

Revision date: 13.05.2024
Replacement of version 0007 of 08.05.2023

Version: 0008



KNAUF Performance Materials GmbH

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

1.1 *Product identifier*

Trade name **Perligran Organic**
Product number **perl0086**

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

Appropriate use:
The product is used as a soil additive in horticulture.

1.3 *Details of the supplier of the safety data sheet*

KNAUF Performance Materials GmbH
Kipperstraße 19
D-44147 Dortmund
Telephone: +49-231-9980-01 Telefax: +49-231-9980-138
e-mail-address of the competent person responsible for this Safety Data Sheet:
info@gefstoff.de

Technical contact:

KNAUF Performance Materials GmbH, Kipperstraße 19, D-44147 Dortmund
Telephone: +49-231-9980-01 Telefax: +49-231-9980-138

1.4 *Emergency telephone number*

Giftnotruf der Charité - Universitätsmedizin Berlin, Campus Benjamin Franklin, Haus VIII (Wirtschaftsgebäude), UG
Hindenburgdamm 30, 12203 Berlin
Giftnotruf Berlin +49-30-30686 700 (Advice in German and English)
(24 hours, Monday – Sunday)

SECTION 2: Hazards identification

2.1 *Classification of the substance or mixture*

The mixture does not meet the criteria for a classification as hazardous in accordance with the current version of Regulation (EC) No 1272/2008.

2.2 *Label elements*

Hazard pictogram(s):	No pictogram
Signal word(s):	No signal word
Product identifier:	Not required
Hazard statements:	Not required
Precautionary statements:	Not required
Supplemental hazard information:	Not required

2.3 *Other hazards*

The product is moistened with water and potassium salts of humic acids and the moisture content is 20%.

It is not expected that the moistened product presents a significant release of dust.

The dustiness of the dry raw material Perligran 2/6 has been determined in accordance with DIN 33897-2 and EN 15051-Method B.

Classification of dustiness according to EN 15051-Method B:

Dusting propensity concerning respirable dust:	moderate
Dusting propensity concerning inhalable dust:	high

The mixture does not contain any substances classified as PBT/vPvB or any substances having endocrine disrupting properties in concentrations of more or equal than 0.1%.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

REACH registration number:

Humic acids, potassium salts: 01-2119484861-29-XXXX

3.2.1 Characterisation

The product is a mixture of perlite of volcanic origin recovered by expansion at temperatures above 1000°C.
It is sprayed with water and potassium salts of humic acids.

3.2.2 Substances presenting a health/environmental hazard within the meaning of Regulation (EC) No 1272/2008

The mixture does not contain substances meeting the criteria for a classification as hazardous in accordance with Regulation (EC) No 1272/2008.

3.2.3 Substances for which there are Union workplace exposure limits which are not already included under point 3.2.2 (see also Section 8.)

No substances.

3.2.4 Additional information

The product contains quartz. The content of the respirable dust fraction is less than 1% in the dust fraction of perlite.
The product contains potassium salts of humic acids. DNEL/PNEC values have been assigned for this substance (see subsection 8.1).

SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 General information

Emergency eyewash should be provided in the immediate working surroundings.

4.1.2 In case of inhalation

If liberated dust is inhaled, ensure supply of fresh air.

In the event of symptoms take medical treatment.

4.1.3 In case of contact with skin

No special measures necessary.

4.1.4 In case of contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do.

Do not rub eyes, cornea damage is possible by mechanical stress.

4.1.5 In case of ingestion

No special measures necessary.

4.2 Most important symptoms and effects, both acute and delayed

If liberated dust is inhaled: irritant effect on the respiratory tract, e.g. burning, coughing.

In case of contact of liberated dust with eyes: burning eyes, tears.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be discussed.

5.1.2 Unsuitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be discussed.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released: carbon monoxide, carbon dioxide.

5.3 Advice for firefighters

In case of formation of dust, wear self-contained breathing apparatus.

