



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD.

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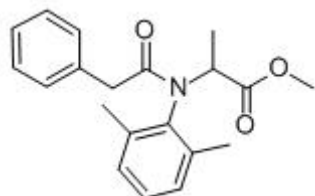
1. Chemical Product Identification

Product Name: Benalaxyl TC

Molecular Formula: C₂₀H₂₃NO₃

Molecular Weight: 325.40

Structural Formula:



Chemical Name: methyl N-(phenylacetyl)-N-(2,6-xyllyl)-DL-alaninate

Form: Powder

Colour: Colourless

CAS No.: 71626-11-4

2. Composition / Information On Ingredients

Composition	Chemical name	Content (% w/w)
Active ingredient	Benalaxyl	98%
Other ingredient	-----	2%



3. Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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

Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word Warning

Hazard statement(s)

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard none

Statements

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

phrase(s)

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

phrase(s)

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

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Other hazards - none

4. First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

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: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

5. Fire-Fighting Measures

Suitable extinguishing media: Water spray, carbon dioxide, chemical foam and chemical powder
Specific Hazards: Combustion generates toxic fumes containing carbon dioxide and nitrogen oxides.
Special protective equipment For fire fighters: Self-contained breathing apparatus and total protection is required.
Specific method: Cool drums with water spray.
Contain run-off with inert material

6. Accidental Release Measures

Personal precautions: Wear suitable protective clothing. (See section 8)
Environmental precautions: Do not allow the product to enter sewers, surface and ground water, soil. If contamination occurs inform Authorities
Method for cleaning up: Contain run-off. Transfer spilled material to suitable containers for recovery or disposal. Wash contaminated areas with detergent and water, absorb with inert material and send to disposal.

7. Handling And Storage

Handling: Handle under adequate ventilation or suction. Keep dust at minimum.
Storage: In original packaging under normal storage condition. Packages should not be exposed to direct sunlight and must be kept unopened and undamaged.
Further information: Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Keep containers dry.

8. Exposure Controls/personal protection

Engineering measures to reduce exposure: Exhaust systems and localized dust capture devices.
Personal protection
Equipment respiratory protections: Mask with a combined filter for fine powders and organic vapors.
Hand protection: Chemical-resistant gloves.
Eye protection: Safety goggles or face shield.
Skin & body protection: Chemical-resistant boots, long sleeved shirt, and long pants.
Hygiene measures: Do not eat, drink or smoke when



handling the product. Wash hands thoroughly after handling. Wash clothes before re-use.
Dispose of eyewash facility and safety shower.

9. Physical And Chemical Properties

Appearance: White powder

Melting point: 78-80°C

Density: 1.181 at 20°C

Vapour pressure: 0.66 mPa (25 °C, gas saturation method)

Partition coefficient(n-octanol and water): logP = 3.54 (20 °C)

Solubility: In water 28.6 mg/l (20 °C). In acetone, methanol, ethyl acetate, 1,2-dichloroethane and xylene >250, n-heptane <20 (all in g/kg, 22 °C)

10. Stability And Reactivity

Reactivity : Stable under normal conditions

Chemical stability: stable under normal conditions

Thermal decomposition/conditions to be avoided:

Formation of toxic gases is possible during heating or in case in fire.

Possibility of hazardous reactions:No dangerous reactions known.

Conditions to avoid: Heat

Incompatible materials: strong oxidizing agents

Hazardous decomposition products: formation of toxic gases is possible during heating or in case in fire.

11. Toxicological Information

Acute oral LD50 for rats is 4200 mg/kg.

Acute dermal LD50 for rats is >2000 mg/kg.

Acute inhalation toxicity LC50 (4 h) for rats is >4.2 mg/L.

Skin irritation: Non-irritating to skin (rabbits).

Eye irritation: Non-irritating to eyes (rabbits).

Skin sensitization for guinea pig: Non-sensitizing.

12. Ecological And Ecotoxicological Information



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Effect on birds: Acute oral LD50 for mallard ducks >4500 mg/kg, bobwhite quail >5000 mg/kg, chickens 4600 mg/kg.

Effect on fish: Acute LC50 (96 h) for Rainbow trout is 3.75 mg/l.

Effects on aquatic invertebrates: Acute EC50 (48 h) for Daphnia magna is 0.59 mg/l. Effects on algae: Acute 72 hour EC50 for Raphidocelis subcapitata is 2.4 mg/l.

Effects on bees: contact acute 48 hour LD50 is 100 µg/bee, oral acute 48 hour LD50 is 104 µg/bee.

Effects on earthworms: Acute 14 day LC50 is 180 mg/kg.

13. Disposal Considerations

Must be dumped or incinerated in accordance with local regulations.

Contaminated packaging:

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

Contaminated packaging should be emptied as far as possible and disposed of in accordance with official regulations after being thoroughly cleaned.

Uncontaminated packaging may be treated as household waste.

14. Transport Information

Not applicable

15. Regulatory Information

Not applicable

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



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sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.