



**Safety Data Sheet**  
**BIODUE**

**Safety Data Sheet dated 16/5/2019, version 3**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

Mixture identification:

Trade name: BIODUE

1.2. Relevant identified uses of the substance or mixture and uses advised against  
Identified use:

Uses advised against:

Any other use different from the identified uses.

1.3. Details of the supplier of the safety data sheet

Company:

BARCHEMICALS SRL

VIA S.ALLENDE 14

CASTELNUOVO RANGONE (MO)

ITALY

PHONE. +39 059/536502

FAX. +39 059/536742

www.barchemicals.it

Competent person responsible for the safety data sheet:

barani.corrado@barchemicals.it

1.4. Emergency telephone number


Barani Dr.Corrado - MOBILE PHONE. +39 335/6109383

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**SECTION 2: Hazards identification**


2.1. Classification of the substance or mixture


EC regulation criteria n°1272/2008 (CLP)

 Warning, Acute Tox. 4, Harmful if swallowed.

 Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.

 Danger, Eye Dam. 1, Causes serious eye damage.

 Warning, STOT SE 3, May cause respiratory irritation.

 Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

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## Hazard statements:

- H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

## Precautionary statements:

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353+P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor/...  
P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor/...  
P391 Collect spillage.

## Special Provisions:

None

## Contains

- peracetic acid . . . %  
hydrogen peroxide solution ... %  
acetic acid ... %

## Special provisions according to Annex XVII of REACH and subsequent amendments:

None

## 2.3. Other hazards

vPvB Substances: None - PBT Substances: None

## Other Hazards:

No other hazards













**SECTION 3: Composition/information on ingredients**

## 3.1. Substances






N.A.

## 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

| Qty    | Name                             | Ident. Number   | Classification   |
|--------|----------------------------------|---|--|
| 21.8 % | hydrogen peroxide solution ... % | Index 008-003-00-9<br>number:<br>CAS: 7722-84-1<br>EC: 231-765-0<br>REACH No.: 01-21194858<br>45-22 |  2.13/1 Ox. Liq. 1 H271<br> 3.1/4/Inhal Acute Tox. 4 H332<br> 3.1/4/Oral Acute Tox. 4 H302<br> 3.2/1A Skin Corr. 1A H314<br> 3.8/3 STOT SE 3 H335<br> 4.1/C3 Aquatic Chronic 3 H412        |
| 6 %    | peracetic acid . . . %           | Index 607-094-00-8<br>number:<br>CAS: 79-21-0<br>EC: 201-186-8<br>REACH No.: 01-21195313<br>30-56   |  2.15/D Org. Perox. D H242<br> 2.6/3 Flam. Liq. 3 H226<br> 3.1/3/Oral Acute Tox. 3 H301<br> 3.1/4/Dermal Acute Tox. 4 H312<br> 3.1/4/Inhal Acute Tox. 4 H332<br> 3.2/1A Skin Corr. 1A H314 |

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|       |                   |   |  |
|-------|-------------------|---|--|
|       |                   |   |  3.8/3 STOT SE 3 H335<br> 4.1/A1 Aquatic Acute 1 H400<br> 4.1/C1 Aquatic Chronic 1 H410 |
| 3.6 % | acetic acid ... % | Index 607-002-00-6<br>number:<br>CAS: 64-19-7<br>EC: 200-580-7<br>REACH No.: 01-21194753<br>28-30 |  2.6/3 Flam. Liq. 3 H226<br> 3.2/1A Skin Corr. 1A H314   |

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**

In case of skin contact:

After contact with skin, wash immediately with soap and plenty of water.  
 Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.  
 Protect uninjured eye.

In case of Ingestion:

Rinse well your mouth  
 Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.  
 In case of breathing difficult, bring the injured person into the open air and store it in a comfortable position for breathing. Consult a physician.  
 If breathing is irregular or stopped, administer artificial respiration.

**4.2. Most important symptoms and effects, both acute and delayed**

Contact with the skin produces redness, burning and pain.  
 After contact with the eyes produces redness and pain.  
 Ingestion causes severe irritation or chemical burns in the mouth, throat, esophagus and stomach.

