

## 4-(dimethylamino)azobenzene 60-11-7 MSDS

### Section 1 - Chemical Product

MSDS Name: Methyl Yellow indicator grade Material Safety Data Sheet  
Synonym: C. I. 11020; 4-Dimethylaminoazobenzene;  
N,N-Dimethyl-4-phenylazoaniline; Solvent Yellow 2

### Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
60-11-7	4-Dimethylaminoazobenzene	100	200-455-7

Hazard Symbols: T

Risk Phrases: 25 40

### Section 3 - HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Toxic if swallowed. Limited evidence of a carcinogenic effect. Cancer suspect agent.

#### Potential Health Effects

##### Eye:

Contact with eyes may cause severe irritation, and possible eye burns.

##### Skin:

May cause severe skin irritation. May cause dermatitis. May be harmful if absorbed through the skin.

##### Ingestion:

Harmful if swallowed. May cause digestive tract disturbances. May form methemoglobin which in sufficient concentration causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood).

##### Inhalation:

May cause respiratory tract irritation. May be harmful if inhaled.

##### Chronic:

Possible cancer hazard based on tests with laboratory animals.

### Section 4 - FIRST AID MEASURES

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

##### Skin:

Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Remove contaminated clothing and shoes.

Ingestion:

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.

Inhalation:

Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

Effects may be delayed. Treat symptomatically and supportively. 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. Decomposes at high temperatures, resulting in toxic and corrosive products. Containers may explode when heated.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam. Cool containers with flooding quantities of water until well after fire is out.

#### **Section 6 - ACCIDENTAL RELEASE MEASURES**

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

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Vacuum or sweep up material and place into a suitable, dry disposal container.

#### **Section 7 - HANDLING and STORAGE**

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed.

Do not breathe dust. Use only with adequate ventilation.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances. Poison room locked. Keep containers tightly closed.

#### 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 adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. See 29CFR 1910.1003 for specific regulatory requirements applying to areas containing a listed carcinogen, signs, training, reports, and medical surveillance programs.

Exposure Limits CAS# 60-11-7: United States OSHA: ; (Cancer suspect agent - see 29 CFR 1910.101 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 protective 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: Powder

Color: orange-brown - orange

Odor: None reported.

pH: ca. 5-7 (10g/l aq soln.)

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 111-117 deg C (dec)

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: 111-117 deg C

Solubility in water: 13.6mg/l in water

Specific Gravity/Density:

Molecular Formula: C14H15N3

Molecular Weight: 225.29

#### Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Dust generation.

Incompatibilities with Other Materials:

Acids - acid anhydrides - oxidizing agents.

Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

#### Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 60-11-7: BX7350000 LD50/LC50:

CAS# 60-11-7: Oral, mouse: LD50 = 300 mg/kg; Oral, rat: LD50 = 200 mg/kg.

Carcinogenicity:

4-Dimethylaminoazobenzene - California: carcinogen, initial date 1/1/88

NTP: Suspect carcinogen IARC: Group 2B carcinogen Other:

See actual entry in RTECS for complete information.

#### Section 12 - ECOLOGICAL INFORMATION

#### Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: DYE, SOLID, TOXIC, N. O. S. \*

Hazard Class: 6.1

UN Number: 3143

Packing Group: III

IMO

Shipping Name: DYE, SOLID, TOXIC, N. O. S.

Hazard Class: 6.1

UN Number: 3143

Packing Group: III

RID/ADR

Shipping Name: DYE, SOLID, TOXIC, N. O. S.

Hazard Class: 6.1

UN Number: 3143

Packing group: II

USA RQ: CAS# 60-11-7: 10 lb final RQ; 4.54 kg final RQ

**Section 15 - REGULATORY INFORMATION**

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 25 Toxic if swallowed.

R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

S 28A After contact with skin, wash immediately with plenty of water.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 60-11-7: No information available.

Canada

CAS# 60-11-7 is listed on Canada's DSL List.

CAS# 60-11-7 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 60-11-7 is listed on the TSCA inventory.

**SECTION 16 - ADDITIONAL INFORMATION**

N/A

---

---