

# 2-NITROANILINE

NTA

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION		
Common Synonyms 1-Amino-2-nitrobenzene Azoic diazo component 6 o-Nitraniline o-Nitroaniline ONA	Solid	Orange	Musty odor	<p><b>4.1 Flash Point:</b> Not pertinent (combustible solid)</p> <p><b>4.2 Flammable Limits in Air:</b> Not pertinent</p> <p><b>4.3 Fire Extinguishing Agents:</b> Water, foam, dry chemical, carbon dioxide</p> <p><b>4.4 Fire Extinguishing Agents Not to Be Used:</b> Currently not available</p> <p><b>4.5 Special Hazards of Combustion Products:</b> Toxic oxides of nitrogen may form in fire.</p> <p><b>4.6 Behavior in Fire:</b> Currently not available</p> <p><b>4.7 Auto Ignition Temperature:</b> 970°F</p> <p><b>4.8 Electrical Hazards:</b> Not pertinent</p> <p><b>4.9 Burning Rate:</b> Not pertinent</p> <p><b>4.10 Adiabatic Flame Temperature:</b> Currently not available</p> <p><b>4.11 Stoichiometric Air to Fuel Ratio:</b> 40.5 (calc.)</p> <p><b>4.12 Flame Temperature:</b> Currently not available</p> <p><b>4.13 Combustion Molar Ratio (Reactant to Product):</b> 11.0 (calc.)</p> <p><b>4.14 Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed</p>	<p><b>7.1 Grades of Purity:</b> Commercial, 100%</p> <p><b>7.2 Storage Temperature:</b> Ambient</p> <p><b>7.3 Inert Atmosphere:</b> No requirement</p> <p><b>7.4 Venting:</b> Open</p> <p><b>7.5 IMO Pollution Category:</b> Currently not available</p> <p><b>7.6 Ship Type:</b> Currently not available</p> <p><b>7.7 Barge Hull Type:</b> Currently not available</p>		
<p>Keep people away. Avoid contact with solid and dust. Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>				<p><b>8. HAZARD CLASSIFICATIONS</b></p> <p><b>8.1 49 CFR Category:</b> Poison</p> <p><b>8.2 49 CFR Class:</b> 6.1</p> <p><b>8.3 49 CFR Package Group:</b> II</p> <p><b>8.4 Marine Pollutant:</b> No</p> <p><b>8.5 NFPA Hazard Classification:</b> Not listed</p> <p><b>8.6 EPA Reportable Quantity:</b> Not listed.</p> <p><b>8.7 EPA Pollution Category:</b> Not listed.</p> <p><b>8.8 RCRA Waste Number:</b> Not listed</p> <p><b>8.9 EPA FWPCA List:</b> Not listed</p>			
<p><b>Fire</b> Combustible. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus. Extinguish with water, dry chemicals, foam, or carbon dioxide. Cool exposed containers with water.</p>				<p><b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b></p> <p><b>9.1 Physical State at 15°C and 1 atm:</b> Solid</p> <p><b>9.2 Molecular Weight:</b> 138.1</p> <p><b>9.3 Boiling Point at 1 atm:</b> 543°F = 284°C = 557°K</p> <p><b>9.4 Freezing Point:</b> 160°F = 71°C = 344°K</p> <p><b>9.5 Critical Temperature:</b> Not pertinent</p> <p><b>9.6 Critical Pressure:</b> Not pertinent</p> <p><b>9.7 Specific Gravity:</b> 1.44 at 20°C (solid)</p> <p><b>9.8 Liquid Surface Tension:</b> Not pertinent</p> <p><b>9.9 Liquid Water Interfacial Tension:</b> Not pertinent</p> <p><b>9.10 Vapor (Gas) Specific Gravity:</b> Not pertinent</p> <p><b>9.11 Ratio of Specific Heats of Vapor (Gas):</b> Not pertinent</p> <p><b>9.12 Latent Heat of Vaporization:</b> Not pertinent</p> <p><b>9.13 Heat of Combustion:</b> -10,000 Btu/lb = -5,550 cal/g = -232 X 10³ J/kg</p> <p><b>9.14 Heat of Decomposition:</b> Not pertinent</p> <p><b>9.15 Heat of Solution:</b> Not pertinent</p> <p><b>9.16 Heat of Polymerization:</b> Not pertinent</p> <p><b>9.17 Heat of Fusion:</b> 27.88 cal/g</p> <p><b>9.18 Limiting Value:</b> Currently not available</p> <p><b>9.19 Reid Vapor Pressure:</b> Currently not available</p>			
