

SAFETY DATA SHEET

**Biological enzyme blockage removal
and oil displacement agent**

Version 1.0
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name : Biological enzyme blockage removal and oil displacement agent

Product Number : BD-I, BD-II
Brand : DGBIO

1.2 Other means of identification

No data available

1.3 Relevant identified uses of the substance or mixture and uses advised against

For oil extraction industry use.

1.4 Details of the supplier of the safety data sheet

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1.5 Emergency telephone number

Emergency Phone # : +86 29 87037858 +86 151 2922 3785

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Usual chemical name : Biological enzyme blockage removal and oil displacement agent
Mixture based on biosurfactants.

CAS Code : ———

Composition : The effective content of sophorolipid is $\geq 25\%$
The main components of the product are more than 25% biosurfactant, about 5% stabilizer, and most of the rest is water.

Other : Not known.

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

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.

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. FIREFIGHTING 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

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation.

6.2 Environmental precautions

The product is biodegradable and does not pose a hazard to the environment, but it is not recommended to direct the high concentration product to the drains and river.

6.3 Methods and materials for containment and cleaning up

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.

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 use(s)

No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

We are not aware of any national exposure limit.

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

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. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Use ordinary work clothes, such as ordinary work clothes in the laboratory, and ordinary work clothes in the factory.

Respiratory protection

Under normal circumstances, no special protection is required. If you need to filter the odor, you can use ordinary masks or higher-level masks that comply with local regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: liquid
Colour: Light yellow to dark brown liquid |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | BD-I:7.0 - 9.0, BD-II:5.0-7.0 |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| 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) Relative density | No data available |

l) Water solubility	Soluble in water
m) Partition coefficient: n-octanol/water	No data available
n) Auto-ignition temperature	No data available
o) Decomposition temperature	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

Oxidizing agents, Reducing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available.

In the event of fire: see section 5.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity test (LD₅₀>2000mg/kg) .

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

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.

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: Not available

12. ECOLOGICAL INFORMATION
12.1 Toxicity

No data available

12.2 Persistence and degradability

Biodegradability

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

No data available

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Product

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

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION
14.1 UN number

ADR/RID: -

IMDG: -

IATA-DGR: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA-DGR: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA-DGR: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

14.6 Special precautions for user

No data available

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Please pay attention on the waste treatment should also comply with local regulations requirement.

16. OTHER INFORMATION**Further information**

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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. Deguan Biotechnology and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

For further information please contact sales@sxdgbio.com.
