

Product Safety Information Sheet

A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis



GreenSwitch Original

Date of issue: 14/10/2019 Revision date: 14/10/2019 : Version: 1.01

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

1.1. Product identifier

Product form : Mixture
Trade name : **GreenSwitch Original**
Product code / Fertilizer formula : NPK 2-0-7

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use, Consumer use
Use of product : Fertiliser. Component of mixed fertilisers

1.2.2. Uses advised against

Restrictions on use : Uses against are not known

1.3. Details of the supplier of the safety data sheet

Van Iperen International BV
Smidsweg 24
P.O. Box 1333 3260AH Oud-Beijerland
3273 LK Westmaas - Netherlands
T +31 (0)186 578 888 - F +31 (0)186 573452
info@iperen.com - www.vaniperen.com

1.4. Emergency telephone number

Emergency number : Contact supplier if guidance is required

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification : The substance in solution is not classified as oxidizer.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Potassium nitrate	(CAS-No.) 7757-79-1 (EC-No.) 231-818-8 (REACH-no) exempted	15	Ox. Sol. 3, H272

Full text of H-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Rinse and then wash skin thoroughly with water and soap. If on skin, take off contaminated clothing. If on skin and if skin irritation or rash occurs, seek medical advice and attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Victim is fully conscious: immediately induce vomiting. If victim conscious and alert, give 2-3 glasses of water to drink. Do not give an unconscious person anything to drink. Keep watching the victim. If you feel unwell, seek medical advice.

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

- Symptoms/effects after inhalation : None under normal use.
- Symptoms/effects after skin contact : Contact during a long period may cause light irritation.
- Symptoms/effects after eye contact : Redness of the eye tissue. On continuous exposure/contact: Irritation of the eye tissue.
- Symptoms/effects after ingestion : Swallowing large quantities can give complaints to stomach/bowel.

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

Treat symptomatically. Follow the advices in chapter 4.1.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : EXTINGUISHING MEDIA FOR SURROUNDING FIRES: All extinguishing media allowed. Use fire extinguishing methods suitable to surrounding conditions.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not applicable (aqueous non combustible product).
- Explosion hazard : No direct explosion hazard.
- Hazardous decomposition products in case of fire : When heated/burning: release of toxic and corrosive gases/vapours (nitrous vapours, potassium oxides, metal fumes, carbon monoxide/carbon dioxide)

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind, consider evacuation and have neighbourhood close doors and windows.
- Firefighting instructions : Dilute toxic gases with water spray.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.
- Other information : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate air ventilation. Do not get in eyes, on skin, or on clothing. Keep away from naked flames/heat.

6.1.1. For non-emergency personnel

- Protective equipment : Wear protective gloves/protective clothing/eye protection as advised in section 8.
- Emergency procedures : Mark the danger area. No naked flames. Keep containers closed. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

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SECTION 6: Accidental release measures (continue)

6.1.2. For emergency responders

Protective equipment : Wear protective gloves/protective clothing/eye protection as advised in section 8.
See also the information in "For non-emergency personnel".

6.2. Environmental precautions

Stop leaks if possible. Dam up the liquid spill. Prevent spreading in sewers. Prevent soil and water pollution. Contain leaking substance, pump over in suitable containers. Turn leaking containers leak-side up to prevent the escape of liquid. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Any spillage should be cleaned up immediately. Collect spill in closed and suitable containers for disposal. Take up rest of liquid spill into absorbent material sand, earth, vermiculite. Scoop absorbed substance into closing containers.

Methods for cleaning up : Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information : Dispose the product, depending on the degree and type of contamination, either as fertilizer or in an authorized waste disposal site.

6.4. Reference to other sections

See section 1 for emergency contact information.

See section 8 for information on appropriate personal protective equipment.

See section 13 for additional waste treatment information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use sufficient ventilation. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection as advised in section 8.
Care for eyewashstations at the workplace. Avoid splashing.

Hygiene measures : Always wash hands after handling the product. Do not eat, drink or smoke during use. If on skin, take off contaminated clothing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep preferably in the original container.

Incompatible materials : Keep away from iron. Do not use with copper/aluminium/zinc - risk of corrosion.

Storage temperature : -10 - 30 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials, reducing agents, (strong) acids, (strong) bases, organic materials, metals

Storage area : Store in dry, cool, well-ventilated area. Keep out of direct sunlight.
Provide for a tub to collect spills.

Special rules on packaging : Meet the legal requirements. correctly labelled.
Secure fragile packagings in solid containers. closing.

Packaging materials : SUITABLE MATERIAL: synthetic material, glass, stainless steel

PGS7 Fertilizer group : not applicable

7.3. Specific end use(s)

Not classified as dangerous. Exposure scenarios have not been made.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Care for eyewashstations at the workplace.

Personal protective equipment : Protective clothing. Gloves. Safety glasses.



Hand protection : Gloves

Material selection gloves : Take advice to your gloves' supplier

Type	Material	Permeation	Thickness (mm)	Standard
Reusable gloves	Natural rubber, Latex, Butyl rubber, Polyvinylchloride (PVC)	6 (> 480 minutes)	0.5 mm	EN-16523-1
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.35 mm	EN-16523-1
Reusable gloves	Fluoroelastomer (FKM)	6 (> 480 minutes)	0.4 mm	EN-16523-1

Eye protection : Safety glasses

Skin and body protection : Normal working clothes are suitable

Respiratory protection : No respiratory protection needed under normal use conditions.
Mist formation: aerosol mask with filter type P2

Environmental exposure controls : In some cases proces modifications will be necessary to reduce emissions to acceptable levels. Emissions from ventilation or work process equipment should be checked to ensure they comply with legislation.

