
82	61.350	82	0.510	75	1.282		
84	61.290	84	0.510	76	1.282		

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I	120	0.041	120	0.00070		N
	N	130	0.058	130	0.00098		O
	S	140	0.081	140	0.00135		T
	O	150	0.111	150	0.00182		
	L	160	0.151	160	0.00244		P
	U	170	0.203	170	0.00322		E
	B	180	0.269	180	0.00420		R
	L	190	0.353	190	0.00543		T
	E	200	0.458	200	0.00693		I
		210	0.589	210	0.00878		N
		220	0.749	220	0.01101		E
		230	0.945	230	0.01368		N
		240	1.182	240	0.01687		T
		250	1.467	250	0.02065		
		260	1.807	260	0.02508		
		270	2.210	270	0.03025		
		280	2.685	280	0.03625		
		290	3.241	290	0.04318		
		300	3.888	300	0.05111		
		310	4.637	310	0.06017		
		320	5.500	320	0.07045		
		330	6.489	330	0.08206		
		340	7.617	340	0.09512		
		350	8.898	350	0.10970		
		360	10.350	360	0.12610		
		370	11.980	370	0.14420		