



21.01.2009

HESI plantenvoeding

Tel 0031 45 5690420

Fax +31 45 5690421

Edisonstraat 11-17

e-mail: Hesi@orange.nl

6372 AK Landgraaf

web-site www.Hesi.nl

Nederland

MATERIAL SAFETY DATA SHEETS pH-Plus

1. Identity / Description

product name:

Hesi pH-Plus

1.1. identity:

liquid rootin

1.2. manufacturer:

Brinkman Agro BV, 's-Gravenzande

tel: 0174 446100

1.3. contact information:

Hesi plantenvoeding, Tel 0031 45 5690420,

Edisonstr. 11-17

6372 CKALandgraaf, Nederland

2. Hazardous ingredients identity information

2.1. Hazardous components: **potassium hydroxide 50%**

2.2. ingredients

CAS-Nr.: **1310-58-3**

EC-Index No: **019-002-00-8**

Chemical formula: **KOH**

potassium hydroxide

50%

R Phrase: R 22-35 S Phrase: S 26-36/37/39-45

3. Physical / Chemical Characteristics

3.1. boiling point:

>150 degrees C

3.2. specific gravity:

1,450 g/cm3

3.3. vapour pressure: 20°C

N/A

3.4. melting point:

> - 20 degrees C

3.5. vapor density (air=1)

N/A

3.6. solubility in water:

100%

3.7. viscosity:

N/A

3.8. form:

liquid

3.9. appearance:

colourless

3.10. odor:

odourless

3.11. pH (concentrate)

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4. Fire and explosion hazard data

- 4.1. flash point: **not flammable**
4.5. extinguishable media: **foam, dry materials**
4.6. special fire fighting procedures: **none**
4.7. unusual fire & explosion hazards: **none**
4.8. ignition temperature: **not combustible**
4.9. hazardous decomposition: **development of hazardous combustion gases or vapours possible in the event of fire**
4.10 hazardous reactions:

5. Reactivity data

- 5.1. stability: **strong heating**
conditons to be avoided: **Store in original container**
5.2. incompatibility: **with iron/iron-containing compounds, steel, aluminium**
5.3. hazardous decomposition: **in the event of fire, see chapter 4**
5.4. hazardous reactions: **bases, metal oxides**
metals, metal alloys: formed could be: hydrogen

6. Health Hazard data

- 6.1. route of entry (inhalation) **irritation symptoms in the respiratory tract**
6.2. route of entry (skin) **burns**
(eye) **conjunctivitis, burns, risk of blindness**
6.3. route of entry (digestion) **burns, strong pain (risk of perforation)**
6.4. hazards identification **causes burns**
6.5. carcinogenicity: **None**
6.6. signs and symptoms of exposure: **burns**

6.7. emergency first aid procedures:

- eye contact:** **rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call ophtalmologist**
skin contact **wash off with plenty of water, dab with polythylene glycol 400**
immediately remove contaminated clothing
inhalation **fresh air, call in physician**
ingestion **make victim drink plenty of water (if necessary, several litres)**
avoid vomiting (risk of perforation!) Immediately call in physicia
do not attempt to neutralize.



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7. PRECAUTION FOR SAFE HANDLING; STORAGE; AND USE OF PRODUCT

- | | |
|--|--|
| 7.1. technical protection measures: | no special precaution |
| 7.2. personal protection including breathing, eye and hands: | necessary |
| 7.3. recommended storage conditions: | tightly closed. Storage temperature: no restrictions |
| 7.4. precaution on handling: | do not inhale vapours/aerosols. Avoid substance contact |
| | Ensure supply fresh air in enclosed rooms |
| 7.5. spill or leak procedures: | take up with liquid-absorbent and neutralizing material |
| | Forward for disposal |
| | clean up affected area |
| 7.5. Waste disposal | chemicals must be disposed of in compliance with the respective national regulations. |

8. CONTROL MEASURES:

- | | |
|--|--|
| 8.1. respiratory protection: | required, when vapours/aerosols are generated |
| 8.2. ventilation: | required |
| 8.3. protective gloves: | required , nitrile rubber, 0,11 mm breakthrough time > 480 min |
| 8.4. eye protection: | alkaline-resistant protective clothing |
| 8.5. other protective or handling equipment: | wash hands and face after working with substance |
| 8.6. work/ hygienic practices: | immediately change contaminated clothing |
| | do not eat, drink or smoke, while working with substance |

9.1. Regulatory information

Labelling according to EC Directives:

Symbol	C	corrosive	
R Phrase:			R 22-35 Harmful if swallowed.

S Phrase:		Causes severe burns.
		S 26-36/37/39-45
		In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		and eye/face protection.
		In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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10. **transport information**
road & rail ADR RID
UN 1814 Klasse 8
liquid, 8, II
ems F-A S-B

Sea IMDG-code
UN 1814, POTASSIUM HYDROXIDE, LIQUID, 8, II
Ems F-A S-B

Air CAO, PAX
potassium hydroxide, liquid, 8, UN 1814, II

Abbreviations:

N/A: Not applicable

N/N: None Known

The information contained herein is based on the present state of knowlegde.
It characterizes the product with regard to the appropriate safety precautions.
It does not represent a guarantee of the properties of the product.

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