**4.3. Indication of any immediate medical attention and special treatment needed**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

If swallowed, seek immediate medical attention. Do not induce vomiting to the danger of perforation. Keep the patient at rest.  
 In case of contact with eyes, rinse immediately with water and seek medical advice.  
 After contact with skin, wash immediately with plenty of soap and water.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**

Suitable extinguishing media:  
 Water spray, heavy alcohol foam, dry chemical or carbon dioxide.  
 Extinguishing media which must not be used for safety reasons:  
 None in particular.

**5.2. Special hazards arising from the substance or mixture**

Do not inhale explosion and combustion gases.  
 Burning produces heavy smoke.

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5.3. Advice for firefighters

Immediately isolate the area by removing all persons from the area of the accident in the event of a fire. No action shall be taken involving any personal risk or without proper training. Firefighters must wear protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask on the working face at positive pressure. Fire extinguishers (including helmets, protective boots and gloves) conforming to European Standard EN469 will provide basic protection for chemical accidents.

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**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate the surrounding areas.

Remove persons to safety.

Prevent entry of foreign and unprotected personnel.

Do not touch or walk on spilled material.

Provide adequate ventilation.

Avoid breathing vapors or mists.

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

6.3. Methods and material for containment and cleaning up

In case of a liquid product, hold and absorb the spillage with inert absorbent material (eg, sand, earth, vermiculite, fossil flour). Store contaminated material in suitable containers and start waste disposal. After collection, rinse the area and the materials with water by retrieving the water used and, if necessary, dispose of it in authorized plants.

6.4. Reference to other sections

See also section 8 and 13

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**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature and away from direct sunlight.

Keep away from combustible material and avoid contact with organic material.

Keep away from food, drink and feed.

Incompatible materials:

See the next paragraph 10.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

See section 1.2.

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**SECTION 8: Exposure controls/personal protection**

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**8.1. Control parameters**

hydrogen peroxide solution ... % - CAS: 7722-84-1

ACGIH - TWA(8h): 1 ppm - Notes: A3 - Eye, URT, and skin irr

peracetic acid ... % - CAS: 79-21-0

ACGIH - STEL: 0.4 ppm - Notes: (IFV), A4 - URT, eye, and skin irr

acetic acid ... % - CAS: 64-19-7

EU - TWA(8h): 25 mg/m<sup>3</sup>, 10 ppm - STEL: 50 mg/m<sup>3</sup>, 20 ppm

ACGIH - TWA(8h): 10 ppm - STEL: 15 ppm - Notes: URT and eye irr, pulm func

**DNEL Exposure Limit Values**

hydrogen peroxide solution ... % - CAS: 7722-84-1

Worker Professional: 1.4 03 - Consumer: 0.21 03 - Exposure: Human Inhalation -

Frequency: Long Term, local effects - Endpoint: Irritation (respiratory tract)

Worker Professional: 3 03 - Consumer: 1.93 03 - Exposure: Human Inhalation -

Frequency: Short Term, local effects - Endpoint: Irritation (respiratory tract)

peracetic acid ... % - CAS: 79-21-0

Worker Professional: 0.6 03 - Consumer: 0.6 03 - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Professional: 0.6 03 - Consumer: 0.6 03 - Exposure: Human Inhalation -

Frequency: Short Term, systemic effects

Worker Professional: 0.6 03 - Consumer: 0.6 03 - Exposure: Human Inhalation -

Frequency: Long Term, local effects

Worker Professional: 0.6 03 - Consumer: 0.3 03 - Exposure: Human Inhalation -

Frequency: Short Term, local effects

acetic acid ... % - CAS: 64-19-7

Worker Professional: 25 03 - Consumer: 25 03 - Exposure: Human Inhalation -

Frequency: Long Term, local effects - Endpoint: Irritation (respiratory tract)

Worker Professional: 25 03 - Consumer: 25 03 - Exposure: Human Inhalation -

Frequency: Short Term, local effects - Endpoint: Irritation (respiratory tract)

