



MATERIAL SAFETY DATA SHEET

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Version : 4

Date : 11 / 7 / 2016

Supersedes : 25 / 6 / 2015

GREENWAY NEO HEAT PUMP

105471900

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

1.1. Product identifier

Trade name : GREENWAY NEO HEAT PUMP

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1 Relevant identified uses** : Heat transfer fluid**1.3. Details of the supplier of the safety data sheet**: DEHON SERVICE
26 Avenue du Petit Parc
94683 VINCENNES Cedex France
Tel : +33 (0) 1 43 98 75 00
Fax : +33 (0) 1 43 98 21 51

e-mail : ContactFDS@climalife.dehon.com

1.4 Emergency telephone number : EMERGENCY TELEPHONE NUMBER (24h/24) : + 33 (0) 1 72 11 00 03Anti-poison Center : INRS/ORFILA (France) : +33 (0) 1 45 42 59 59
Anti-poison Centre (Belgium) : +32 70 245 245
Anti-poison Centre (Spain) : +34 91 562 04 20
Anti-poison Centre (Finland/Estonia) : +358 9 471977
Anti-poison Centre (Netherlands) : +31 30 274 8888
Anti-poison Centre (United Kingdom) : +44 870 600 6266
Poisons Information Centre (Hungary) : +36 80 201 199

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture**2.1.1. Regulation (EC) No 1272/2008 (CLP)** : Not classified as dangerous product.**2.2. Label elements****2.2.1 Labelling EC 1272/2008 (CLP)**

Supplemental hazard information : EUH210 : Safety data sheet available on request

2.3. Other hazards : -

SECTION 3 Composition/information on ingredients

3.1./3.2. Substance / Preparation : Preparation**Hazardous constituents :**

Substance name	Contents	CAS No	EC No	Index No	Ref REACH	Classification
Propane-1,3-diol	> 70 %	504-63-2	207-997-3	----	01-2119489383-28	Not classified. (DSD/DPD) Not classified. (GHS)
Isononanoate de potassium	< 5 %	84501-71-3	282-991-1	----	----	Xn: R22 Xi: R38-41 Acute Tox. 4 (Oral);H302 Eye Irrit. 2;H319 Skin Irrit. 2;H315
Potassium hydroxide	< 0.1 %	1310-58-3	215-181-3	019-002-00-8	01-2119487136-33	Xn: R22 C: R35 Met. Corr. 1;H290 Acute Tox. 4 (Oral);H302 Skin Corr. 1A;H314

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SECTION 4 First aid measures
4.1. Description of first aid measures

- Inhalation** : If the person feels unwell :
Move the affected person to the fresh air
- Skin contact** : Remove all contaminated clothing and footwear
Rinse with water
If case of redness or irritation, call a doctor
- Eye contact** : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum)
If irritation persists, consult an eye specialist
- Ingestion** : Rinse mouth out with water
Do not give anything to drink. Do not induce vomiting.
consult a doctor

4.2. Most important symptoms and effects, both acute and delayed : No information available

4.3. Indication of any immediate medical attention and special treatment needed : No information available

SECTION 5 Fire-fighting measures
5.1. Extinguishing media

Suitable extinguishing media : Water spray
Carbon dioxide (CO₂)
Alcohol-resistant foam
Powders

Unsuitable extinguishing media : Strong water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards : Toxic gases are released

5.3. Advice for firefighters

Specific fire fighting methods : Do not dispose of fire-fighting water in the environment
Cool down the containers exposed to heat with a water spray
Clear the danger area

Protection of fire-fighters : Complete protective clothing
Self-contained breathing apparatus

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures : Avoid contact with skin and eyes
Do not breathe vapours
Only qualified personnel equipped with suitable protective equipment may intervene

6.2. Environmental precautions : Contain the spilled material by bunding
Prevent the product from entering drains

6.3. Methods and material for containment and cleaning up

- Neutralization : Absorb spillage with:
- inert material (sand, earth)

- Disposal : Dispose of contaminated materials in accordance with current regulations.

6.4 Reference to other sections : For further information refer to section 8 "Exposure controls/personal protection"

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SECTION 6 Accidental release measures (continued)
SECTION 7 Handling and storage
7.1. Precautions for safe handling

Precautions : Handle in well ventilated areas
 Avoid any direct contact with the product

Industrial hygiene : Always wash hands after handling the product
 Do not drink, eat or smoke in the workplace

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : The floor of the depot should be impermeable and designed to form a tight basin

Storage conditions

- Recommended : Store :
 - in a dry, well-ventilated area
 Keep container tightly closed.

Packaging materials

- Recommended : Stainless steel
 Polyethylene

- Not suitable : Zinc ; Galvanized steel

7.3. Specific end use(s) : No data

SECTION 8 Exposure controls/personal protection
8.1. Control parameters

Engineering measures : Ensure good ventilation of the work station

8.1.1. Occupational Exposure Limits : Potassium hydroxide : France : LEP - VLE (15min; mg/m³) : 2
 Potassium hydroxide : United Kingdom : WEL - STEL (15min; mg/m³) : 2
 Potassium hydroxide : Hungary : AK - TWA (8h; mg/m³) : 2
 Potassium hydroxide : Hungary : AK - STEL (15min; mg/m³) : 2
 Potassium hydroxide : Belgium : GWBB - STEL (15min; mg/m³) : 2
 Potassium hydroxide : USA (NIOSH) : REL - STEL (15min; mg/m³) : 2
 Potassium hydroxide : Switzerland : LEP - VME (8h; mg/m³) : 2 Aerosol

8.2. Exposure controls
Personal protection :

- Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.