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SECTION 6: Accidental release measures

6.1 *Personal precautions, protective equipment and emergency procedures*

6.1.1 *For non-emergency personnel*

Avoid formation of dust. Ensure adequate ventilation.
Keep away from unprotected people.

6.1.2 *For emergency responders*

For suitable fabric for personal protective clothing see Section 8.

6.2 *Environmental precautions*

No special measures necessary.

6.3 *Methods and material for containment and cleaning up*

Pick up mechanically. Avoid formation of dust.
Do not use compressed air for cleaning surfaces or clothing.
Use approved industrial vacuum cleaner for removal.

6.4 *Reference to other sections*

For personal protective equipment see also Section 8.
For disposal considerations see also Section 13.

SECTION 7: Handling and storage

7.1 *Precautions for safe handling*

7.1.1 *Advice on safe handling*

The product is moistened with water and potassium salts of humic acids and the moisture content is 20%.

It is not expected that the moistened product presents a significant release of dust.

The following information under point 7.1.1 relates primarily to the dried product:

Avoid formation of dust. When filling, transferring, or emptying of containers, adequate suctioning close to work place necessary.

Do not compress empty bags, except when contained in another clean bag.

Dust deposits that cannot be avoided must be taken up regularly.

Comply with the minimum standards in accordance with TRGS 500¹.

In case of release of mineral dust, comply with the protective measures in accordance with TRGS 559¹.

In case of dust formation and release of only small amounts of dust (range of grams) the model solutions of the Control Guidance Sheets 100¹, La-101¹ and 110¹ must be taken into consideration in designing the work process.

In case of dust formation and release of medium to large amounts of dust (range of kilograms up to tons) the model solutions of the Control Guidance Sheets 200¹, 208¹ and 240¹ must be additionally taken into consideration.

7.1.2 *Advice on general occupational hygiene*

Do not inhale dust.

Use suitable barrier skin cream in case of sensitive skin.

Emergency eyewash should be provided in the immediate working surroundings.

7.2 *Conditions for safe storage, including any incompatibilities*

7.2.1 *Advice on protection against fire and explosion*

No special measures necessary.

7.2.2 *Requirements for storage rooms and vessels*

Keep only in the original container. Keep container tightly closed.

7.2.3 *Advice on storage compatibility*

Do not store together with hydrofluoric acid.

Do not store together with strong oxidising agents.

The information about joint storage given in Table 12 of TRGS 510¹ must be observed.

7.2.4 *Further information on storage conditions*

Store in a dry place.

7.2.5 *Storage class (for Germany only)*

LGK 13 in accordance with TRGS 510¹.

7.3 *Specific end use(s)*

The product is only intended for the uses mentioned under subsection 1.2.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS number	Identification	Limit values	Remarks
93763-70-3	perlite	5 mg/m ³ inhalable aerosol 10 mg/m ³ 4 mg/m ³ (and tuff, pemza) 10 mg/m ³ - total dust 4 mg/m ³ - respirable fraction 2 mg/m ³ (persulfates) 10 mg/m ³ inhalable aerosol	National limit values – eight hours Austria Belgium Latvia Norway Norway Norway National limit values – short-term Austria

DNEL values

Additional limit values for humic acids, potassium salts in accordance with the registration dossier:
 general population, long-term exposition: oral, systemic effect: 0.21 mg/kg_{bw}/d

PNEC values

Additional limit values for humic acids, potassium salts in accordance with the registration dossier:
 aquatic, fresh water: 0.077 mg/l
 aquatic, sewage treatment plant (STP): 10 mg/l

The methods for measuring chemical agents in workplace atmosphere must meet the general requirements of EN 481, EN 482 and EN 689.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See also subsection 7.1.

In case of dust formation exhaust ventilation at the object (initiation point) is necessary.

In case of release of dust, additionally comply with the protective measures in accordance with TRGS 559¹.

The effectiveness of suitable protective measures must be controlled.

Suitable assessment methods are described in the German TRGS 402¹.

8.2.2 Individual protection measures, such as personal protective equipment

Personal protective equipment needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled.

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer/supplier of the personal protective equipment.

