

**RUINEX**

1 page of 8  
Revision Date 2022.10.19

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

### 1.1 Product identifiers.

**Product name:** Ruinex

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

**Use** Agriculture use.

**Restrictions on use** See product label for restrictions.

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

**Supplier:** Bioenergy LT  
Staniunu str. 83-1, Panevezys 36151, Lithuania  
+370 674 46174 (working hours: I-V 8:00 – 17:00 h.)  
info@bioenergy.lt

### 1.4 Emergency telephone number:

1.4.1	Emergency Phone	+44 1235 239670 - Europe - Multi lingual response
	Austria	Poison Information Centre (AT): +43-(0)1-406 43 43
	Belgium	Poison Centre (BE): +32 70 245 245
	Croatia	Poison Control (CR): +385 1 2348 342
	Czech Republic	Poison Control (CS): +420 224 919 293, +420 224 915 402
	Denmark	Poison Control Hotline (DK): +45 82 12 12 12
	Estonia	Poison Control (ET): 16662, (+372) 626 93 90
	Finland	Poison Information Centre (FI): +358 9 471 977
	France	ORFILA (FR): + 01 45 42 59 59
	Germany	Poison Centre Berlin (DE): +49 030 30686 790 (24 h service, Advice in German and English)
	Greece	Poison Information Center (EL): (0030) 2107793777
	Hungary	Poison Information Service (HU): (+ 36-80) 201-199
	Iceland	Poison Information Center: 543 2222
	Italy	Poison Centre, Milan (IT): +39 02 6610 1029
	Latvia	Poison Information Center (LV): +371 67042473
	Lithuania	Poison Information Office (LT): +370 5236 20 52 or +370 687 53 378
	Luxembourg	Belgian Poison Center: (+352) 8002-5500
	Netherlands	National Poisons Information Center (NVIC): 030-274 8888
	Norway	Poison Center: 22 59 13 00
	Portugal	Poison Information Centre (PT): +351 21 330 3284
	Spain	Poison Information Service (ES): +34 91 562 04 20
	Sweden	112 – ask for Poisons Information

**RUINEX**

2 page of 8

Revision Date 2022.10.19

## 2 SECTION. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008

### 2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

#### Hazardous components which must be listed on the label:

*Bacillus mojavensis* MVY-007, *Bacillus amyloliquefaciens* MVY-008, *Bacillus megaterium* MVY-001, *Trichoderma harzianum* MVY-021 (in total >  $1.2 \times 10^{12}$  CFU/l)

**Signal word:** Warning

#### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/doctor/physician if you feel unwell.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 3 SECTION. COM POSITION/INFORMATION ON INGREDIENTS

### 3.1 Mixtures

#### Mixture containing

*Bacillus mojavensis* MVY-007, *Bacillus amyloliquefaciens* MVY-008, *Bacillus megaterium* MVY-001, *Trichoderma harzianum* MVY-021 (in total >  $1.2 \times 10^{12}$  CFU/l)

Chemical name	CAS-No.	Concentration [%]
<i>Bacillus mojavensis</i> MVY-007, <i>Bacillus amyloliquefaciens</i> MVY-008, <i>Bacillus megaterium</i> MVY-001, <i>Trichoderma harzianum</i> MVY-021	-	>= 5.00 - <= 15.00
Molasses	68476-78-8	>= 1.00 - <= 15.00
Water	-	>= 60.00 - <= 90.00

**RUINEX**

3 page of 8

Revision Date 2022.10.19

## 4 SECTION. FIRST AID MEASURES

### 4.1 Description of first aid measures

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethylene glycol 400, subsequently rinse with water.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

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

<b>Symptoms</b>	To date no symptoms are known.
-----------------	--------------------------------

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

<b>Treatment</b>	Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.
------------------	--

## 5 SECTION. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

<b>Suitable</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable</b>	High volume water jet.

<b>5.2 Special hazards arising from the substance or mixture</b>	Harmful vapours can be released at high temperatures.
--	---

### 5.3 Advice for firefighters

<b>Special protective equipment for firefighters</b>	Do not inhale explosion gases or combustion gases. Use protective equipment suitable to the situation.
<b>Further information</b>	Contain the spread of the fire-fighting media. Contain runoff to prevent entry into water or drainage systems.

