

MATERIAL SAFETY DATA SHEET

1. Chemical product/ company identification

Trade names and synonyms: Dimethomorph

Chemical Family: Morpholide

Formula: $C_{21}H_{22}ClNO_4$

Mol Wt: 387.9

Company identification: HEBEI JRAIN TECHNOLOGY CO.,LTD.

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2. Composition/ Information on ingredients

Components

Material	CAS Number	%
Dimethomorph (E,Z)-4-[3-(4-chlorophenyl)-3 -(3,4-dimethoxyphenyl)-1-oxo-2 -propenyl]morpholine	110488-70-5	96%
Others:		4%

3. Hazards identification

Emergency overview

Appearance and odor: gray odorless powder

Warning statements:

Keep out of the reach of children.

Warning!

No irritation to eyes or skin.

Harmful if swallowed or absorbed through skin..

Avoid contact wit skin, eyes, and clothing. Wash thoroughly with soap and water after handling.

4. First aid measures

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin contact: Flush skin with water after contact. Wash contaminated clothing before reuse.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion: If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person.

5. Fire fighting measures

Flammable properties: Non-flammable

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Extinguishing media: Water spray, foam, dry chemical, CO₂

Special firefighting procedures: Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Decontaminate emergency personnel with soap and water before leaving the fire area.

Unusual fire explosion hazards: Organic dusts may form an explosive dust/air mixture.

6. Accidental release measures

Spill and leak procedures:

In case of large scale spillage of this product, avoid contact, isolate area and keep out animals and unprotected persons. For a small spill, wear personal protective equipment as specified on the label.

For a liquid spill: Dike and contain the spill with inert material (sand, earth, etc.) and transfer the liquid and solid diking materials to separate containers for disposal.

For a solid spill: Sweep solid into a drum for re-use or disposal. Remove personal protective equipment and decontaminate it prior to re-use.

7. Handling and storage

Handling (Personnel)

Do not get in eyes, on skin or clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Wash clothing after use.

Do not contaminate water when disposing of equipment washwaters.

Pesticide applicators & workers must refer to the product label and directions for use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170.

8. Exposure controls/ Personal protection

Recommendations for manufacturing, commercial blending, and packaging workers:

Respiratory Protection:

Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.

Eye Protection:

Chemical goggles when respirator does not provide eye protection.

Protective clothing:

Gloves and protective clothing as necessary to prevent skin contact.

Ventilation:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

9. Physical and chemical properties

Appearance: Yellow powder

Melting point: 125.2-149.2°C; (E)-isomer 136.8-138.3°C; (Z)-isomer 166.3-168.5°C

Vapour pressure: (E)-isomer 9.7×10^{-4} mPa; (Z)-isomer 1.0×10^{-3} mPa (both 25°C)

Density: Bulk density 1318 kg/m³ (20°C)

Solubility: In water 81.1 (pH 5), 49.2 (pH 7), 41.8 (pH 9) (all in mg/l, 20°C). In n-heptane 0.12 (E), 0.053 (Z); xylene 22.2 (E), 6.4 (Z); 1,2-dichloroethane 182.5 (E), 92.5 (Z); acetone 105.6

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(E), 18 (Z), methanol 33.5 (E), 7.5 (Z) (all in mg/l). In n-hexane 0.11, methanol 39, ethyl acetate 48.3, toluene 49.5, acetone 100, dichloromethane 461 (all for (E, Z), in mg/l).

10. Stability and reactivity

Stability: Stable. Store in a cool well ventilated area.

Conditions to avoid: Store in original container in cool, dry, well ventilated place away from ignition sources, eat or flame.

Chemical incompatibility: Oxidizing agents.

Hazardous decomposition products: Oxides of carbon and nitrogen; HCl

Hazardous polymerization: Dose not occur.

Conditions: to avoid: Dose not polymerize.

Corrosive to metal: No

Oxidizer: No

11. Toxicological information

Oral: Acute oral LD₅₀ for male rats 4300, female rats 3500, male mice >5000, female mice 3700 mg/kg b.w.

Skin and eye: Acute percutaneous LD₅₀ for rats >5000 mg/kg b.w.

Not irritant to skin or eyes of rabbits.

Not a skin sensitizer (guinea pigs, M&K test).

Inhalation: LC₅₀ (4h) for rats >4.2 mg/l air (maximum attainable concentration).

12. Ecological information

Birds: Acute oral LD₅₀ for mallard ducks and Northern bobwhite quail >2000mg/kg. Dietary LC₅₀ >5200 ppm. Fish LC₅₀ (96h) for bluegill sunfish >25, carp 14, rainbow trout 6.2 mg/l. Daphnia EC₅₀ (48h) >10.6mg/l. Algae: EC₅₀ (96h) 29.2mg/l. Bees Non-toxic to honeybees at >100 µg/bee (contact), at 32.4 µg/bee (oral); (highest doses tested). Worms: EC₅₀ for earthworms >1000mg/kg soil.

13. Disposal considerations

Waste disposal method:

Pesticide wastes are acutely hazardous. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

For plastic containers: Triple rinse (or equivalent) and add rinsate to the spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning, If burned, stay out of smoke.

For bulk containers: Reusable containers should be returned to the point of purchase for cleaning and refilling.

For minibulk containers: Clean all tanks on an approved loading pad so rinsate can be collected and mixed into the spray solution or into a dedicated tank. Using a high pressure sprayer, rinse several times with small volumes of water to minimize rinsate.

14. Transportation information

According to the local government. The following details are from China.

Dangerous goods class: 9

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains 96% Dimethomorph)

UN number: 3077

Packing group: III

15. Regulatory information

According to the local government.

16. Other information

Additional Information

DO NOT allow to become overheated in storage.

KEEP OUT OF REACH OF CHILDREN

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