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

Product identifier

PIX

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

Relevant identified uses: crop protection product, growth regulator

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Operating Division Crop Protection

Telephone: +49 621 60-27777
E-mail address: Produktinformation-Pflanzenschutz@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Label elements

Globally Harmonized System, EU (GHS)

Hazard Statement: EUH401
To avoid risks to human health and the environment, comply with the instructions for use.

The product does not require a hazard warning label in accordance with GHS criteria.
According to Directive 67/548/EEC or 1999/45/EC

Self classification

S-phrase(s)
S2 Keep out of the reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S20/21 When using do not eat, drink or smoke.

The product does not require a hazard warning label in accordance with EC Directives.

**Classification of the substance or mixture**

According to Regulation (EC) No 1272/2008 [CLP]

| No need for classification according to GHS criteria for this product. |

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:
No specific dangers known, if the regulations/notes for storage and handling are considered.

**Other hazards**

According to Regulation (EC) No 1272/2008 [CLP]

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

### 3. Composition/Information on Ingredients

**Mixtures**

Chemical nature

crop protection product, growth regulator, Soluble concentrate (SL)

**Hazardous ingredients (GHS)**  
according to Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Mepiquat-chloride techn.</th>
<th>Content (W/W): 5 %</th>
<th>Acute Tox. 4 (oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAS Number: 24307-26-4</td>
<td>Aquatic Chronic 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H302, H412</td>
</tr>
</tbody>
</table>

**Hazardous ingredients**
4. First-Aid Measures

**Description of first aid measures**

- Remove contaminated clothing.

**If inhaled:**

- Keep patient calm, remove to fresh air.

**On skin contact:**

- Wash thoroughly with soap and water.

**On contact with eyes:**

- Wash affected eyes for at least 15 minutes under running water with eyelids held open.

**On ingestion:**

- Rinse mouth and then drink plenty of water.

**Most important symptoms and effects, both acute and delayed**

Symptoms: No significant reaction of the human body to the product known.

**Indication of any immediate medical attention and special treatment needed**

- Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

**Extinguishing media**

Suitable extinguishing media:
- water spray, foam, dry powder, carbon dioxide

**Special hazards arising from the substance or mixture**

- hydrogen chloride, carbon monoxide, Carbon dioxide, nitrogen oxides

The substances/groups of substances mentioned can be released in case of fire.

**Advice for fire-fighters**

Special protective equipment:
- Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or...
effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Do not breathe vapour/spray.

Environmental precautions
Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up
For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
For large amounts: Dike spillage. Pump off product.
Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage

Precautions for safe handling
No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities: Segregate from foods and animal feeds. Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:
Storage duration: 60 Months

Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters
No occupational exposure limits known.

**Exposure controls**

**Personal protective equipment**

Respiratory protection:  
Respiratory protection not required.

Hand protection:  
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact  
(Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other

Eye protection:  
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:  
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

**General safety and hygiene measures**

Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Keep away from food, drink and animal feeding stuffs. Store work clothing separately.

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**9. Physical and Chemical Properties**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>pinkish</td>
</tr>
<tr>
<td>Odour</td>
<td>almost odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not determined</td>
</tr>
<tr>
<td>pH value</td>
<td>approx. 5 - 7 (20 °C) (measured with the undiluted substance)</td>
</tr>
<tr>
<td>Solidification temperature</td>
<td>approx. -2 °C</td>
</tr>
<tr>
<td>Boiling temperature</td>
<td>approx. 100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No flash point - Measurement made up to the boiling point. (Directive 92/69/EEC, A.9)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>does not ignite</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>&gt; 600 °C</td>
</tr>
</tbody>
</table>
Vapour pressure: approx. 23 hPa (20 °C)
Information applies to the solvent.

Density: approx. 1.00 g/cm³ (20 °C) (OECD Guideline 109)

Relative vapour density (air): not determined

Solubility in water: fully soluble

Information on: Mepiquat-chloride techn.


Thermal decomposition: not determined

Viscosity, dynamic: 1 mPa.s (20 °C, 100 1/s) (OECD 114)

Explosion hazard: Based on the chemical structure there is no indicating of explosive properties.

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Other information

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: aluminum

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
Corrodes aluminum. No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
strong bases, strong acids, strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.
11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

<table>
<thead>
<tr>
<th>Information on: Mepiquat-chloride techn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental/calculated data:</td>
</tr>
<tr>
<td>LD50 rat (oral): approx. 464 mg/kg (OECD Guideline 401)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information on: Mepiquat-chloride techn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental/calculated data:</td>
</tr>
<tr>
<td>LC50 rat (by inhalation): &gt; 4.89 mg/l 4 h (OECD Guideline 403)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information on: Mepiquat-chloride techn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental/calculated data:</td>
</tr>
<tr>
<td>LD50 rat (dermal): &gt; 2,000 mg/kg (OECD Guideline 402)</td>
</tr>
</tbody>
</table>

Irritation

Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes. The product has not been tested. The statement has been derived from the properties of the individual components.

<table>
<thead>
<tr>
<th>Information on: Mepiquat-chloride techn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental/calculated data:</td>
</tr>
<tr>
<td>Skin corrosion/irritation rabbit: non-irritant (other)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information on: Mepiquat-chloride techn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental/calculated data:</td>
</tr>
<tr>
<td>Serious eye damage/irritation rabbit: non-irritant (other)</td>
</tr>
</tbody>
</table>

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from the properties of the individual components.

<table>
<thead>
<tr>
<th>Information on: Mepiquat-chloride techn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental/calculated data:</td>
</tr>
<tr>
<td>Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies. (other)</td>
</tr>
</tbody>
</table>
12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

| Information on: Mepiquat-chloride techn. |
| Toxicity to fish: |
| LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss (OECD Guideline 203) |

| Information on: Mepiquat-chloride techn. |
| Aquatic invertebrates: |
| EC50 (48 h) 68.5 mg/l, Daphnia magna (Directive 79/831/EEC) |
Information on: Mepiquat-chloride techn.

Aquatic plants:

- **EC50 (96 h) 44.8 mg/l (growth rate), Anabaena flos-aquae (OECD Guideline 201, static)**
- **EC50 (7 d) 15.41 mg/l (growth rate), Lemna gibba (OECD guideline 221, static)**
- **No observed effect concentration 0.01 mg/l, Lemna gibba (OECD guideline 221, static)**

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**Persistence and degradability**

Assessment biodegradation and elimination (H2O):
The product has not been tested. The statement has been derived from the properties of the individual components.

**Bioaccumulative potential**

Assessment bioaccumulation potential:
The product has not been tested. The statement has been derived from the properties of the individual components.

**Mobility in soil (and other compartments if available)**

Assessment transport between environmental compartments:
The product has not been tested. The statement has been derived from the properties of the individual components.

**Results of PBT and vPvB assessment**

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

**Other adverse effects**

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.
Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

ADR
Not classified as a dangerous good under transport regulations

RID
Not classified as a dangerous good under transport regulations

Inland waterway transport

ADN
Not classified as a dangerous good under transport regulations

Sea transport

IMDG
Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO
Not classified as a dangerous good under transport regulations

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)

**Chemical Safety Assessment**

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

### 16. Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

- **Xn** Harmful.
- **22** Harmful if swallowed.
- **52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Acute Tox.** Acute toxicity
- **Aquatic Chronic** Hazardous to the aquatic environment - chronic
- **H302** Harmful if swallowed.
- **H412** Harmful to aquatic life with long lasting effects.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.