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

1.1. Product identifier: **BioRemove 5100**

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

Powder, blend of microorganisms for biological degradation of wastes, in waste treatment stations.

Uses advised against:

The product should not be used for other purposes than those specified without the advice of an expert.

1.3. Details of the supplier of the safety data sheet:

NOVOZYMES BIOLOGICALS FRANCE
Parc des Grillons Bâtiment 6
60 Route de Sartrouville
78230 LE PECQ FRANCE
Tel /Fax: +33 (0)1 30 15 28 40/ +33 (0)1 30 15 15 45
ordersnzb@novozymes.com

1.4. Emergency telephone number: +33 (0)1 30 15 28 40 (work hours)
UK National Poisons Information Service :
0844 892 0111

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to the classification rules laid down in Regulation (EC) No. 1272/2008:

The preparation is not classified as dangerous for human health or the environment.

2.2. Label elements:

Pictogram(s): None

Indication(s) of danger: None.

Hazard statement(s): None

Precautionary statement(s):

P261 Avoid breathing dust

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Other applicable labels elements: None

2.3. Other hazards:

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Classification of the ingredients according to Regulation (EC) No. 1272/2008:

None of the ingredients are hazardous or are present at levels < thresholds set in Regulation (EC) No. 1272/2008.

4. FIRST-AID MEASURES

4.1. Description of first aid measures:

Exposure by inhalation: Remove victim to fresh air. Rest and keep warm. If symptoms of irritation and/or sensitization occur (shortness of breath, wheezing or labored coughing) seek medical attention.

Exposure by skin: Immediately wash affected area thoroughly with soap and water. Seek medical attention if irritation develops.

Exposure by eye contact: Immediately flush eyes with plenty of water and seek medical advice.

Exposure by ingestion: Do not induce vomiting. Drink water to dilute. Seek medical advice.

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

Prolonged or frequent contacts may provoke irritations to eyes and skin.

Organisms used are non-pathogenic but can cause infection when in contact with open wounds.

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

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media: All types of extinguishers may be used: water, foam.

5.2. Special hazards arising from substance or mixture:

If the substance is involved in a fire, oxides of carbon and nitrogen may be evolved.

5.3. Advice for firefighters: Self-contained breathing apparatus should be worn.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Use protective equipment. Avoid formation of dust, splashing and formation of aerosols.

6.2. Environmental precautions:

None

6.3. Methods and material for containment and cleaning-up:

Clean-up by collection.

Dispose of waste material in accordance with local or national regulations.

6.4. Reference to other sections:

For personal protective equipment, refer to section 8.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling:

Precautions: The substance should be handled under conditions of good industrial hygiene and in conformity with any local regulations in order to avoid unnecessary exposure. The product is formulated using a range of microorganisms known to be non-pathogenic to humans. It is however advised to cover open wounds when in use.

Technical measures: The use of gloves is recommended to reduce exposure to the preparation.

Specific requirements: None.

7.2. Conditions for safe storage, including any incompatibilities:

Specific design for storage rooms or vessels:

None.

Incompatible materials: Strong acids or alkali compounds may inactivate biological cultures. Avoid strong oxidizing agents. Do not store in metallic containers.

Conditions of storage: Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Avoid freezing temperatures. Avoid temperatures above 35 °C to preserve biological stability.

Quantity limits: None.

7.3. Specific end use(s):

No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Limit value 8 hr dust = 10 mg/m3 (particles of a diameter < 100 µ) and 4 mg/m3 (particles of a diameter < 5 µ)

8.2. Exposure control:

8.2.1. Appropriate engineering controls:

None.

8.2.2. Individual protection measures, such as personal protective equipment:

The user as part of a formal exposure risk assessment should decide upon the provision of personal protective equipment and the need to provide engineering control measures. Based upon the available toxicological information the protective measures described below should be regarded as a minimum.

Eye/face protection: Avoid contact with eyes.

Skin protection: Avoid contact with broken skin.

