

Material Safety Data Sheet

2-Bromoaniline, 98%

ACC# 07667

Section 1 - Chemical Product and Company Identification

MSDS Name: 2-Bromoaniline, 98%

Catalog Numbers: AC106610000, AC106610250, AC106611000, NC9187727, XXAC10661-2KG

Synonyms: o-Bromoaniline.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
615-36-1	2-Bromoaniline	98	210-421-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: brown yellow, red brown or brown solid. Flash Point: > 66 deg C.

Warning! Causes eye, skin, and respiratory tract irritation. Harmful if swallowed, inhaled, or absorbed through the skin. May cause methemoglobinemia. Material is a solid at room temperature that melts upon moderate heating into a combustible liquid with a flash point below 200°F(93.3°C).

Target Organs: Blood, kidneys, central nervous system, liver.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. Aniline acts through an intermediate to change hemoglobin to methemoglobin. In one subject, 65 mg of aniline increased the methemoglobin level by 16% within 2 hours. Intense methemoglobinemia may lead to asphyxia severe enough to injure the cells of the central nervous system. Pathologic findings in acute fatalities from aniline include chocolate color of the blood; injury to the kidney, liver and spleen; and hemolysis.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown blood. Inhalation of aniline causes anoxia due to the formation of methemoglobin.

Chronic: May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.

Antidote: Methylene blue, alone or in combination with oxygen is indicated as a treatment in nitrite induced methemoglobinemia.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.

Flash Point: > 66 deg C (> 150.80 deg F)

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 2; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Avoid breathing dust. Keep away from heat and flame.

Storage: Keep away from heat and flame. Store in a cool, dry place.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2-Bromoaniline	none listed	none listed	none listed

OSHA Vacated PELs: 2-Bromoaniline: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: brown yellow, red brown or brown

Odor: None reported.

pH: Not available.

Vapor Pressure: 30 mbar @ 120 C

Vapor Density: 5.9

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 229 deg C @ 760 mmHg

Freezing/Melting Point:29-31 deg C

Decomposition Temperature:Not available.

Solubility: insoluble

Specific Gravity/Density:1.578

Molecular Formula:C6H6BrN

Molecular Weight:172.02

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Ignition sources, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen bromide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 615-36-1 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 615-36-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found.

Teratogenicity: No information found

Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	TOXIC SOLIDS, ORGANIC, N.O.S.	TOXIC SOLID, ORGANIC, N.O.S. (2-BROMOANILINE)
Hazard Class:	6.1	6.1
UN Number:	UN2811	UN2811
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 615-36-1 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 615-36-1: immediate.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 615-36-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 615-36-1: No information available.

Canada - DSL/NDSL

CAS# 615-36-1 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #5 Date: 12/18/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.