8.2.2.1 Eye/face protection

Tightly fitting safety glasses in accordance with EN 166 (in case of dust formation).

8.2.2.2 Skin protection

Hand protection:

Work gloves for protection against mechanical damage.

Body protection:

Not necessary.

8.2.2.3 Respiratory protection

Filtering half mask to protect against particles FFP1 – FFP3 in accordance with EN 149 (in dust-laden atmosphere).

Maximum use concentration for substances with occupational exposure limit values (OELV):

P1-filter up to max. 4 x OELV;

P2-filter up to max. 10 x OELV;

P3-filter up to max. 30 x OELV.

These values are only valid for Germany in accordance with the German DGUV Regel 112-190².

The limitations in wearing time according to the DGUV Regel 112-190² (rule of the German employers' liability insurance association) for the use of respirators have to be observed.

8.2.2.4 Thermal hazards

Not relevant.

8.2.3 Environmental exposure controls

See Section 6.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	solid	
Colour:	brown	
Odour:	odourless	
Odour threshold:	no data available	
Melting point/freezing point (°C):	approx. 1400	(raw perlite)
Boiling point/initial boiling point/boiling range (°C):	not applicable	
Flammability:	not combustible	
Lower explosion limit:	not applicable	
Upper explosion limit:	not applicable	
Flash point (°C), closed cup:	not applicable	
Auto-ignition temperature (°C):	not applicable	
Decomposition temperature (°C):	no data available	
pH (as supplied) (20°C):	no data available	
Kinematic viscosity (mm ² /s):	not applicable	
Solubility in water:	< 1 wt %	(raw perlite)
Soluble in:	The fraction of potassium salts of humic acids is water-soluble.	
Partition coefficient: n-octanol/water (log value):	no data available	
Vapour pressure (20°C) (mbar):	not applicable	
Bulk density (g/l):	100 – 140	(raw perlite)
Relative vapour density (20°C):	not applicable	
Particle characteristics:	dusty	
	Classification of dustiness in accordance with DIN 33897-2 and EN 15051-Method B:	
	dusting propensity concerning respirable dust: moderate	
	dusting propensity concerning inhalable dust: high	

9.2 Other information

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available for the product.

10.2 Chemical stability

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

When used as intended, no hazardous reaction known.

10.4 Conditions to avoid

When used as intended, no particular conditions known.

10.5 Incompatible materials

Avoid contact with hydrofluoric acid and strong oxidising agents.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

For hazardous combustion products see subsection 5.2.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

No data are available for the product.

11.1.1 Acute toxicity

LD50 rat, oral	(mg/kg)	> 2000	(humic acids, potassium salts)	(EU method B.1)
LD50 rat, dermal	(mg/kg)	> 2000	(humic acids, potassium salts)	(EU method B.3)
LC50 rat, inhalation	(mg/l/4h)	No data available.		

11.1.2 Skin corrosion/irritation

Skin irritation, rabbit:	Not irritating	(humic acids, potassium salts)	(EU method B.4)
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11.1.3 Serious eye damage/irritation

Eye irritation, rabbit: Not irritating (humic acids, potassium salts) (EU method B.5)

11.1.4 Respiratory or skin sensitisation

No evidence of sensitive properties of perlite has been found.

Skin sensitisation, mouse: Not sensitising (humic acids, potassium salts) (EU method B.42)

11.1.5 Germ cell mutagenicity

The mixture does not contain substances classified as germ cell mutagens.

11.1.6 Carcinogenicity

The mixture does not contain substances classified as carcinogenic.

11.1.7 Reproductive toxicity

The mixture does not contain substances classified as toxic for the reproduction.

11.1.8 Specific target organ toxicity (STOT)-single exposure

The mixture does not contain substances classified as being a specific target organ toxicant after single exposure.

11.1.9 Specific target organ toxicity (STOT)-repeated exposure

The mixture does not contain substances classified as being a specific target organ toxicant after repeated exposure.

11.1.10 Aspiration hazard

The mixture does not contain aspiration toxicants.

