



SAFETY DATA SHEET

(according to Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830)

Version
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1 SECTION. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTALKING

1.1 Product identifiers.

1.1.1 Product name BACTO-K

1.1.2 Product ID 202050100

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

1.2.1 Recommended use: Microbiological liquid preparation. *Bacillus megaterium* MVY-011 mobilizes potassium into plants in an accessible face. Potassium well absorbed by plants improves plant nutrition behind the roots

1.3 Details of the supplier of the safety data sheet.

1.3.1 Company: Bioenergy LT

1.3.2 Address: Staniūnų g. 83, Panevėžys 36151, Lithuania

1.3.3 Phone number: +370 674 46174 (working hours: I-V 8:00 – 17:00 h.)

1.3.4 E-mail address: info@bioenergy.lt

1.4 Emergency telephone number

1.4.1 Emergency Phone +370 5 236 20 52 or +370 687 53378

2 SECTION. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification in accordance with Regulation (EU) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended. Not classified, the classification criteria are not met.

2.2 Label elements

2.2.1 Labelling in accordance with Regulation (EU) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.



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2.2.1.1 Hazard label for supply/use required.

2.2.2 Hazard statements

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.2.3 Precautionary statements

P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

2.3.1 Micro-organisms may have the potential to provoke sensitizing reactions.

3 SECTION. COM POSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

3.1.1 Chemical nature *Bacillus megaterium* MVY-011 : $> 1.2 \times 10^{12}$ CFU/ml

3.1.2 Hazardous components Hazard statements according to Regulation (EU) No. 1272/2008. *Bacillus megaterium* MVY-011 Not classified.

3.1.3 Further information For the full text of the H-Statements mentioned in this Section, see Section 16.

4 SECTION. FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 Inhalation Remove to fresh air. Keep the patient warm and at ease. If the symptom persists remains, invite the patient.

4.1.2 Skin contact Wash skin with plenty of soap and water.



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4.1.3 Eye contact Wash immediately with plenty of water for at least 15 minutes. If any, remove contact lenses after the first 5 minutes of washing. Then continue rinsing the eyes. If irritation persists, call a physician

4.1.4 Ingestion Do not induce vomiting. Call a physician or doctor immediately poison information office. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

4.2.1 Symptoms No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

4.3.1 Treatment Treat symptomatically. There is no specific antidote.

5 SECTION. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

5.1.2 Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

5.3.1 Special protective equipment for firefighters In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

5.3.2 Further information Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

6 SECTION. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures



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- 6.1.1 Precautions Avoid contact with spilled product or contaminated surfaces. Ensure adequate ventilation. Use personal protective equipment.
- 6.2 Environmental precautions** Prevent entry into surface and ground water, sewage. Do not contaminate the surface or groundwater for the treatment of equipment, waste management, as well as the water with which the equipment was washed. Use the product as directed on the label.
- 6.3 Methods and materials for containment and cleaning up**
- Methods for cleaning up** Absorb with inert absorbent material (eg sand, silica gel, universal binder, arbolite). Collect and dispose of the product in a properly marked, tightly closed package. Thoroughly clean contaminated floors and objects, comply with environmental requirements. Clean with disinfectants.
- Additional advice** Use personal protective equipment.
- 6.4 Reference to other sections** See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See section 13 for waste disposal information.

7 SECTION. HANDLING AND STORAGE

7.1 Precautions for safe handling

- 7.1.1 Advice on safe handling No special precautions are required when handling unopened product packages; follow the requirements of the instructions for use.
- 7.1.2 Advice on protection against fire and explosion No special precautions are required.
Store the product according to point 7.3.2.
- 7.1.3 Hygiene measures Avoid contact with skin, eyes and clothing. Store work clothes separately. Wash hands before breaks and immediately after use. Wash thoroughly with soap and water after work. Take off immediately all contaminated clothing and clean it for future use. Clothes that are not cleaned must be destroyed (burned).

7.2 Conditions for safe storage, including any incompatibilities

- 7.2.1 Requirements for storage areas and containers Store in places accessible only to authorized persons. Store in the original package for containers and containers. Keep container tightly closed in a cool, well-ventilated place. Keep away from direct sunlight. Protect from frost.



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- 7.2.2 Advice on common storage Keep away from food, drink and animal feedingstuffs.
- 7.2.3 Storage stability Storage temperature from +5 ° C to +30 ° C
- 7.2.4 Suitable materials HDPE (high density polyethylene)
- 7.3 Specific end use (s) Refer to product label or instructions for use

8 SECTION. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

- 8.1.1 Ingredients *Bacillus megaterium* MVY-011

8.2 Exposure controls

- 8.2.1 Respiratory protection Respiratory protection must be used for short-term activities to prevent residual risks after all available and practicable measures to reduce side effects have been taken (eg partitions and / or local exhaust ventilation). The respirator manufacturer's instructions for use and maintenance must always be followed. Use respiratory protection with particle filter (protection level 20) according to European standard EN149FFP3 or EN140P3 or equivalent.
- 8.2.2 Hand protection Please follow the instructions for penetration and penetration time, which provided by glove supplier. Also take into account the specific local conditions in which the product is used, the risk of cuts, scratches, duration of contact. Wash gloves when soiled. Destroy if the inside becomes dirty, torn or it is not possible to clean the surface. Wash your hands often and always wash before eating, drinking, smoking or using the toilet.
Material Nitrile nitrile rubber
Penetration rate > 480 min.
Glove thickness > 0.4 mm
Directive Protective gloves in accordance with EN 374.
- 8.2.3 Eye protection Wear safety goggles (according to EN166, field of use = 5 or equivalent).
- 8.2.4 Skin and body protection Wear standard protective clothing of category 3, type 5. Wear two layers of clothing where possible. A polyester / cotton or cotton suit should be worn under a chemical resistant suit and should often be professionally washed. If there is a higher risk of using a higher level of protection clothing.
- 8.2.5 General protective measures The hazards are not known if the product is used in accordance with the label requirements. Users must follow these recommendations. Wash hands thoroughly



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with soap and water after handling the product and before eating, drinking, chewing gum, smoking, using the toilet or cosmetics. Do not allow children or pets to enter the treated area until the solution has dried.