<p><b>Exposure</b> CALL FOR MEDICAL AID. DUST Irritating to eyes, nose and throat. If inhaled will cause headache, dizziness, or loss of consciousness. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>SOLID Irritating to skin and eyes. If swallowed will cause headache, dizziness, nausea, vomiting or loss of consciousness. 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 and have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>				<p><b>5. CHEMICAL REACTIVITY</b></p> <p><b>5.1 Reactivity with Water:</b> No reaction</p> <p><b>5.2 Reactivity with Common Materials:</b> Currently not available</p> <p><b>5.3 Stability During Transport:</b> Stable</p> <p><b>5.4 Neutralizing Agents for Acids and Caustics:</b> Not pertinent</p> <p><b>5.5 Polymerization:</b> Not pertinent</p> <p><b>5.6 Inhibitor of Polymerization:</b> Not pertinent</p> <p><b>6. WATER POLLUTION</b></p> <p><b>6.1 Aquatic Toxicity:</b> 24 ppm/<sup>24</sup>Daphnia/threshold toxicity/fresh water *Time period not specified.</p> <p><b>6.2 Waterfowl Toxicity:</b> Currently not available</p> <p><b>6.3 Biological Oxygen Demand (BOD):</b> Currently not available</p> <p><b>6.4 Food Chain Concentration Potential:</b> None</p> <p><b>6.5 GESAMP Hazard Profile:</b> Not listed</p>			
<p><b>Water Pollution</b> HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>				<p><b>NOTES</b></p>			
<p><b>1. CORRECTIVE RESPONSE ACTIONS</b></p> <p>Stop discharge Contain Collection Systems: Skim; Dredge</p>			<p><b>2. CHEMICAL DESIGNATIONS</b></p> <p><b>2.1 CG Compatibility Group:</b> Not listed.</p> <p><b>2.2 Formula:</b> 1, 2-C<sub>6</sub>H<sub>4</sub>NO:NH<sub>2</sub></p> <p><b>2.3 IMO/UN Designation:</b> 6.1/1661</p> <p><b>2.4 DOT ID No.:</b> 1661</p> <p><b>2.5 CAS Registry No.:</b> 88-74-4</p> <p><b>2.6 NAERG Guide No.:</b> 153</p> <p><b>2.7 Standard Industrial Trade Classification:</b> 51454</p>				
<p><b>3. HEALTH HAZARDS</b></p> <p><b>3.1 Personal Protective Equipment:</b> Self-contained breathing apparatus; neoprene gauntlets; safety goggles; rubber or neoprene sealed-tongue work shoes and apron; close-weave cotton coveralls capable of closing at wrist and ankles.</p> <p><b>3.2 Symptoms Following Exposure:</b> Inhalation or ingestion causes headache, nausea, methemoglobinemia, vomiting, weakness, and stupor; cyanosis caused by contact usually develops in 4-6 hrs.; prolonged and excessive exposure may also cause liver damage. Contact with eyes or skin causes irritation; continued exposure may cause same symptoms as inhalation or ingestion.</p> <p><b>3.3 Treatment of Exposure:</b> INHALATION: remove victim to fresh air; administer oxygen if required; get medical attention. INGESTION: induce vomiting; get medical attention. EYES: flush with water for at least 15 min. SKIN: flush with water, wash with soap and water; be sure that no solid remains under fingernails or in hair.</p> <p><b>3.4 TLV-TWA:</b> Not listed.</p> <p><b>3.5 TLV-STEL:</b> Not listed.</p> <p><b>3.6 TLV-Ceiling:</b> Not listed.</p> <p><b>3.7 Toxicity by Ingestion:</b> Grade 2; LD<sub>50</sub> = 0.5-5 g/kg</p> <p><b>3.8 Toxicity by Inhalation:</b> Currently not available.</p> <p><b>3.9 Chronic Toxicity:</b> Currently not available</p> <p><b>3.10 Vapor (Gas) Irritant Characteristics:</b> Currently not available</p> <p><b>3.11 Liquid or Solid Characteristics:</b> Currently not available</p> <p><b>3.12 Odor Threshold:</b> Currently not available</p> <p><b>3.13 IDLH Value:</b> Not listed.</p> <p><b>3.14 OSHA PEL-TWA:</b> Not listed.</p> <p><b>3.15 OSHA PEL-STEL:</b> Not listed.</p> <p><b>3.16 OSHA PEL-Ceiling:</b> Not listed.</p> <p><b>3.17 EPA AEGL:</b> Not listed</p>							

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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
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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
34	0.006		NOT		NOT		NOT
36	0.012						
38	0.017						
40	0.022						
42	0.028						
44	0.033						
46	0.038						
48	0.044						
50	0.049						
52	0.054						
54	0.060						
56	0.065						
58	0.070						
60	0.076						
62	0.081						
64	0.086						
66	0.092						
68	0.097						
70	0.102						
72	0.108						
74	0.113						
76	0.118						
78	0.124						
80	0.129						
82	0.134						
84	0.140						