**PNEC Exposure Limit Values**

hydrogen peroxide solution ... % - CAS: 7722-84-1

Target: Fresh Water - Value: 0.0126 mg/l

Target: Marine water - Value: 0.0126 mg/l

Target: Microorganisms in sewage treatments - Value: 4.66 mg/l

Target: Freshwater sediments - Value: 0.047 mg/kg

Target: Marine water sediments - Value: 0.047 mg/kg

peracetic acid ... % - CAS: 79-21-0

Target: Fresh Water - Value: 0.000224 mg/l

Target: Microorganisms in sewage treatments - Value: 0.0510 mg/l

Target: Soil (agricultural) - Value: 0.320 mg/kg

acetic acid ... % - CAS: 64-19-7

Target: Fresh Water - Value: 3.06 mg/l

Target: Marine water - Value: 0.306 mg/l

Target: Microorganisms in sewage treatments - Value: 85 mg/l

Target: Freshwater sediments - Value: 11.4 mg/kg

Target: Soil (agricultural) - Value: 0.470 mg/kg

**8.2. Exposure controls**

Eye/face protection:

Eye glasses with side protection. EN166

Protection for skin:

Clothing resistant to corrosive products CLASS I, EN 340

Protection for hands:

Gloves resistant to chemicals. EN 374

Respiratory protection:

Not necessary in normal use.

Thermal Hazards:

Not applicable (the product is handled at room temperature)

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Environmental exposure controls:

Do not allow the product to be absorbed from the soil or from entering waterways or sewers.  
Do not let product enter drains. Discharge into the environment must be avoided.

Appropriate engineering controls:

Ensure adequate ventilation. Comply with the maximum concentration values in the workplace.

Predict the presence of showers and eye wash fountains at the workplace.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties                                    | Value                     | Method: | Notes: |
|---|---------------------------|---------|--------|
| Appearance and colour:                        | Liquid<br>Colorless       | --      | --     |
| Odour:  | Acre                      | --      | --     |
| Odour threshold:                              | Not Relevant              | --      | --     |
| pH:   | 1                         | --      | --     |
| Melting point / freezing point:               | Not applicable            | --      | --     |
| Initial boiling point and boiling range:      | Not Relevant              | --      | --     |
| Flash point:                                  | Prodotto non infiammabile | --      | --     |
| Evaporation rate:                             | Not Available             | --      | --     |
| Solid/gas flammability:                       | Prodotto non infiammabile | --      | --     |
| Upper/lower flammability or explosive limits: | Prodotto non infiammabile | --      | --     |
| Vapour pressure:                              | Not Relevant              | --      | --     |
| Vapour density:                               | Not Relevant              | --      | --     |
| Relative density:                             | 1.08 Kg/l                 | --      | --     |
| Solubility in water:                          | Complete                  | --      | --     |
| Solubility in oil:                            | Not Relevant              | --      | --     |
| Partition coefficient (n-octanol/water):      | Not Relevant              | --      | --     |
| Auto-ignition temperature:                    | Not Relevant              | --      | --     |
| Decomposition temperature:                    | Not Relevant              | --      | --     |
| Viscosity:                                    | Not Relevant              | --      | --     |
| Explosive properties:                         | Prodotto non esplosivo    | --      | --     |
| Oxidizing properties:                         | Not Relevant              | --      | --     |

### 9.2. Other information

| Properties                           | Value        | Method: | Notes: |
|--------------------------------------|--------------|---------|--------|
| Miscibility:                         | Complete     | --      | --     |
| Fat Solubility:                      | Not Relevant | --      | --     |
| Conductivity:                        | Not Relevant | --      | --     |
| Substance Groups relevant properties | Not Relevant | --      | --     |

## SECTION 10: Stability and reactivity



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- 10.1. Reactivity  
The product is not pyrophoric.
- 10.2. Chemical stability  
Stable under recommended storage and handling. Please refer to section 7 of the MSDS.
- 10.3. Possibility of hazardous reactions  
In presence of metals.
- 10.4. Conditions to avoid  
Keep away from heat sources.  
Avoid direct sunlight.  
Avoid contact with organic material.
- 10.5. Incompatible materials  
concentrated alkali.  
Products containing chlorine.  
organic substances.
- 10.6. Hazardous decomposition products  
Oxygen.  
Methane  
ketene

