MAPP 13973
A soluble concentrate containing 720 g/l (63.2% w/w) chlormequat chloride.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

10 litres

SAFETY PRECAUTIONS

Operator protection
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective clothing.
WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
WASH CONCENTRATE from skin or eyes immediately.
DO NOT BREATHE SPRAY.
WASH HANDS AND EXPOSED SKIN before meals and after work.
WHEN USING DO NOT EAT, DRINK OR SMOKE.
IF YOU FEEL UNWELL, seek medical advice (show label where possible).

Environmental protection
DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

Storage and disposal
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
KEEP OUT OF REACH OF CHILDREN.
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.
DO NOT RE-USE CONTAINER for any purpose.
Keep dry and frostproof in a suitable pesticide store.

© = Registered trademark of BASF
3C CHLORMEQUAT 720

A soluble concentrate containing 720 g/l (63.2% w/w) chlormequat chloride.

HARMFUL IF SWALLOWED.

KEEP OUT OF REACH OF CHILDREN.
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
WHEN USING DO NOT EAT, DRINK OR SMOKE.
IF SWALLOWED, seek medical advice immediately and show this container or label.

To avoid risks to man and the environment, comply with the instructions for use

This product is approved under the Control of Pesticides Regulations 1986

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL PLANT GROWTH REGULATOR, as directed below:

<table>
<thead>
<tr>
<th>Crops</th>
<th>Maximum individual dose (litres product/hectare)</th>
<th>Maximum total dose (litres product/hectare)</th>
<th>Maximum number of treatments</th>
<th>Latest time of application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter wheat and autumn drilled spring wheat</td>
<td>-</td>
<td>2.25</td>
<td>-</td>
<td>Before third node detectable stage</td>
</tr>
<tr>
<td>Winter and spring oats</td>
<td>-</td>
<td>2.25</td>
<td>-</td>
<td>Before third node detectable stage</td>
</tr>
<tr>
<td>Triticale</td>
<td>-</td>
<td>2.25</td>
<td>-</td>
<td>Before first node detectable stage</td>
</tr>
<tr>
<td>Rye</td>
<td>-</td>
<td>2.25</td>
<td>-</td>
<td>Before second node detectable stage</td>
</tr>
<tr>
<td>Winter barley</td>
<td>-</td>
<td>2.25</td>
<td>-</td>
<td>Before first node detectable stage</td>
</tr>
<tr>
<td>Spring wheat (spring drilled)</td>
<td>-</td>
<td>1.1</td>
<td>-</td>
<td>Before second node detectable stage</td>
</tr>
<tr>
<td>Poinsettias See ‘Other specific restrictions’.</td>
<td>22 ml product per 5 litres water</td>
<td></td>
<td>See ‘Other specific restrictions’.</td>
<td></td>
</tr>
<tr>
<td>Geranium, pelargonium See ‘Other specific restrictions’.</td>
<td>9 ml product per 5 litres water</td>
<td>12.5 ml product per 5 litres water</td>
<td>See ‘Other specific restrictions’.</td>
<td></td>
</tr>
</tbody>
</table>

Other specific restrictions:

1) Containers must not be re-used for any purpose.

2) For application to ornamentals, the maximum concentration must not exceed the following:

   Poinsettia: (drench) 22 ml product per 5 litres water
   Geranium, pelargonium: 12.5 ml product per 5 litres water

3) For application to ornamentals, the maximum number of treatments must not exceed the following:

   Poinsettia: one per crop at 227 ml dilute solution/pot or two per crop at 57 ml dilute solution/pot
   Geranium, pelargonium: three per crop

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.
DIRECTIONS FOR USE

IMPORTANT: this information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

1. Restrictions/Warnings

Avoid spray drift on to neighbouring crops.

3C Chlormequat 720 should be applied to crops during good growing conditions at the correct timing.

Do not apply 3C Chlormequat 720 when the crop is wet or if rain or frost is imminent.

Do not apply 3C Chlormequat 720 to very late sown spring crops.

Do not apply 3C Chlormequat 720 to crops on soils of low fertility unless these soils regularly receive adequate dressings of nitrogen fertilisers.

3C Chlormequat 720 may be applied to wheat, oats and winter barley undersown with grasses and clovers.

Caution is needed if using mixtures of liquid nitrogen fertilisers and 3C Chlormequat 720 as scorching may result in certain circumstances.

Wash equipment thoroughly after use.

