

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 16 Aug 2022

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Benfluralin

### 1.1. Catalog No.:

675738

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 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.

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2 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****Statements**

none

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

**Hazard symbol(s) R-phrase(s)**

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

**S-phrase(s)**

S22 Do not breathe dust.

S24/25 Avoid contact with skin and eyes.

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.

2.3 Other hazards - none

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

Synonyms : N-Butyl-2,6-dinitro-N-ethyl-4-trifluoromethylaniline

Formula : C<sub>13</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub>

Molecular Weight : 335,28 g/mol

Component Concentration

Benfluralin

CAS-No.

EC-No.

1861-40-1

217-465-2

-

#### 3.1.1. Formula

C<sub>13</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub>

#### 3.1.2. Molecular Weight (g/mol)

335.28

### 3.1.3. CAS-No.

1861-40-1

## 4. FIRST AID MEASURES

### 4.1 Description of 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

Flush eyes with water as a precaution.

#### If swallowed

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

### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen fluoride

Nature of decomposition products not known.

Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen fluoride

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary

5.4 Further information  
no data available

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end uses

no data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: crystalline

Colour: orange

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing

point

no data available

f) Initial boiling point and

boiling range

148 - 149 °C at 9 hPa

g) Flash point no data available

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower

flammability or

explosive limits

no data available

k) Vapour pressure 0,000519 hPa at 30 °C

l) Vapour density no data available

m) Relative density no data available

n) Water solubility insoluble

o) Partition coefficient: noctanol/

water  
log Pow: 5,29  
p) Autoignition  
temperature  
no data available  
q) Decomposition  
temperature  
no data available  
r) Viscosity no data available  
s) Explosive properties no data available  
t) Oxidizing properties no data available  
9.2 Other safety information  
no data available

## 10. STABILITY AND REACTIVITY

10.1 Reactivity  
no data available  
10.2 Chemical stability  
no data available  
10.3 Possibility of hazardous reactions  
no data available  
10.4 Conditions to avoid  
no data available  
10.5 Incompatible materials  
Strong oxidizing agents  
10.6 Hazardous decomposition products  
Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects  
Acute toxicity  
LD50 Oral - rat - 10.000 mg/kg  
Skin corrosion/irritation  
no data available  
Serious eye damage/eye irritation  
no data available  
Respiratory or skin sensitization  
no data available  
Germ cell mutagenicity  
no data available  
Carcinogenicity  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
Reproductive toxicity  
no data available  
Specific target organ toxicity - single exposure  
no data available  
Specific target organ toxicity - repeated exposure  
no data available  
Aspiration hazard  
no data available  
Potential health effects Inhalation May be harmful if inhaled. May cause respiratory tract irritation.  
Ingestion May be harmful if swallowed.  
Skin May be harmful if absorbed through skin. May cause skin irritation.  
Eyes May cause eye irritation.  
Signs and Symptoms of Exposure  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information  
RTECS: XU4550000

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0,1 mg/l - 96,0 h

Toxicity to daphnia and  
other aquatic  
invertebrates

EC50 - Daphnia magna (Water flea) - 1,9 - 2,6 mg/l - 48 h

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 2,5 mg/l - 5 d

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

Very toxic to aquatic life

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

### 14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benfluralin)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benfluralin)

IATA: Environmentally hazardous substance, solid, n.o.s. (Benfluralin)

### 14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

### 14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

### 14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

### 14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination

packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment

no data available

## 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. For lab use only!