## 6 SECTION. ACCIDENTAL RELEASE MEASURES

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

<b>Precautions</b>	Avoid contact with spilled product or contaminated surfaces. Ensure adequate ventilation. Use personal protective equipment.
--------------------	--

<b>6.2 Environmental precautions</b>	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.
--------------------------------------	--

**RUINEX**

4 page of 8

Revision Date 2022.10.19

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

#### Methods for cleaning up

Absorb with inert absorbent material (e.g. sand, silica gel, universal binder, arbolite). Collect and dispose of the product in a properly labelled, 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

#### Advice on safe handling

No special precautions are required when handling unopened product packages, follow the requirements of the instructions for use. No special precautions are required. Store the product according to point 7.2

#### 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 before reuse. Clothes that are not cleaned must be destroyed (burned).

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

#### Requirements for storage areas and containers

Store only in original receptacle. Keep container tightly closed in a cool, well-ventilated place. Keep away from direct sunlight. Protect from frost.

#### Advice on common storage

Keep away from food, drink and animal foodstuff.

#### Storage stability

Storage temperature from +5 °C to +30 °C

#### Suitable materials

HDPE (high density polyethylene)

#### Specific end use (s)

Refer to product label or instructions for use

## 8 SECTION. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Ingredients

*Bacillus mojavensis* MVY-007, *Bacillus amyloliquefaciens* MVY-008, *Bacillus megaterium* MVY-001, *Trichoderma harzianum* MVY-021

### 8.2 Exposure controls

#### Respiratory protection

Not required if used according to its intended purpose. Use suitable respiratory protective device in case of insufficient ventilation or when fumes are formed.

#### Hand protection

Please follow the instructions for degradation 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 when contaminated inside, when perforated or when contamination outside cannot be removed. Wash your hands often and always wash before eating, drinking, smoking or using the toilet. Penetration rate > 480 min. Glove thickness > 0.4 mm Material Nitrile rubber Protective gloves in accordance with EN 374.

#### Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent)

#### Skin and body protection

Protective clothing recommended.

**RUINEX**

5 page of 8

Revision Date 2022.10.19

**General protective measures** No hazards are known if the product is used in accordance with the label requirements. Wash hands thoroughly with soap and water after handling the product and before eating, drinking, chewing gum, smoking, using the toilet or cosmetics. Do not allow children 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

<b>Physical state</b>	Liquid
<b>Colour</b>	Dark brown / black
<b>Odour</b>	Sweet, earthy
<b>Odour Threshold</b>	No data available
<b>pH</b>	4-7
<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	>100 ° C
<b>Flash point</b>	>100 ° C No flash point up to the boiling point
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	475 ° C
<b>Thermal decomposition</b>	No data available
<b>Minimum ignition energy</b>	No data available
<b>Self-accelarating decomposition</b>	No data available
<b>Temperature (SADT)</b>	
<b>Upper explosion limit</b>	Not applicable
<b>Lower explosion limit</b>	Not applicable
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	Approximately 1.08 g/cm <sup>3</sup>
<b>Bulk density</b>	>= 0.40 g/ml (loose)
<b>Water solubility</b>	Dispersible
<b>Partition coefficient:</b>	Not applicable
<b>noctanol/water</b>	
<b>Viscosity</b>	0.9 mPas
<b>Oxidizing properties</b>	Non-oxidizing
<b>Explosivity</b>	Non-explosive 92/69 / EEC, A.14 / OECD 113

### 9.2 Other safety-related physicochemical properties are unknown.

## 10 SECTION. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known if stored and handled as prescribed / indicated.
<b>10.4 Conditions to avoid</b>	Freezing, temperatures above +30 °C and direct sunlight.
<b>10.5 Incompatible materials</b>	Store only in the original package.