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**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

Toxicological information of the product:

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a) acute toxicity

The product is classified: Acute Tox. 4 H302

b) skin corrosion/irritation

The product is classified: Skin Corr. 1A H314

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

h) STOT-single exposure

The product is classified: STOT SE 3 H335

i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

hydrogen peroxide solution ... % - CAS: 7722-84-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 800 mg/kg - Source: STUDY REPORT 1981 (ECHA) - Notes: OECD GUIDELINE 401 (ACUTE ORAL TOXICITY)

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Test: LC50 - Route: Inhalation - Species: Rat > 0.17 mg/l - Duration: 4h - Notes: LINEE GUIDA 403 PER IL TEST DELL'OECD

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg - Source: STUDY REPORT 1983 (ECHA) - Notes: US EPA GUIDELINES FOR ACUTE DERMAL TOXICITY

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Yes - Source: STUDY REPORT 1990 (ECHA) - Notes: OECD GUIDELINE 404 (ACUTE DERMAL IRRITATION / CORROSION)

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Yes - Source: STUDY REPORT 1985 (ECHA) - Notes: OECD GUIDELINE 405 (ACUTE EYE IRRITATION / CORROSION)

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: .porc No - Source: STUDY REPORT 1953 (ECHA) - Notes: SKIN SENSITIZATION TEST

h) STOT-single exposure:

Test: Respiratory Tract Irritant Yes - Source: ECHA

peracetic acid . . . % - CAS: 79-21-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 1000 mg/kg - Source: (PAA 15%) - Notes: OECD GUID. 401

Test: LC50 - Route: Inhalation - Species: Rat > 500 mg/m<sup>3</sup> - Duration: 4h - Source: (PAA 15%) - Notes: EPA OPP 81-3 (ACUTE INHALATION TOXICITY)

Test: LD50 - Route: Skin - Species: Rabbit > 1900 mg/kg - Source: (PAA 12%) - Notes: EPA OPP 81-2 (ACUTE DERMAL TOXICITY)

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Yes - Source: STUDY REPORT 1982 (ECHA) - Notes: OECD GUIDELINE 404 (ACUTE DERMAL IRRITATION / CORROSION), IN VIVO.

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Yes - Source: STUDY REPORT 1983 (ECHA) - Notes: EPA TOXIC SUBSTANCES HEALTH EFFECTS TEST GUIDELINES (PB82-232984)

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: .porc Negative - Source: STUDY REPORT 2000 (ECHA) - Notes: EU METHOD B.6 (SKIN SENSITISATION)

e) germ cell mutagenicity:

Test: Mutagenesis No - Source: BUSCHINI, A 2004 (ECHA) - Notes: OECD GUIDELINE 481 (GENETIC TOXICOLOGY: SACCHAROMYCES CEREVISIAE, MITOTIC RECOMB)

h) STOT-single exposure:

Test: Respiratory Tract Irritant Yes

acetic acid ... % - CAS: 64-19-7

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 3310 mg/kg - Source: WOODARD G, LANGE SW, NELSON AND CALVERY 1941 (ECHA)

Test: LC50 - Species: Rat > 16000 ppm - Duration: 4h

Test: LC50 - Route: Inhalation - Species: Rat > 16000 ppm - Source: SMYTH, CARPENTER & WEIL 1951 (ECHA)

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: .porc Yes - Source: PUBBLICAZIONE 1975 (ECHA)

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Yes - Source: MURPHY, OSTERBERG, SEABAUGH AND BIERBOWER 1982 (ECHA) - Notes: EPA OPP 81-4 (ACUTE EYE IRRITATION)

e) germ cell mutagenicity:



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Test: Mutagenesis No - Source: MORITA, TAKEDA AND OKUMURA 1990 (ECHA) -  
Notes: OECD GUIDELINE 473 (IN VITRO MAMMALIAN CHROMOSOME  
ABERRATION TEST)

f) carcinogenicity:

Test: Carcinogenicity No - Source: SLAGA, BOWDEN & BOUTWELL 1975 (ECHA)  
peracetic acid . . . % - CAS: 79-21-0  
LD50 (RAT) ORAL: 1540 MG/KG  
LD50 (RABBIT) SKIN: 1410 MG/KG

acetic acid ... % - CAS: 64-19-7  
LD50 (RABBIT) SKIN: 1060 MG/KG

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## SECTION 12: Ecological information

### 12.1. Toxicity

No information is available on the mixture as a whole. This is the information on  
eco-toxicological effects of the individual components.