11.1.11 Symptoms related to the physical, chemical and toxicological characteristics

If liberated dust is inhaled: irritant effect on the respiratory tract, e.g. burning, coughing.

In case of contact of liberated dust with eyes: burning eyes, tears.

11.1.12 Delayed and immediate effects as well as chronic effects from short and long-term exposure

If liberated dust is inhaled: irritant effect on the respiratory tract, e.g. burning, coughing.

In case of contact of liberated dust with eyes: burning eyes, tears.

11.2 Information on other hazards

No data available for the mixture.

11.2.1 Endocrine disrupting properties

The mixture does not contain any substances having endocrine disrupting properties in concentrations of more or equal than 0.1%.

11.2.2 Other information

None.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:**

LC50 96h	(fish)	> 128 mg/l	(Poecilia reticulata; guppy) (EU method C.1)
			(humic acids, potassium salts)
EC50 48h	(daphnia)	> 116 mg/l	(Daphnia magna) (EU method C.2)
			(humic acids, potassium salts)
EC50 21d	(daphnia)	3.2 mg/l	(Daphnia magna) (OECD Test Guideline 211)
			(humic acids, potassium salts)
EC50 72h	(algae)	87 mg/l	(Desmodesmus subspicatus) (EU method C.3)
			(humic acids, potassium salts)

Behaviour in sewage works:

The behaviour of the product in sewage treatment plants has not been tested. Do not allow to enter into drains.

12.2 Persistence and degradability

The fraction of perlite is water insoluble and inert to microorganisms.

The fraction of humic acids, potassium salts is not readily biodegradable.

Degradation of 2% within 28 days (EU method C.4E; closed bottle test).

Chemical oxygen demand (COD) No data available.

Biochemical oxygen demand (BOD5) No data available.

AOX-hint Not to apply.

12.3 Bioaccumulative potential

The product has not been tested.

12.4 Mobility in soil

The product has not been tested.

12.5 Results of PBT and vPvB assessment

The mixture does not contain any substances classified as PBT/vPvB in a concentration of 0.1% or more.

12.6 Endocrine disrupting properties

The mixture does not contain any substances having endocrine disrupting properties in concentrations of more or equal than 0.1%.

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12.7 Other adverse effects

Ozone depletion potential	No data available.
Photochemical ozone creation potential	No data available.
Global warming potential	No data available.

Contains according to the formulation following compounds of directives 2006/11/EC and 80/68/EEC:

None.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Waste disposal according to official state regulations.

Consult the local waste disposal expert about waste disposal.

Disposal operations/recovery operations according to Directive 2008/98/EC

Disposal operations	D 1	Deposit into or on to land
Recovery operations	R 3/5	Recycling/reclamation of organic substances which are not used as solvents
		Recycling/reclamation of other inorganic material

Properties of waste which render it hazardous in accordance with Annex III of Directive 2008/98/EC

Not relevant.

13.1.1 Product / unused product

Waste disposal corresponding to European Waste Catalogue. Wastes must be classified with respect to their origin and depending on different processing steps. The waste codes mentioned as follows are only constituted as our recommendations. Referring to the particular case they should be completed or revised.

EC waste code	17 06 04
Waste notation	Insulation materials other than those mentioned in 17 06 01 and 17 06 03

13.1.2 Contaminated packaging

Recommendation: Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent: Remove adhering residues mechanically.

Packaging that cannot be cleaned:

EC waste code:	15 01 02
Waste notation:	Plastic packaging

SECTION 14: Transport information**14.1 UN number or ID number**

No dangerous good in accordance with the UN Model Regulations (ADR/RID/ADN/IMDG/ICAO/IATA).

14.2 UN proper shipping name

Not relevant.

14.3 Transport hazard class(es)

Not relevant.

14.4 Packing group

Not relevant.

14.5 Environmental hazards

Not relevant.

14.6 Special precautions for user

Not relevant.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant.

