



21.01.2009

HESI plantenvoeding

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Edisonstraat 11-17

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6372 AK Landgraaf

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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)

**13**

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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  
in the event of fire, see chapter 4

5.3. hazardous decomposition:

bases, metal oxides

5.4. hazardous reactions:

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)  
(eye)

burns

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

## 8. CONTROL MEASURES:

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

## 9.1. Regulatory information

Labelling according to EC Directives:

Symbol	C	corrosive	
R Phrase:			<b>R 22-35</b> Harmful if swallowed.

S Phrase:	Causes severe burns. <b>S 26-36/37/39-45</b> 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 knowledge.  
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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