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The product is classified: Aquatic Chronic 2 - H411

hydrogen peroxide solution ... % - CAS: 7722-84-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 16.4 mg/l - Duration h: 96 - Notes: ECHA  
Endpoint: LC50 - Species: Daphnia = 2.4 mg/l - Duration h: 48 - Notes: ECHA  
Endpoint: EC50 - Species: Algae = 1.38 mg/l - Duration h: 72 - Notes: ECHA

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: aquatic invertebrates = 0.63 mg/l - Duration h: 504 - Notes:  
ECHA  
Endpoint: EC50 - Species: activated sludge = 466 mg/l - Duration h: 0.5 - Notes: ECHA

peracetic acid . . . % - CAS: 79-21-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.53 mg/l - Duration h: 96 - Notes: ECHA  
Endpoint: EC50 - Species: Algae = 0.16 mg/l - Duration h: 72 - Notes: ECHA (PAA 5%)

acetic acid ... % - CAS: 64-19-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 75 mg/l - Duration h: 96 - Notes: MATTSON,  
ARTHUR AND WALBRIDGE 1976 - GESTIS  
Endpoint: EC50 - Species: Daphnia = 47 mg/l - Duration h: 48 - Notes: ESPIRITU,  
JANSSEN AND PERSOONE 1995 - GESTI

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

N.A.

### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

### 12.6. Other adverse effects

None

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled  
conditions. In so doing, comply with the local and national regulations currently in force.

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## SECTION 14: Transport information

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- 14.1. UN number  
ADR-UN Number: 3265  
IATA-UN Number: 3265  
IMDG-UN Number: 3265
- 14.2. UN proper shipping name  
ADR-Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (hydrogen peroxide solution ... %, peracetic acid . . . %)  
IATA-Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (hydrogen peroxide solution ... %, peracetic acid . . . %)  
IMDG-Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (hydrogen peroxide solution ... %, peracetic acid . . . %)
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR - Hazard identification number: 88  
IATA-Class: 8  
IATA-Label: 8  
IMDG-Class: 8
- 14.4. Packing group  
ADR-Packing Group: II  
IATA-Packing group: II  
IMDG-Packing group: II
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: No  
IMDG-Marine pollutant: No
- 14.6. Special precautions for user  
ADR-Subsidiary risks: -  
ADR-S.P.: 274  
ADR-Transport category (Tunnel restriction code): 1 (E)  
IATA-Passenger Aircraft: 850  
IATA-Subsidiary risks: -  
IATA-Cargo Aircraft: 854  
IATA-S.P.: A3 A803  
IATA-ERG: 8L  
IMDG-EmS: F-A , S-B  
IMDG-Subsidiary risks: -  
IMDG-Stowage and handling: Category B SW2  
IMDG-Segregation: -
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code  
N.A.

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**SECTION 15: Regulatory information**

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) 2015/830

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Regulation (EU) n. 286/2011 (ATP 2 CLP)  
 Regulation (EU) n. 618/2012 (ATP 3 CLP)  
 Regulation (EU) n. 487/2013 (ATP 4 CLP)  
 Regulation (EU) n. 944/2013 (ATP 5 CLP)  
 Regulation (EU) n. 605/2014 (ATP 6 CLP)  
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
 Regulation (EU) n. 2016/918 (ATP 8 CLP)  
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
 Regulation (EU) n. 2017/776 (ATP 10 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3  
 Restriction 40

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)  
 Regulation (EC) nr 648/2004 (detergents).  
 Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1  
 Product belongs to category: E2

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.  
 Substances for which a Chemical Safety Assessment has been carried out:  
 None

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## SECTION 16: Other information