Other information : Use good personal hygiene practices. Do not eat, drink or smoke during use.
The information in this section contains generic advice and guidance.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Liquid.

Colour : No data available on colour.

Odour : No data available on odour.

pH : No information available

Crystallization temperature : No information available

Flash point : Not applicable

Explosive limits : No data available

Vapour pressure : No data available

Solubility : Soluble in water. Soluble in ethanol.
Water: complete

Log Pow : No data available

Decomposition temperature : No data available

Explosive properties : Not explosive.

Oxidising properties : The anhydrous product is considered to be an oxidizer.

9.2. Other information

VOC content : Not applicable

Additional information : Refer to product datasheet

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SECTION 10: Stability and reactivity

10.1. Reactivity

Stable in use and storage conditions as recommended in item 7.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Thermal decomposition can lead to the escape of irritating gases and vapours (oxides of nitrogen).

Decontamination with reducing agents or strong acids can cause formation of toxic gases (oxides of nitrogen). It can enhance combustion of other substances.

10.4. Conditions to avoid

Avoid high temperatures. Temperatures lower than 5°C. Contamination with combustible materials.

10.5. Incompatible materials

May be corrosive to some metals. Keep substance away from: strong acids, oxidizing agents and reducing agents, combustible materials.

10.6. Hazardous decomposition products

On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Potassium nitrate (7757-79-1)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Skin, 14 day(s))
LC50 inhalation rat (mg/l)	> 0.527 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (dust), 14 day(s))

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No information available

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No information available

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)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Classification concerning the environment: not applicable.

Ecology - air : Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009).
TA-Luft Klasse 5.2.1.

Ecology - water : For Flanders: maximum concentration in drinking water: 50 mg/l (magnesium)(M.B. 28/1/2003).
Maximum concentration in drinking water: 50 mg/l (nitrate) (Directive 98/83/EC).
Not harmful to fishes (LC50(96h) >1000 mg/l).
Slightly harmful to invertebrates (Daphnia) (EC50 (48h): 100 - 1000 mg/l).
May cause eutrophication. Not harmful to algae (EC50 >1000 mg/l).

Potassium nitrate (7757-79-1)	
LC50 fish 1	1378 mg/l (Equivalent or similar to OECD 203, 96 h, Poecilia reticulata, Static system, Fresh water, Experimental value)
EC50 Daphnia 1	490 mg/l (48 h, Daphnia magna, Fresh water, Experimental value)
ErC50 (algae)	> 1700 mg/l (10 day(s), Diatomeae, Static system, Salt water, Experimental value, Nominal concentration)

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SECTION 12: Ecological information (continue)

12.2. Persistence and degradability

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Persistence and degradability	Biodegradability in soil: not applicable.
Potassium nitrate (7757-79-1)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

GreenSwitch Original	
Bioaccumulative potential	Bioaccumulation: not applicable.
Potassium nitrate (7757-79-1)	
BCF fish 1	3.162 l/kg (BCFBAF v3.01, Calculated value, Fresh weight)
Log Pow	-0.79 (Estimated value, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

GreenSwitch Original	
Ecology - soil	Soluble in water. Low potential for adsorption (based on substance properties).
Potassium nitrate (7757-79-1)	
Ecology - soil	Low potential for adsorption (based on substance properties). Soluble in water.

12.5. Results of PBT and vPvB assessment

Component	
Potassium nitrate (7757-79-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- European List of Waste (LoW) code : 06 03 14 - solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
Depending on branch of industry and production process, also other EURAL codes may be applicable
- Regional legislation (waste) : Disposal must be done according to official regulations.
- Waste treatment methods : Dispose the product, depending on the degree and type of contamination, either as fertilizer or in an authorized waste disposal site. Empty and rinsed containers can be disposed as non-hazardous material or be returned for recycling.
- Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name : Not applicable

14.3. Transport hazard class(es)

Transport hazard class(es) : Not applicable

14.4. Packing group

Packing group : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Other information : No supplementary information available

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SECTION 14: Transport information (continue)

14.6. Special precautions for user

Transport regulations : Not subject

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions. Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances

VOC content : Not applicable

Other information, restriction and prohibition regulations : Substance is not listed in Annex I of directive 67/548/EEC and Annex VI of directive (EG) nr. 1272/2008. Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources.

Seveso Information : Not classified

15.1.2. National regulations

Ensure all national/local regulations are observed

Netherlands

Waterbezwaarlijkheid : 11 - Weinig schadelijk voor in het water levende organismen

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out. Exempted from REACH

SECTION 16: Other information

Version : 1.0 A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis

Revision date : 14/10/2019

Date of issue : 14/10/2019

Indication of changes : Not applicable.

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
CLP	CLP = Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	DNEL = Derived No Effect Level
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
NOAEL	No-Observed Adverse Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	PNEC = Predicted No-Effect Concentration

SECTION 16: Other information (continue)

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REACH	REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals, Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	SDS = Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

Data sources : ECHA Website: Information on Registered Substances.
Handbook of Chemistry and Physics CRC Press Inc.
Information from suppliers.
REACH registration dossier

Training advice : Before using/handling the product one must read carefully the MSDS.

Full text of H- and EUH-statements:	
Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidiser.

Company disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.