

1. Chemical Product

Identification

Manufacturer/information

service:

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Product Name: Bentazone 95% TC

Molecular Formula: $C_{10}H_{12}N_2O_3S$

Molecular Weight:

240.3 Structural

Formula:

Chemical Name: 3- isopropyl-1H-benzo-2,1,3- thiadiazin-4one2,2-dioxide

Form: POWDER

Color: Light-yellow

Odor: characteristic low odour

CAS No.: 25057-89-0

2. Composition / Information On Ingredients

Substance	CAS-no.	Amount	Symbol R-phrases Xn 22-36-43-52/53
Bentazone	25057-89-0	95%	
Water		0.5%max	
Acetone Insolubale		0.2%max	
Residue on ignition		0.3%max	
Impurity		1.0%max	
TOTAL		100%	

3. HAZARD IDENTIFICATION

Physical hazards: May be harmful if swallowed, inhaled or absorbed through the skin.

Human health hazards: Irritating to eyes.

May cause sensitisation by skin contact.

Environmental hazards: Toxic to aquatic organisms.

4. FIRST AID MEASURES

Inhalation (spray): Move victim to fresh air, keep at rest and call a doctor.

Ingestion: Rinse mouth and call a doctor or transport to hospital.

Eye contact: Rinse with plenty of water (remove lenses if possible). Do not flush into direction of other eye. Transport to a doctor.

Skin contact: Remove contaminated clothing, rinse skin with plenty of water of shower and call a doctor, if necessary.

5. FIRE-FIGHTING MEASURES

Flammability: Not combustible.

Extinguishing media

- suitable: Dry chemical, carbon dioxide, foam, water.

- unsuitable: -

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H e b e i J R a i n T e c h n o l o g y C o . , L t d .

Special hazards: In case of fire bentazone decomposes to form toxic gas/vapour
(sulphur

oxide, nitrogen oxide).

Other procedures : Keep drums cool by spraying with water, extra personal protection:

self-contained breathing apparatus.

6. ACCIDENTAL RELEASE

MEASURES Personal precautions

Ventilation.

Gloves, protective clothing, face shield.

Avoid heat, flames, sparks and other sources of ignition. Environmental precautions

Prevent spillage into the soil or aquatic environment. Avoid contact with vegetation and crops.

Methods for cleaning

Contain and collect spillage with non-combustible absorbent materials e.g. sand, earth, vermiculite, diatomaceous earth.

Place in container for disposal according to local regulations.

7. Handling And Storage

Handling

Thoroughly wash hands after work, before eating or smoking.

Do not eat, drink or smoke during work.

Avoid contact with skin, eyes and clothes.

Do not breathe vapour or spray.

Storage

Store in a dry well ventilated place At Normal Temperature.

Keep away from sources of ignition and oxidising materials.

Keep separated from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL

PROTECTION Exposure controls

Bentazone : No exposure limits

established Personal protection

Respiration protection: in case of spray: ventilation, local exhaust or breathing protection (Filter respirator).

Hand protection: gloves (rubber), protective clothing.

Eye protection: safety goggles.

Ingestion: do not eat, drink or smoke during work.

9. PHYSICAL AND CHEMICAL IDENTIFICATION

Appearance : SOLID POWDER

Odour: chemical

Colour: Light yellow to off-white powder

pH: 2.0-5.0

Melting point: 137-139 °C

Density, specific gravity, or Bulk density: 1.41(20°C)

Vapour pressure (measured at 25°C if melting point \leq 30°C): 0.17mPa(20°C)

Solubility (measured at 20 or 25 °C in water and other solvents): In water 570mg/l(pH 7,20°C). In acetone 1387, methanol 1061, ethyl acetate 582, dichloromethane 206, n-heptane 0.5×10^{-3} (all in g/l,20°C)

Octanol/water partition coefficient (pure a/i): 0.4559

Stability to metal, light, & temperature: Very resistant to hydrolysis in both acidic and alkaline media. Decomposed by sunlight.