### For professional use.

Full text of phrases referred to in Section 3:

H271 May cause fire or explosion; strong oxidiser.  
 H332 Harmful if inhaled.  
 H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H335 May cause respiratory irritation.  
 H412 Harmful to aquatic life with long lasting effects.  
 H242 Heating may cause a fire.  
 H226 Flammable liquid and vapour.  
 H301 Toxic if swallowed.  
 H312 Harmful in contact with skin.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.

| Hazard class and hazard category | Code       | Description                       |
|----------------------------------|------------|-----------------------------------|
| Ox. Liq. 1                       | 2.13/1     | Oxidising liquid, Category 1      |
| Org. Perox. D                    | 2.15/D     | Organic peroxide, Type D          |
| Flam. Liq. 3                     | 2.6/3      | Flammable liquid, Category 3      |
| Acute Tox. 3                     | 3.1/3/Oral | Acute toxicity (oral), Category 3 |

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|                   |              |  |
|-------------------|--------------|--|
| Acute Tox. 4      | 3.1/4/Dermal | Acute toxicity (dermal), Category 4                          |
| Acute Tox. 4      | 3.1/4/Inhal  | Acute toxicity (inhalation), Category 4                      |
| Acute Tox. 4      | 3.1/4/Oral   | Acute toxicity (oral), Category 4                            |
| Skin Corr. 1A     | 3.2/1A       | Skin corrosion, Category 1A                                  |
| Eye Dam. 1        | 3.3/1        | Serious eye damage, Category 1                               |
| STOT SE 3         | 3.8/3        | Specific target organ toxicity - single exposure, Category 3 |
| Aquatic Acute 1   | 4.1/A1       | Acute aquatic hazard, category 1                             |
| Aquatic Chronic 1 | 4.1/C1       | Chronic (long term) aquatic hazard, category 1               |
| Aquatic Chronic 2 | 4.1/C2       | Chronic (long term) aquatic hazard, category 2               |
| Aquatic Chronic 3 | 4.1/C3       | Chronic (long term) aquatic hazard, category 3               |

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| Classification according to Regulation (EC) Nr. 1272/2008 | Classification procedure   |
|---|----------------------------|
| Acute Tox. 4, H302  | Calculation method         |
| Skin Corr. 1A, H314                                       | On basis of test data (pH) |
| Eye Dam. 1, H318  | On basis of test data (pH) |
| STOT SE 3, H335   | Calculation method         |
| Aquatic Chronic 2, H411                                   | Calculation method         |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

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This MSDS cancels and replaces any preceding release.

For professional use.

|             |  |
|-------------|--|
| ADR:        | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| ATE:        | Acute Toxicity Estimate  |
| ATEmix:     | Acute toxicity Estimate (Mixtures)   |
| CAS:        | Chemical Abstracts Service (division of the American Chemical Society).              |
| CLP:        | Classification, Labeling, Packaging.   |
| DNEL:       | Derived No Effect Level.   |
| EINECS:     | European Inventory of Existing Commercial Chemical Substances.                       |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany.  |
| GHS:        | Globally Harmonized System of Classification and Labeling of Chemicals.              |
| IATA:       | International Air Transport Association.   |
| IATA-DGR:   | Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  |
| ICAO:       | International Civil Aviation Organization.   |

**Safety Data Sheet**  
**BIODUE**

|          |   |
|----------|---|
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG:    | International Maritime Code for Dangerous Goods.                                  |
| INCI:    | International Nomenclature of Cosmetic Ingredients.                               |
| KSt:     | Explosion coefficient.  |
| LC50:    | Lethal concentration, for 50 percent of test population.                          |
| LD50:    | Lethal dose, for 50 percent of test population.                                   |
| PNEC:    | Predicted No Effect Concentration.  |
| RID:     | Regulation Concerning the International Transport of Dangerous Goods by Rail.     |
| STEL:    | Short Term Exposure limit.  |
| STOT:    | Specific Target Organ Toxicity.   |
| TLV:     | Threshold Limiting Value.   |
| TWA:     | Time-weighted average   |
| WGK:     | German Water Hazard Class.  |