Do not use straw from 3C Chlormequat 720 treated cereals as a horticultural growth medium or as a mulch.

2. Lodging Control

3C Chlormequat 720 produces shorter, thicker and stronger stems in wheat and oats which are more resistant to lodging and help to prevent damage from eyespot.

Lodging control will not be so pronounced in winter barley with 3C Chlormequat 720 but will help to maintain yield potential by encouraging better root development and tiller survival.

On certain ornamentals (see below) the use of 3C Chlormequat 720 can promote a more compact bushy habit.

3. Crops

3.1 Winter Wheat and Autumn Drilled Spring Wheat

Low lodging risk situations

Time of Application
Apply 3C Chlormequat 720 from leaf sheath lengthening stage up to and including the second node detectable stage. The optimum application time is the leaf sheaths erect stage just prior to the first node detectable stage.

Rate of Application
Apply 1.65 litres 3C Chlormequat 720 in 220–450 litres of water per hectare.

High lodging risk situations

Time of Application
Apply 3C Chlormequat 720 either as a split application or as a single dose. As a split application apply the first dose at the tillers formed to leaf sheath lengthening stage followed by the second dose at the leaf sheath erect up to and including the first node detectable stage. Do not apply later than second node detectable stage. If a split application is not possible the full dose at leaf sheath erect just prior to the first node detectable stage is recommended.

Rate of Application
When using a split application, apply 1.6 litres 3C Chlormequat 720 at the earlier timing, followed by 0.7 litres 3C Chlormequat 720 at the later timing, both in 220–450 litres of water per hectare.

If using a single dose, apply 2.25 litres 3C Chlormequat 720 in 220–450 litres of water per hectare.

The use of Terpal sequentially is recommended for improved lodging control where the crop is growing vigorously. See Terpal literature for full details.
3.2 Spring Wheat (Spring Drilled)

**Time of Application**
Apply 3C Chlormequat 720 during good growing conditions at the leaf sheaths erect stage just prior to the first node detectable stage.

Do not apply 3C Chlormequat 720 later than the first node detectable stage on the majority of tillers.

**Rate of Application**
Apply 1.1 litres 3C Chlormequat 720 in 220–450 litres of water per hectare.

Winter wheat varieties sown in the spring should be treated at the winter wheat rate.

3.3 Winter Barley

Whilst 3C Chlormequat 720 is less consistent in winter barley for the control of lodging than in wheat or oats, the relatively early application timing can promote changes in the pattern of growth which may lead to an increase in yield. Root development and tiller production is largely determined in the autumn of sowing. 3C Chlormequat 720 applied in the autumn can stimulate both root system development and tiller production. 3C Chlormequat 720 may be applied either as a split application or as a single dose.

The use of Terpal sequentially is recommended for reliable lodging control. See Terpal literature for full details.

**Time of Application**
When using a split dose treatment, apply the first dose in the autumn from when the crop has three leaves once adequate cover is established up until early tillering, followed by the second dose in the spring from mid-tillering to just prior to the first node detectable stage. It is important that both parts of the split dose are applied. When using a single dose, apply 3C Chlormequat 720 in the spring from mid-tillering to just prior to the first node detectable stage.

**Rate of Application**
When using a split dose, apply 0.7 litres in the autumn, followed by 1.6 litres in the spring, both in 220–450 litres of water per hectare. When using a single dose, apply 2.25 litres 3C Chlormequat 720 in the spring in 220–450 litres of water per hectare.

3.4 Oats

3C Chlormequat 720 will reduce stem length in oats under most circumstances, but resistance to lodging will be greater on short strawed varieties.

**Time of Application**
Apply 3C Chlormequat 720 at the second node detectable stage on the majority of tillers.

**Rate of Application**
Apply 2.25 litres 3C Chlormequat 720 in 220–450 litres of water per hectare.

For full effect, an authorised non-ionic wetter at 25 ml per 100 litres must be added to the spray mixture, except when using mixes of 3C Chlormequat 720 with Corbel.

3.5 Rye

3C Chlormequat 720 may be used on rye. Although widely used on the continent the results of UK trials have been less than consistent in effects on plant height and lodging.

The use of Terpal sequentially is recommended for improved lodging control where the crop is growing vigorously. See Terpal literature for full details.

**Time of Application**
Apply 3C Chlormequat 720 when the first node is detectable on the majority of tillers.

**Rate of Application**
Apply 2.25 litres 3C Chlormequat 720 in 220–450 litres of water per hectare.

3.6 Triticale

The results of a number of independent trials have shown that an increase in crop yield and a reduction in early lodging can be obtained following an application of 3C Chlormequat 720.