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SECTION 15: Regulatory information

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

15.1.1 Information regarding relevant Union safety, health and environmental provisions

- Regulation (EC) No 1907/2006: Annex V (7) (perlite)
(exemptions from the obligation to register)
- Conditions of restriction in accordance with Annex XVII Regulation (EC) No 1907/2006: None
- The mixture does not contain substances classified as substances of very high concern (SVHC) in accordance with Article 57 or listed in Annex XIV of the regulation (list of substances subject to authorisation) in concentrations of more or equal than 0.1%.

15.1.2 Information regarding national laws/national measures that may be relevant (for Germany only)

- Indications on restriction of occupation: Not relevant
- Major Accident Ordinance: Not relevant
- Fire and explosion hazards: Not relevant
- Regulation on clean air (TA Luft): Number 5.2.1 (exhaust stream in case of liberation of dust during processing and treatment)
- Water hazard class: Non-hazardous to water
(according to § 3(2) sentence 2 AwSV)³
- German Ordinance on Hazardous Substances (in accordance with EC-Directive 98/24/EC): Article 6 must be observed.
- Only in case of liberation of dust during processing and treatment:
- German ordinance on Hazardous Substances (in accordance with EC-Directive 98/24/EC): Articles 7, 8, 9, 14, Annex I No 2
- Regulation on Occupational Medical Prevention (ArbMedVV): Annex, Part 1 (1):
Obligatory prophylaxis: The employer shall arrange occupational medical prophylaxis for workers conducting activities with exposure to inhalable dust, if the occupational exposure limit value is exceeded.
Annex, Part 1 (2):
Prophylaxis offer: For activities involving inhalable dust occupational medical prevention has to be offered.
- DGUV Recommendations on Occupational Medical Prevention: dust exposure
- Technical Rules for Hazardous Substances¹: TRGS 400, 402, 500, 510, 555, 559, 900
- Rules of the employers' liability insurance association²: DGUV Regel 112-190, 112-192
- Classification in accordance with the easy-to-use workplace control scheme for hazardous substances of the Federal Institute for Occupational Safety and Health, version 2.2, 2014⁴: inhalation: hazard group A
(in case of release of mineral dust, the protective measures in accordance with TRGS 559¹ should be applied preferably)

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for the mixture.

SECTION 16: Other information

- 16.1 **Keeping (restrictions)** Not relevant
- Supply** to industry consumer, for the general public
- 16.2 **Full text of the hazard statements referred to under sections 2 and 3 of the Safety Data Sheet**
- Not to apply.
- 16.3 **Key or legend to abbreviations and acronyms used in the safety data sheet**
- ADN: Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
- ADR: Accord relatif au transport international des marchandises dangereuses par route
- AOX: adsorbable organically bound halogens
- AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances that are hazardous to water)
- DNEL: Derived No-Effect Level
- DGUV: Deutsche Gesetzliche Unfallversicherung (German Social Accident Insurance)
- IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
- ICAO-TI: International Civil Aviation Organisation – Technical Instructions

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(continued from 16.3 Key or legend to abbreviations and acronyms used in the safety data sheet)

IMDG-Code: International Maritime Dangerous Goods-Code
IMO: International Maritime Organization
LGK: Lagerklasse (storage class)
PBT: persistent, bioaccumulative and toxic
PNEC: Predicted No-Effect Concentration
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Hazardous Substances)
vPvB: very persistent and very bioaccumulative

16.4 Literature references and sources for data

- ¹ <https://www.baua.de>
- ² <https://www.arbeitsicherheit.de>
- ³ <https://www.umweltbundesamt.de>
- ⁴ <https://www.baua.de/emkg>

16.5 Method used for the classification of the mixture

The product does not meet the criteria for a classification as hazardous in accordance with the current version of Regulation (EC) No 1272/2008.

16.6 Changes which have been made to the previous version of the safety data sheet

Revised sections: 1, 8.1, 12.1, 15.1.2, 16.3

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Compiled by:

Dr. Michael Urban**Fachberatung Gefahrstoff Gefahrgut**

Vogelbeerweg 3

D-26180 Rastede-Ipwege / Germany

Tel.: +49-4402-695620

Fax: +49-4402-695621