Respiratory protection:

No specific protective equipment is usually necessary. However if operating conditions create high airborne concentrations of this material, based upon available information and in the absence of occupational exposure limits the use of a vapour mask to a minimum standard of EN405 with filters compliant with NF EN143 norm is recommended

Hand protection: Avoid prolonged or frequent repeated skin contact, especially with broken skin. Chemical protective gloves to a standard EN374 should be provided. Usage periods should not exceed the breakthrough times for the chemical stated by the manufacturer of the glove.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Appearance:	Dry free-flowing powder, tan
Odour:	no added fragrance
pH:	Not applicable
Boiling point/boiling range:	Not applicable.
Melting point/melting range:	Not determined.
Flash point:	Not determined.
Flammability (solid, gas):	Not applicable.
Autoflammability:	Not determined.
Explosive properties:	Predicted not explosive based on chemical structure.
Oxidising properties:	Not determined.
Vapour pressure:	Not applicable
Relative density:	not determined
Solubility	– Water solubility: not soluble
	– Fat solubility: Not determined.
Partition coefficient n-octanol/water:	Not determined.

9.2. Other information: None available.

10. STABILITY AND REACTIVITY

10.1. Reactivity: Not reactive.

10.2. Chemical stability: Stable.

10.3. Possibility of hazardous reactions:

If the substance is involved in a fire, oxides of carbon and nitrogen may be evolved.

10.4. Conditions to avoid:

Excessive temperature variations, below 0 °C or above 35 °C.

10.5. Incompatible materials:

Strong acids, alkali compounds and strong oxidising agents may inactivate biological cultures.

10.6. Hazardous decomposition products:

None anticipated.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:

Ingestion, LD50 Rat oral (mg/kg):	Not determined.
Inhalation, LC50 Rat inhalation (mg/l/4 hr):	Not determined.
Skin, LD50 Rat dermal (mg/kg):	Not determined.

Irritation:

Eye/ Skin irritation:	Not determined

Sensitization: Not determined

12. ECOLOGICAL INFORMATION

12.1. Toxicity: The preparation is not anticipated to pose any environmental hazard.
No data on toxicity specifically to soil organisms, plants and terrestrial animals are available.

12.2. Persistence and degradability:

The preparation is expected to biodegrade rapidly. However, no information on anaerobic biodegradation is available.

12.3. Bioaccumulative potential:

Not anticipated to bioaccumulate.

12.4. Mobility in soil : No information available

12.5. Results of PBT and vPvB assessment

No information available

12.6. Other adverse effects:

There is no ozone depletion, photochemical ozone creation or global warming potential. Adverse effects in the sewage treatment plant are not anticipated.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:

Dispose of by incineration or landfill in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1. UN number: None.

14.2. UN proper shipping name: None.

14.3. Transport hazard class(es): Not applicable.

14.4. Packing group: Not applicable.

14.5. Environmental hazards: None.

14.6. Special precautions for user: None.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Microbial classification:

All the bacteria contained in this formulation are of group 1 according to Directive 2000/54/EC (on the protection of workers from risks related to exposure to biological agents at work). Microorganisms from group 1 are unlikely to cause a human disease.

When handling the product, precautions described in Annex VI of Directive 2000/54/EC have to be taken into consideration in order to make a risk assessment.

GMO status

The bacteria contained in this formulation are not genetically modified according to Council Directive 2001/18/EC (on deliberate release of GMO into the environment).

15.2. Chemical safety assessment:
No chemical safety assessment has been carried out yet for this mixture.

16. OTHER INFORMATION

Sources:

Detailed composition.
SDS of ingredients.
ECHA website: http://echa.europa.eu/

Safety/classification: http://www.baua.de/de/Themen-von-A-Z/Biologische-Arbeitsstoffe/TRBA/pdf/TRBA-466.pdf;jsessionid=4BE5B29D4CA8F29C28E34321F16B6719.1_cid380?__blob=publicationFile&v=6
http://www.biosafety.be/GB/WPProcGB.html

Occupational exposure:
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:338:0087:0089:EN:PDF
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:038:0036:0039:EN:PDF
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0039:20060301:EN:PDF
http://limitvalue.ifa.dguv.de/Webform_gw.aspx

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