**RUINEX**

6 page of 8

Revision Date 2022.10.19

**10.6 Hazardous decomposition products**

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

**11 SECTION. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

<b>Acute toxicity</b>	No data available
<b>Skin corrosion/irritation</b>	No data available
<b>Serious eye damage/irritation</b>	No data available
<b>Respiratory or skin</b>	No data available sensitization
<b>Specific target organ toxicity (STOT) – single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity (STOT) - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Assessment mutagenicity</b>	
<i>Bacillus mojavensis</i> MVY-007, <i>Bacillus amyloliquefaciens</i> MVY-008, <i>Bacillus megaterium</i> MVY-001, <i>Trichoderma harzianum</i> MVY-021: Test not required for microorganisms.	
<b>Assessment carcinogenicity</b>	
<i>Bacillus mojavensis</i> MVY-007, <i>Bacillus amyloliquefaciens</i> MVY-008, <i>Bacillus megaterium</i> MVY-001, <i>Trichoderma harzianum</i> MVY-021: Test not required for microorganisms.	
<b>Assessment toxicity to reproduction</b>	
<i>Bacillus mojavensis</i> MVY-007, <i>Bacillus amyloliquefaciens</i> MVY-008, <i>Bacillus megaterium</i> MVY-001, <i>Trichoderma harzianum</i> MVY-021: Test not required for microorganisms.	
<b>Assessment developmental toxicity</b>	
<i>Bacillus mojavensis</i> MVY-007, <i>Bacillus amyloliquefaciens</i> MVY-008, <i>Bacillus megaterium</i> MVY-001, <i>Trichoderma harzianum</i> MVY-021: Test not required for microorganisms.	
<b>Assessment STOT Specific target organ toxicity – single exposure</b>	
<i>Bacillus mojavensis</i> MVY-007, <i>Bacillus amyloliquefaciens</i> MVY-008, <i>Bacillus megaterium</i> MVY-001, <i>Trichoderma harzianum</i> MVY-021: Based on available data, the classification criteria are not met.	
<b>Aspiration hazard</b>	
Based on available data, the classification criteria are not met.	
<b>Information on likely routes of exposure</b>	
May be harmful if inhaled. Mists may cause respiratory tract irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. May cause eye irritation. Harmful if swallowed.	
<b>Early onset symptoms related to exposure</b>	Refer to Section 4
<b>Delayed health effects from exposure</b>	Refer to Section 11
<b>Exposure levels and health effects</b>	Refer to Section 4
<b>Interactive effects</b>	Not known
<b>When specific chemical data is not available</b>	Not applicable
<b>Mixture of chemicals</b>	Refer to Section 2.1
<b>Further information</b>	Micro-organisms may have the potential to provoke skin and respiratory sensitisation.

**RUINEX**

7 page of 8  
Revision Date 2022.10.19

## 12 SECTION. ECOLOGICAL INFORMATION

<b>12.1</b>	<b>Toxicity</b>	No data available
<b>12.2</b>	<b>Persistence and degradability</b>	No data available
<b>12.3</b>	<b>Bioaccumulative potential</b>	No data available
<b>12.4</b>	<b>Mobility in soil</b>	No data available
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	Not applicable
<b>12.6</b>	<b>Other adverse effects</b>	
	<b>Additional ecological information</b>	No data available

## 13 SECTION. WASTE MANAGEMENT

<b>13.1</b>	<b>Waste management methods</b>	
	<b>Product</b>	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.
	<b>Contaminated packaging</b>	Empty contaminated packaging thoroughly. They may be recycled after thorough and proper cleaning. Do not reuse empty contaminated packaging for other purposes.
	<b>Waste key for the unused</b>	02 01 09: agrochemical waste other than those mentioned in 02 01 08 product

## 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.

<b>14.1.</b>	<b>UN number</b>	Not applicable
<b>14.2.</b>	<b>UN proper shipping name</b>	Not applicable.
<b>14.3.</b>	<b>Transport hazard class(es)</b>	Not applicable.
<b>14.4.</b>	<b>Packing group</b>	Not applicable.
<b>14.5.</b>	<b>Environmental hazards</b>	Not applicable.
<b>14.6</b>	<b>Special precautions for user</b>	Not applicable.
<b>14.7</b>	<b>Transport in bulk</b>	Not applicable.
	<b>According to Annex II of MARPOL and the IBC Code</b>	

## 15 SECTION. REGULATORY INFORMATION

<b>15.1</b>	<b>Safety, health and environmental regulations / legislation specific for the substance or mixture</b>	Appendix C to the Convention concerning International Carriage by Rail (COTIF) Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Concerning the classification, labeling and packaging of substances and mixtures, amending and repealing Regulation (EC) No 1272/2008, amending and repealing amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No 1907/2006.
-------------	---	---



**RUINEX**

8 page of 8

Revision Date 2022.10.19

**15.2 Chemical Safety Assessment**

A chemical safety assessment is not required.

**15.3 Further information**

WHO-classification: U (Unlikely to present acute hazard in normal use)

Water hazard class (WGK): Generally not hazardous for water.

**16 SECTION. OTHER INFORMATION**

**Text of the hazard statements mentioned in Section 3**

**Abbreviations and acronyms**

AND	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
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 sections: 1,2,3,4,5,6,7,8,9,11,14,15