In the event of insufficient ventilation: Mask with A canister

- Hand protection : Protective gloves made of rubber

- Eye protection : Safety goggles

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SECTION 9 Physical and chemical properties
9.1. Information on basic physical and chemical properties
9.1.a. Appearance
Physical state : Liquid

Colour : Green

9.1.b. Odour : weak

9.1.c. Odour threshold : No information available

9.1.d. pH : 8 - 8.5 (33 % aqueous solution)
8.3 - 8.8 (50 % aqueous solution)

9.1.e. Melting point / Freezing point : -13 °C (33 % aqueous solution)
-27 °C (50 % aqueous solution)

9.1.f. Initial boiling point - boiling range : 144 °C

 * **9.1.g. Flash point** : Not applicable

9.1.h. Evaporation rate : No information available

9.1.i. Flammability : Non flammable.

9.1.j. Explosion limits (lower - upper) : No information available

9.1.k. Vapour pressure : No information available

9.1.l. Vapour density : No information available

9.1.m. Relative density
9.1.m. Density : 1,06 g/cm³ at 20 °C

9.1.n. Solubility
-in water : Complete

9.1.o. Partition coefficient : n-octanol / water : No information available

9.1.p. Auto-ignition temperature : No information available

9.1.q. Thermal decomposition : No information available

9.1.r. Viscosity : No information available

9.1.s. Explosive Properties : Not explosive material according to EC criteria

9.1.t. Oxidising properties : Non oxidizing material according to EC criteria

9.2. Other information : -

SECTION 10 Stability and reactivity
10.1. Reactivity : None under normal conditions

10.2. Chemical stability : Stable under normal conditions of use

10.3. Possibility of hazardous reactions : No information available

10.4. Conditions to avoid : - high temperatures, naked flames

10.5. Incompatible materials : - strong oxidizing agents
- zinc and its alloys.

10.6. Hazardous decomposition products : On thermal decomposition (pyrolysis), releases :
Carbon oxides (CO, CO₂)

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SECTION 11 Toxicological information
11.1. Information on toxicological effects

Acute toxicity	: No information available
On ingredients	
Potassium hydroxide	: Rat oral LD50 [mg/kg] : 365
Propane-1,3-diol	: Rat oral LD50 [mg/kg] : 15000
	: Rat inhalation LC50 [mg/l/4h] : 5
	: Percutaneous (Rabbit) LD50 [mg/kg] : > 20000
• Skin corrosion/irritation	: Slightly irritating to skin
• Serious eye damage/irritation	: Not irritating to eyes
• Respiratory or skin sensitisation	: Propane-1,3-diol : No sensitizing effect is known
• Germ cell mutagenicity	: No information available
• Carcinogenicity	: No information available
• Reproductive toxicity	: No information available
• STOT-single exposure	: No information available
• STOT-repeated exposure	: No information available
• Aspiration hazard	: No information available

SECTION 12 Ecological information
12.1. Toxicity
Effects on the aquatic environment
On ingredients

Potassium hydroxide	: 24 Hours - EC50 - Daphnia magna [mg/l] : 270
	: 96 Hours - LC50 - Fish [mg/l] : 80
Propane-1,3-diol	: 96 Hours - LC50 - Fish [mg/l] : 9720 (Pimephales promelas)
	: 48 Hour - EC50 - Daphnia magna [mg/l] : 7417
	: 72 Hours - EC50 - Algae [mg/l] : 1600

12.2. Persistence and degradability : Propane-1,3-diol : Readily biodegradable

12.3. Bioaccumulative potential : Propane-1,3-diol : Not potentially bioaccumulable.

12.4. Mobility in soil : No information available

12.5. Results of PBT and vPvB assessment : No information available

12.6. Other adverse effects : No information available

SECTION 13 Disposal considerations
13.1. Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.

WASTE FROM PRODUCT :
Destruction/Disposal : Dispose of in accordance with relevant local regulations

CONTAMINATED PACKAGING :
Destruction/Disposal : Destroy at an authorised site

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SECTION 14 Transport information

RID/ADR/IMDG/IATA : Not regulated

SECTION 15 Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.

France : Professional diseases(table(s) nr 84) : applicable

Germany : Water hazard class : 1 (specific classification)

15.2. Chemical safety assessment : No information available

SECTION 16 Other information

Further information : Product for professional use only
For more information regarding the use of this product, please refer to our technical information or contact the sales department in your region
This safety data sheet has been written in conformity with the regulation (UE) 453/2010.

List of relevant R phrases (§ 3) : R22 : Harmful if swallowed.
R35 : Causes severe burns.
R38 : Irritating to skin.
R41 : Risk of serious damage to eyes.

List of relevant H phrases (Section 3) : H290 - May be corrosive to metals
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H319 - Causes serious eye irritation

*** Update** : Modifications are indicated by an asterisk (*)

This sheet complements the technical sheets but does not replace them. The information given is based on our knowledge of the product, at the time of publication. It is given in good faith.

Besides, the attention of the user is drawn to the possible risks incurred by using the product for any other use than that for which it was intended.

In no way does this exempt the user from knowing and applying all the regulations controlling his activity. He alone will take on the responsibility for taking the precautions involved by the use of the product.

The aim of all the mandatory regulations mentioned is just to help the user to fulfil his obligations regarding the use of hazardous products.

This information must not be considered exhaustive. It does not exempt the user from ensuring that other obligations than those mentioned could apply, related to the storage and use of the product, this being his sole responsibility.

End of document

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