



Hangzhou Tianlong Biotechnology Co., Ltd.

Add: Room 1906, Fengqi Times Tower, No.338, Fengqi East Road, Hangzhou, Zhejiang, China.

MATERIAL SAFETY DATA SHEET

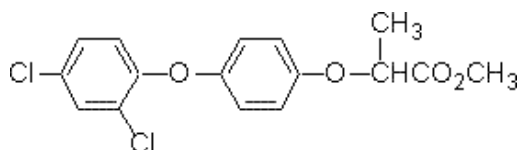
1. Chemical Product and company Identification

Product Name: Diclofop-methyl

Molecular Formula: C₁₆H₁₄Cl₂O₄

Molecular Weight: 341.19

Structural Formula:



Chemical Name: methyl 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoate

CAS No.: 51338-27-3

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

Address: Room 1906, Fengqi Times Tower, No.338 Fengqi East Road, Hangzhou, China, 310020

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2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Diclofop-methyl	51338-27-3	97.0
Other ingredients		3.0

3. Hazards Identification

Harmful if swallowed. Irritating to eyes.

Harmful: may cause lung damage if swallowed.

4. First Aid Measures

Swallowed: Wash out mouth with water. Do not induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice as above.

Eye: Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.

Skin: Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried

Inhaled: If inhaled, remove to fresh air and keep at rest. Obtain medical advice if at all worried.

5. Fire-Fighting Measures

Extinguishing Media: Water fog, fine water spray, foam or dry agent.

Special Fire Fighting Procedures: This product is a combustible liquid. Fire fighters should wear full protective gear, including self-contained breathing apparatus. Toxic decomposition products may be produced in a fire. Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area to prevent contamination of water sources. Dispose of fire control water and spillage later.

6. Accidental Release Measures

Spills & Disposal Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal.

7. Handling And Storage

Keep out of reach of children. Avoid contact with eyes and skin and do not inhale spray mist. Store in the closed, original container in a cool, well-ventilated area out of direct sunlight. Protect from extremes of heat and cold. Keep away from food, drink and animal feed.

8. Exposure Controls/Personal Protection

Engineering Controls: Control process conditions to avoid contact. Use only in well-ventilated areas.

Personal Protection:

Eyes: Wear face shield or goggles.

Clothing: Wear cotton overalls buttoned to neck and wrist, and a washable hat.

Gloves: Wear elbow-length PVC gloves.

Respiratory: Do not breathe vapour. Use an organic chemical cartridge respirator when working in poorly ventilated areas.

Other: After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

9. Physical and Chemical Properties

Form: liquid

Color: Dark brown

Odor: aromatic hydrocarbon odour

Melting Point : 39-41°C

Density: 1.30 at 40°C

Vapor Pressure:0.25mPa at 40 °C;

pH (5% emulsion in water): 4.5 to 6.5

Water Solubility: 0.8mg/l at 25°C

Solubility in Other Solvents: readily soluble in common organic solvents, e.g. acetone and xylene >50, methanol 120 (all in g/ml at 20°C)

10. Stability and Reactivity

Stability: Stable under normal conditions.

Hazardous Polymerization: Hazardous polymerization is not possible.

Hazardous Reaction: Keep away from strong oxidizing agents.

Conditions to Avoid: Excessive heat and fire.

11. Toxicological Information

Acute oral LD50 (rat): 557-580mg/kg

Acute dermal LD50: (rat) >5000mg/kg, (dog) 1600mg/kg

Teratogenic Effects: In a rat teratology study, the teratogenic No-Observable-Effect-Level (NOEL) was 100 ppm, the highest dose tested. A rabbit teratology study reported a teratogenic NOEL of 3 mg/kg/day, the highest dose tested, and a NOEL for fetotoxicity of 3.0 mg/kg/day.

Mutagenic Effects: Ames assay testing revealed no mutagenic effects using four bacterial strains with and without enzyme activation in dose ranges up to 5 milligrams. A micronucleus test in mice indicated no mutagenic effect in a strain with known sensitivity. In a dominant lethal assay, the NOEL was greater than 100 mg/kg. No impairment in fertility of the male mice and no difference in the number of live and dead implantations in the female animals were noted.

12. Ecological Information

Effects on Birds: The acute oral LD50 to bobwhite quail was 4,400 mg/kg; and greater than 10,000 mg/kg for Japanese quail. The eight-day dietary LC50 value for coturnix quail was greater than 20,000 ppm; 13,000 ppm for bobwhite quail; and greater than 20,000 ppm for mallard ducks.

Effects on Aquatic Organisms: The 96-hour LC50 for rainbow trout was 0.35mg/l water.

Effects on Bees: Nontoxic at the highest dose tested 1.1348 kg a.i./ha.

13. Disposal Considerations

When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressure rinse them before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product via a licensed disposal contractor to an approved landfill.

14. Transport Information

Class: 9

UN NO. : 3082

Packing Group: III

15. Regulatory Information

Risk phrases:

R22: Harmful if swallowed.

R43: May cause sensitization by skin contact.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Risk phrases:

S24: Avoid contact with skin.

S37: Wear suitable gloves.

S60: This material and its container must be disposed of as hazardous waste.

S61: Avoid release to the environment.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.