10. STABILITY AND REACTIVITY

Chemical stability : Stable at normal temperature and pressure

Hazardous reaction-products : In case of fire, nitrogen oxides, sulphur dioxide and carbon monoxide may be produced.

Decomposition : Bentazone decomposes when exposed to UV light.

Conditions to avoid : Oxidising agents

Avoid heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Bentazone 98%TC

Acute toxicity

LD₅₀ acute oral (rats): > 2000 mg/kg b.w.

LD₅₀ acute dermal (rats): > 4000 mg/kg

b.w. Irritation

Skin : mildly irritating (rabbit)

Eye : moderately irritating (rabbit)

Sensitization : Sensitizing

Bentazone

Toxicity data

LD₅₀ oral rats : 1400-1800 mg/kg

LD₅₀ dermal rat : > 5000 mg/kg

LC₅₀ (4h), rat : > 5.1

mg/l Irritation

Skin : non irritant

Eyes : irritant

Skin sensitisation : sensitizer (M&K)

12. ECOLOGICAL INFORMATION

Bentazone 98% TC

Aquatic organisms

LC₅₀ (96h) rainbow trout : > 250 mg/l

EC₅₀ (48h) *Daphnia magna* : > 248 mg/l

EBC₅₀ *Algae* : 109 mg/l

ERC₅₀ *Algae* : 251 mg/l

EC₅₀ (21 d) *Daphnia Magna* : > 250 mg/l (survival)

NOEC (21 d) *Daphnia Magna* : 250 mg/l (survival)

EC₅₀ (21 d) *Daphnia Magna* : 236 mg/l (reproduction)

NOEC (21 d) *Daphnia Magna* : 100 mg/l (reproduction)

LC₅₀ (14 d) rainbow trout : 102 mg/l (juvenile growth)

LC₅₀ (28 d) rainbow trout : 68 mg/l (juvenile

growth) Beneficial arthropods

Aphidius rhopalosiphi : Harmful (category 4)

LR₅₀ (48 h) *Aphidius rhopalosiphi* : 1020 µl/l

Typhlodromus pyri : Slightly harmful (category 2)

Poecilus cupreus : Harmless (category 1)

Chrysoperla carnea : Harmless (category 1)

Bentazone

Birds

LD₅₀ acute, oral bobwhite quail : ca. 1140 mg/kg

LC₅₀ bobwhite quail : > 5000 ppm

LC₅₀ mallard duck : > 5000 ppm

Aquatic organisms

LC₅₀ (96 h) *O. mykiss* : > 100 mg/l

EC₅₀ (96 h) *Daphnia magna* : 64 mg/l

EC₅₀ (120 h) *A. flos-aque* : 10.1 mg/l

EC₅₀ (14 d) *L. gibba* : 5.4 mg/l

Bees

Acute oral toxicity : > 200 µg a.s./bee

Acute contact toxicity : > 200 µg a.s./bee

Worms

LC₅₀ earthworms : > 870 mg a.s./kg dry weight substrate

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

Container disposal : Packaging should be disposed of at a specialized chemical waste disposal facility.

14. TRANSPORT INFORMATION

General cargo

15. REGULATORY INFORMATION

Supply classification : Irritant

Hazard pictogram : Xi

Risk phrases R36 : Irritating to eyes.

R43 : May cause sensitisation by skin contact.

Safety phrases S2 : Keep out of reach of children.

S13 : Keep away from food, drink and animal feeding stuffs.

S20/21: When using do not eat, drink or smoke.

S23 : Do not breathe spray.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

16. OTHER INFORMATION

The information in this data sheet is to the best of our knowledge true and accurate, but all instructions, recommendations and suggestions are made without guarantee. Since the conditions of use are beyond their control. Furthermore no liability is accepted if use of any product in accordance with these instructions, recommendations and suggestions infringes any patent.