

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

1.1. Product identifier

Product form : Mixture
Product name : TerraBlend-01
Product code : 499211, 499221

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals

1.2.2. Uses advised against

Restrictions on use : None known

1.3. Details of the supplier of the safety data sheet

Supplier

Buehler
41 Waukegan Rd
60044 Lake Bluff – IL
T 1-847-295-6500
custserv@buehler.com

Only Representative

ITW Test & Measurement GmbH
Meisenweg 35
70771 Leinfelden-Echterdingen
Germany
T +49 0 711 4904690-0
lab.eu@buehler.com

1.4. Emergency telephone number

Emergency number : Global Access Code: 334545; Americas" +1 760 476 3962; Middle East/Africa: +1 760 476 3959; Asia Pacific +1 760 476 3960; Europe +1 760 476 3961

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Acute toxicity (oral), Category 4 H302
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Hazard pictograms (GB CLP)



GHS07

Signal word (GB CLP) : Warning
Contains : Sodium nitrate; ethanediol; ethylene glycol
Hazard statements (GB CLP) : H302 - Harmful if swallowed.
Precautionary statements (GB CLP) : P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents and container to a hazardous or special waste collection point, in accordance with local, regional, national and international regulations.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

2.3. Other hazards

Component

Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	Sodium nitrate (7631-99-4), ethanediol; ethylene glycol (107-21-1), Water (7732-18-5)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	Sodium nitrate (7631-99-4), ethanediol; ethylene glycol (107-21-1), Water (7732-18-5)

Component

Substance(s) not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	ethanediol; ethylene glycol(107-21-1), Water(7732-18-5), Sodium nitrate(7631-99-4)
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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
ethanediol; ethylene glycol	CAS-No.: 107-21-1 EC-No.: 203-473-3	35 – 50	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)
Water	CAS-No.: 7732-18-5 EC-No.: 231-791-2	42.5	Not classified.
Sodium nitrate	CAS-No.: 7631-99-4 EC-No.: 231-554-3	1 – 15	Acute Tox. 4 (Oral), H302 (ATE=1267 mg/kg bodyweight)

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

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

Treat symptomatically.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Not determined.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not handle until all safety precautions have been read and understood. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ethanediol; ethylene glycol (107-21-1)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	10 mg/m³ (particulates)
	52 mg/m³ (vapour)
	20 ppm (vapour)
WEL STEL (OEL STEL)	104 mg/m³ (vapour)
	30 mg/m³ (calculated-particulate)
	40 ppm (vapour)
WEL chemical category	Potential for cutaneous absorption

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

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8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: Colourless.
Odour	: Odourless.
Odour threshold	: Not available
pH	: 6.86
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: > 197 °C
Flash point	: > 100 °C
Explosive limits	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: Not available
Relative density	: Not available
Density	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity, kinematic	: Not available
Explosive properties	: Not available

9.2. Other information

Particle characteristics	: Not applicable
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong oxidizing agents. Strong acids.

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10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified. (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified. (Based on available data, the classification criteria are not met)

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ATE UK (oral)	1011.151 mg/kg bodyweight
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Sodium nitrate (7631-99-4)

LD50 oral rat	1267 mg/kg (Source: JAPAN_GHS)
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ethanediol; ethylene glycol (107-21-1)

LD50 oral rat	4700 mg/kg (Source: NLM_CIP)
LD50 dermal rat	10600 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat	> 2.5 mg/l (Exposure time: 6 h Source: ECHA_API)

Water (7732-18-5)

LD50 oral rat	> 90 ml/kg (Source: FOOD_JOURN)
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Skin corrosion/irritation	: Not classified. (Based on available data, the classification criteria are not met) pH: 6.86
Serious eye damage/irritation	: Not classified. (Based on available data, the classification criteria are not met) pH: 6.86
Respiratory or skin sensitisation	: Not classified. (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified. (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified. (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified. (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified. (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified. (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified. (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified. (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified. (Based on available data, the classification criteria are not met)

Sodium nitrate (7631-99-4)

LC50 - Fish [1]	2000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
LC50 - Fish [2]	994.4 – 1107 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA)

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

ethanediol; ethylene glycol (107-21-1)

LC50 - Fish [1]	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: IUCLID)
LC50 - Fish [2]	14 – 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA)
EC50 - Crustacea [1]	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 96h - Algae [1]	6500 – 13000 mg/l (Species: Pseudokirchneriella subcapitata)

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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Sodium nitrate (7631-99-4)

Persistence and degradability	Not rapidly degradable
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ethanediol; ethylene glycol (107-21-1)

Persistence and degradability	Not rapidly degradable
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Water (7732-18-5)

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

Sodium nitrate (7631-99-4)

Partition coefficient n-octanol/water (Log Pow)	-3.8 (at 25 °C)
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ethanediol; ethylene glycol (107-21-1)

Partition coefficient n-octanol/water (Log Pow)	-1.36
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

Sodium nitrate (7631-99-4)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII
ethanediol; ethylene glycol (107-21-1)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII
Water (7732-18-5)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Transport document description				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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

Not applicable

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

Contains no substance(s) listed on the UK REACH Candidate List

GB PIC regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains substance(s) listed on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure: Sodium nitrate - 7631-99-4

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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 Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Abbreviations and acronyms:	
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H319	Causes serious eye irritation.

Safety Data Sheet (SDS), UK

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.