The use of Terpal sequentially is recommended for improved lodging control where the crop is growing vigorously. See Terpal literature for full details.

**Time of Application**
Apply 3C Chlormequat 720 from mid-tillering to just prior to the first node detectable.
Rate of Application
Apply 2.25 litres 3C Chlormequat 720 in 220–450 litres of water per hectare.

3.7 Poinsettias

Time of Application
Apply 3C Chlormequat 720 when shoot growth after any pinching of established plants in final pots reaches 25 mm. Either a single drench or a spray programme may be used as outlined below.

Rate of Application – Drench Treatment
Use 22 ml 3C Chlormequat 720 in 5 litres of water and apply the diluted solution evenly as a compost drench according to the rates below.

<table>
<thead>
<tr>
<th>Pot Diameter mm</th>
<th>Amount of Solution (per pot) ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>75*</td>
<td>57</td>
</tr>
<tr>
<td>100</td>
<td>85</td>
</tr>
<tr>
<td>130</td>
<td>114</td>
</tr>
<tr>
<td>150</td>
<td>170</td>
</tr>
<tr>
<td>200</td>
<td>227</td>
</tr>
</tbody>
</table>

* Two applications are required in order to apply the necessary volume to pots less than 75 mm in diameter.

Rate of Application – Spray Treatment
Apply 9 ml 3C Chlormequat 720 per 5 litres of water, high volume. Up to three sprays at 10–14 day intervals may be applied.

Occasionally, temporary yellow spotting may occur which can be minimised by the addition of an authorised non-ionic wetter at the rate of 2 ml per 5 litres of spray solution.

See also 'Notes on application to ornamentals' in Section 3.8 below.

3.8 Geraniums/Pelargoniums

Time of Application
Apply 3C Chlormequat 720 30–40 days after sowing with a second application 14 days later. A third application may be required after a further 28 days.

Rate of Application
Apply 12.5 ml 3C Chlormequat 720 per 5 litres of water, high volume, with an authorised non-ionic wetter added at the rate of 2 ml per 5 litres of spray solution.

Notes on application to Ornamentals

(a) Plants to be treated must be well established, growing vigorously, and with a healthy root system.
(b) Pot bound plants or plants under stress should not be treated. Do not treat in strong sunlight.
(c) Do not treat geraniums/pelargoniums when temperatures are likely to drop below 10 °C.
(d) Compost should be moist prior to treatment.
(e) It is advised that the effect is checked on a small number of plants before treating the whole batch.

4. Mixing and Spraying

4.1 Aerial application
3C Chlormequat 720 may be applied from the air to wheat, winter barley, oats, rye and triticale at the recommended rates in 25–60 litres of water per hectare, but results may not be as uniform as from ground applications.

When applied by air to oats, 3C Chlormequat 720 should be used in conjunction with an authorised non-ionic wetter at the recommended rate.

Aerial application must not be made in tank mix with any other products.

4.2 Mixing
Half fill the spray tank with clean water and start the agitation. Pour in the required amount of 3C Chlormequat 720. Add the remainder of the water and continue agitation until spraying is completed.

When tank mixes are to be used, each product should be added separately to the spray tank, taking due note of any instructions given as to the order of mixing.
The following does not form part of the product label under the Control of Pesticides Regulations 1986.

With many products there is a general risk of resistance developing to the active ingredients. For this reason a change in activity cannot be ruled out. It is generally impossible to predict with certainty how resistance may develop because there are so many crop- and use-connected ways of influencing this. We therefore have to exclude liability for damage or loss attributable to any such resistance that may develop. To help minimise any loss in activity the BASF recommended rate should in all events be adhered to.

Numerous, particularly regional or regionally attributable, factors can influence the activity of the product. Examples include weather and soil conditions, crop plant varieties, crop rotation, treatment times, application amounts, admixture with other products, appearance of organisms resistant to active ingredients and spraying techniques. Under particular conditions a change in activity or damage to plants cannot be ruled out. The manufacturer or supplier is therefore unable to accept any liability in such circumstances. All goods supplied by us are of high grade and we believe them to be suitable, but as we cannot exercise control over their mixing or use or the weather conditions during and after application, which may affect the performance of the material, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use; but nothing should be deemed to exclude or restrict any liability upon us which cannot be excluded or restricted under the provisions of the Unfair Contract Terms Act 1977 or any similar applicable law.
Section 6 of the Health and Safety at Work Act
Additional Product Safety Information

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has “off-label” approval or is otherwise permitted under the Control of Pesticides Regulations.