9 SECTION. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

9.1.1	Appearance	Liquid
9.1.2	Color	Dark brown / black
9.1.3	Odor	Sweet, earthy
9.1.4	Odor threshold	No data available
9.1.5	pH	6.4
9.1.6	Boiling point	100 ° C
9.1.7	Flash point	> 100 ° C No flash point - setting to boiling point.
9.1.8	Auto-ignition	475 ° C temperature
9.1.9	Evaporation rate	No data available
9.1.10	Density	Approximately 1.07 g / cm ³
9.1.11	Water solubility	Dispersible
9.1.12	Viscosity	0.7 mPas
9.1.13	Surface tension	No data available
9.1.14	Impact sensitivity	Insensitive to shocks.
9.1.15	Oxidizing properties	Does not oxidize.
9.1.16	Explosive properties	Non-explosive 92/69 / EEC, A.14 / OECD 113
9.1.17	Melting / freezing	<0 ° C temperature



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9.1.18 Upper (lower) flammability
limit or explosiveness
limit values No data available

9.1.19 Vapor pressure No data available

9.1.20 Relative density No data available

9.1.21 Decomposition temperature No data available

9.1.22 Explosive Properties No data available

9.1.23 Partition coefficient No data available

9.1.24 Vapor density No data available

9.2 Other information

9.2.1 Other safety-related physicochemical properties are unknown.

10 SECTION. STABILITY AND REACTIVITY

10.1 Reactivity

10.1.1 Thermal decomposition Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions known if stored and handled as prescribed / indicated.

10.4 Conditions to avoid

Freezing
Higher than + 30 ° C and direct sunlight.

10.5 Incompatible materials

Store only in the original package.

10.6 Hazardous decomposition products

Under normal conditions of use, no decomposition products are formed.



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11 SECTION. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- 11.1.1 Acute toxicity No data available
- 11.1.2 Skin corrosion and and / or irritation No data available
- 11.1.3 High harmfulness eyes and / or eye irritation No data available
- 11.1.4 Respiratory or skin sensitization No data available
- 11.1.5 Specific target organ toxicity (STOT) - single exposure assessment
Bacillus megaterium MVY-011: Based on available data, the classification criteria are not met.
- 11.1.6 Specific target organ toxicity (STOT) - repeated exposure assessment
Bacillus megaterium MVY-011: Based on available data, the classification criteria are not met.
- 11.1.7 Mutagenicity assessment
Bacillus megaterium MVY-011: Test for micro-organisms optional.
- 11.1.8 Carcinogenicity assessment
Bacillus megaterium MVY-011: Test for micro-organisms optional.
- 11.1.9 Assessment of reproductive toxicity
Bacillus megaterium MVY-011: Test for micro-organisms optional.
- 11.1.10 Aspiration hazard
Based on available data, the classification criteria are not met.

12 SECTION. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

12.2 Durability and legibility

No data available



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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

12.6.1 Additional ecological information No data available

13 SECTION. WASTE MANAGEMENT

13.1 Waste management methods

- 13.1.1 Product In accordance with current legislation and, if necessary, after consultation with waste disposal facility operator and / or responsible authority, the product may be disposed of in a landfill, disposed of in an incineration plant or used as a secondary raw material.
- 13.1.2 Contaminated packaging Incompletely cleaned packaging must be washed and recycled as a secondary raw material.
- 13.1.3 Waste key for the unused product **02 01 08*** agrochemical waste containing hazardous substances.

14 SECTION. TRANSPORT INFORMATION

According to ADN/ADR/UK 'Carriage' Regulations/RID/IMDG/IATA not classified as dangerous goods.

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

14.1 – 14.5 Not applicable.

14.6 Special precautions for user



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14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

15 SECTION. REGULATORY INFORMATION

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

15.1.1 Appendix C to the Convention concerning International Carriage by Rail (COTIF) Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)

15.1.2 Concerning the classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEB and 1999/45 / EB and amending Regulation (EU) No 1907/2006. 1907/2006

15.2 Chemical Safety Assessment

A chemical safety assessment is not required for this substance.

15.3 SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimates
CAS-No.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European Community number
ECx	Effective concentration x%
EINECS	European Inventory of Existing Commercial Substances



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ELINCS	European List of Notified Chemical Substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibitory concentration x%
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration x%
LDx	Lethal dose x%
LOEC / LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the Prevention of Pollution from Ships.
N.O.S.	Not otherwise specified
NOEC / NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Rules concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World Health Organization

The information in the safety data sheet shall be in accordance with Regulation (EU) No. 1907/2006, Regulation (EU) No 1907/2006 and Regulation (EU) No Amending Regulation (EU) No 2015/830 1907/2006 (and subsequent amendments). This safety data sheet supplements the product instructions for use but does not replace them. The information is based on our knowledge of the product at the time of writing. Consumers are warned of the potential dangers of using the products for purposes other than those for which they were intended. The required information is provided in accordance with current EEC legislation. Recipients are kindly requested to comply with all relevant national legislation.

Reason for revision: Revised and updated for general editorial purposes.