

# MATERIAL SAFETY DATA SHEET

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Ortho-Chlorobenzylidene Malonitrile



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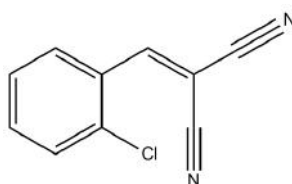
## SECTION 1: Identification of the substance/mixture and of the company

### 1.1 Product identifiers

Product name Ortho-Chlorobenzylidene Malonitrile  
CAS number 2698-41-1

Molecular formula C<sub>10</sub>H<sub>5</sub>ClN<sub>2</sub>

Chemical structure



Molecular weight 188.5  
Appearance Transparent liquid with the odor of pepper

### 1.2 Details of the supplier of the material safety data sheet

Company SHAANXI DAYU CHEMICAL CO., LTD.  
Address Building NO.8, XiShi Jiajun, , XiShi 2nd Road,  
Lianhu District, Xi'an, Shaanxi, China  
Telephone 0086-29-88643345  
Email info@dayuchemical.com  
Website www.hidayuchemical.com

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## SECTION 2: Composition/information on ingredients

Product name Ortho-Chlorobenzylidene Malonitrile  
CAS number 2698-41-1  
Purity 98%

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## **SECTION 3: Hazards identification**

### **EMERGENCY OVERVIEW**

Appearance: white crystalline powder.

The toxicological properties of this material have not been fully investigated.

Be cautious! May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

Target Organs: None.

### **POTENTIAL HEALTH EFFECTS**

Eye: May cause eye irritation. The toxicological properties of this material have not been fully investigated.

Skin: May cause skin irritation. The toxicological properties of this material have not been fully investigated.

Ingestion: May cause irritation of the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic: No information found.

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## **SECTION 4: First aid measures**

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

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

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## **SECTION 5: Firefighting 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.

Extinguishing Media: Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

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## **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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

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## **SECTION 7: Handling and storage**

Handling: Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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## **SECTION 8: Exposure controls/personal protection**

### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

### GENERAL HYGIENE MEASURES

Discard contaminated clothing and shoes. Wash thoroughly after handling.

### Personal Protective Equipment

Eyes: Wear protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection

Skin: Wear protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

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## **SECTION 9: Physical and chemical properties**

Appearance: Transparent Liquid

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.  
Viscosity: Not available.  
Boiling Point: Not available.  
Freezing/Melting Point: 93-96.5 deg C  
Decomposition Temperature: Not available.  
Solubility: Not available.  
Specific Gravity/Density: Not available.  
Molecular Formula: C<sub>10</sub>H<sub>5</sub>N<sub>2</sub>CL  
Molecular Weight: 188.5

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## **SECTION 10: Stability and reactivity**

Chemical Stability: Stable under normal temperatures and pressures.  
Conditions to Avoid: Incompatible materials, dust generation, excess heat.  
Incompatibilities with Other Materials: Oxidizing agents.  
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen bromide.  
Hazardous Polymerization: Has not been reported.

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## **SECTION 11: Toxicological information**

CAS# 2698-41-1:  
LD50/LC50:  
LD50: 1366mg/kg  
LC50: 61g/m<sup>3</sup>.min  
Carcinogenicity:  
CAS# 2698-41-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA  
Epidemiology: No information available  
Teratogenicity: No information available  
Reproductive Effects: No information available  
Neurotoxicity: No information available.  
Mutagenicity: No information available  
Other Studies: No data available

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## **SECTION 12: Ecological information**

No information available.

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## **SECTION 13: Disposal considerations**

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## **SECTION 14: Transport information**

RID/ADR

UN#: 1693

Class: 6.1

PG: II

Proper Shipping Name: Tear gas solution

IMDG

UN#: 1693

Class: 6.1

PG: II

EmS Number: 6.1-03

MFAG Number: 740

Proper Shipping Name: TEAR GAS solution

Marine Pollutant: No

Severe Marine Pollutant: No

Technical Name: Required

IATA

UN#: 1693

Class: 6.1

PG: II

Proper Shipping Name: Tear gas solution

Inhalation Packing Group I: No

Technical Name: Required

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## **SECTION 15: Regulatory information**

US FEDERAL

TSCA

CAS# 2698-41-1: None 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.

#### SARA

##### 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.

#### 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 depletors. This material does not contain any Class 2 Ozone depletors.

#### 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.

#### STATE

CAS# 2698-41-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

#### European/International Regulations

##### European Labeling in Accordance with EC Directives

##### Hazard Symbols:

Not available.

##### Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

S 37 Wear suitable gloves.

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

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

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## **SECTION 16: Other information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SHAANXI DAYU CHEMICAL CO., LTD. shall not be held liable for any damage resulting from handling or from contact with the above product. Please see additional terms and conditions for reference.