

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Melamine

Product Number : M2659  
Brand : Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Target Organ Effect

##### Target Organs

Kidney, Bladder

##### GHS Classification

Acute toxicity, Oral (Category 5)

##### GHS Label elements, including precautionary statements

Pictogram : none

Signal word : Warning

Hazard statement(s)  
H303 : May be harmful if swallowed.

Precautionary statement(s) : none

#### HMIS Classification

Health hazard: 1  
Chronic Health Hazard: \*  
Flammability: 1  
Physical hazards: 0

#### NFPA Rating

Health hazard: 0  
Fire: 1  
Reactivity Hazard: 0

#### Potential Health Effects

**Inhalation** : May be harmful if inhaled. May cause respiratory tract irritation.  
**Skin** : May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.  
**Ingestion** May be harmful if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 2,4,6-Triamino-1,3,5-triazine  
sym-Triaminotriazine

Formula : C<sub>3</sub>H<sub>6</sub>N<sub>6</sub>

Molecular Weight : 126.12 g/mol

Component		Concentration
<b>Melamine</b>		
CAS-No.	108-78-1	-
EC-No.	203-615-4	-

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### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Not flammable or combustible.

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

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### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Avoid breathing dust.

#### Environmental precautions

Do not let product enter drains.

#### Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

#### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Melamine	108-78-1	TWA	5 mg/m <sup>3</sup>	USA. Workplace Environmental Exposure Levels (WEEL)
		TWA	10 mg/m <sup>3</sup>	USA. Workplace Environmental Exposure Levels (WEEL)

### Personal protective equipment

#### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form                      solid  
Colour                    no data available

### Safety data

pH                         no data available  
Melting point/freezing point    Melting point/range: > 300 °C (> 572 °F) - lit.  
Boiling point            no data available  
Flash point              300 °C (572 °F) - closed cup  
Ignition temperature    no data available  
Autoignition temperature    no data available  
Lower explosion limit    no data available  
Upper explosion limit    no data available  
Vapour pressure         no data available  
Density                  no data available  
Water solubility         no data available

Partition coefficient: n-octanol/water	log Pow: -1.29
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents, Strong acids

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)  
Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 3,161 mg/kg

#### Inhalation LC50

no data available

#### Dermal LD50

LD50 Dermal - rabbit - > 1,000 mg/kg

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

Skin - rabbit - No skin irritation

### Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation - 24 h

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.

Genotoxicity in vivo - mouse - Oral  
Micronucleus test

### Carcinogenicity

Carcinogenicity - rat - Oral  
Tumorigenic: Carcinogenic by RTECS criteria. Kidney, Ureter, Bladder: Tumors.

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Melamine)  
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### **Reproductive toxicity**

Reproductive toxicity - rat - Inhalation

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Effects on Fertility:

Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).

Effects on Embryo or Fetus: Fetal death.

no data available

#### **Teratogenicity**

no data available

#### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

#### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

#### **Aspiration hazard**

no data available

#### **Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.

#### **Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### **Synergistic effects**

no data available

#### **Additional Information**

RTECS: OS0700000

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## **12. ECOLOGICAL INFORMATION**

#### **Toxicity**

no data available

#### **Persistence and degradability**

no data available

#### **Bioaccumulative potential**

no data available

#### **Mobility in soil**

no data available

#### **PBT and vPvB assessment**

no data available

#### **Other adverse effects**

no data available

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### 13. DISPOSAL CONSIDERATIONS

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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### 15. REGULATORY INFORMATION

**OSHA Hazards**

Target Organ Effect

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Chronic Health Hazard

**Massachusetts Right To Know Components**

Melamine

CAS-No.  
108-78-1

Revision Date  
1993-04-24

**Pennsylvania Right To Know Components**

Melamine

CAS-No.  
108-78-1

Revision Date  
1993-04-24

**New Jersey Right To Know Components**

Melamine

CAS-No.  
108-78-1

Revision Date  
1993-04-24

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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### 16. OTHER INFORMATION

**Further information**

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