The information on this label is based on the best available information including data from test results.

Safety data sheet

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

   Product identifier

   **3C CHLORMEQUAT 720**

   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

   Contact address: BASF plc
   PO Box 4, Earl Road, Cheadle Hulme, Cheadle, Cheshire
   SK8 6QG, UNITED KINGDOM

   Telephone: +44 161 485-6222
   E-mail address: product-safety-north@basf.com

   Emergency telephone number

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

2. Hazards Identification

   Label elements

   **Globally Harmonized System, EU (GHS)**

   Pictogram:

   ![Signal Word: Warning]

   Hazard Statement:
   - H312 Harmful in contact with skin.
   - H302 Harmful if swallowed.
   - EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

   Precautionary Statements (Prevention):
   - P280e Wear protective gloves/clothing.
   - P270 Do no eat, drink or smoke when using this product.
   - P264 Wash with plenty of water and soap thoroughly after handling.

   Precautionary Statements (Response):
   - P361 Remove/Take off immediately all contaminated clothing.
   - P363 Wash contaminated clothing before reuse.
   - P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P330 Rinse mouth.

Precautionary Statements (Storage):
P405 Store locked up.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

According to Regulation (EC) No 1272/2008 [CLP]
Hazard determining component(s) for labelling: CHLORMEQUAT CHLORIDE

According to Directive 67/548/EEC or 1999/45/EC
Classification/labelling in accordance with UK regulations.

Hazard symbol(s)
Xn Harmful.

R-phrase(s)
R22 Harmful if swallowed.

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.
S46 If swallowed, seek medical advice immediately and show this container or label.

Hazard determining component(s) for labelling: CHLORMEQUAT CHLORIDE

Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]
Acute Tox. 4 (oral)
Acute Tox. 4 (dermal)

According to Directive 67/548/EEC or 1999/45/EC
Possible Hazards:
Harmful in contact with skin and if swallowed.

For the classifications not written out in full in this section the full text can be found in section 16.

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
chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Content (W/W): 63.4 %   Acute Tox. 4 (oral)
CAS Number: 999-81-5   Acute Tox. 4 (dermal)
EC-Number: 213-666-4   H312, H302
INDEX-Number: 007-003-00-6

Hazardous ingredients
according to Directive 1999/45/EC
chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Content (W/W): 63.4 %
CAS Number: 999-81-5
EC-Number: 213-666-4
For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

4. First-Aid Measures

Description of first aid measures
Remove contaminated clothing.
Show container, label and/or safety data sheet to physician. If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.
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:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media
Suitable extinguishing media:
water spray, dry powder, foam, 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 allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environment Agency (England & Wales), the Scottish Environmental Protection Agency (Scotland), or the Environment and Heritage Service (Northern Ireland) if it enters surface or ground waters. Keep people and animals away.

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. Unsuitable materials for containers: aluminum
Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Protect from temperatures below: -5 °C
The product can crystallize below the limit temperature. Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

**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**
none

Refer to the current edition of HSE Guidance Note EH40 Occupational Exposure Limits (United Kingdom).

For normal use and handling refer to the product label/leaflet. In all other cases the following apply.

**Exposure controls**

**Personal protective equipment**
Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

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**
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

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>colourless, clear</td>
</tr>
<tr>
<td>Odour</td>
<td>fish-like, faint odour</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not determined</td>
</tr>
<tr>
<td>pH value</td>
<td>approx. 4 - 6 (CIPAC standard water D, 1 %(m), 20°C) (pH Meter)</td>
</tr>
<tr>
<td>Crystallization temperature</td>
<td>approx. &lt; -20 °C (measured)</td>
</tr>
<tr>
<td>Onset of boiling</td>
<td>approx. 100 °C (1,013 mbar)</td>
</tr>
</tbody>
</table>
Flash point: No flash point - Measurement made up to the boiling point.
Evaporation rate: not applicable
Flammability: not determined
Lower explosion limit: not determined
Upper explosion limit: not determined
Vapour pressure: The product has not been tested.
Density: approx. 1.14 g/cm$^3$ (20 °C)
Relative vapour density (air): not determined
Solubility in water: fully soluble
Partitioning coefficient n-octanol/water (log Kow): -3.44 (calculated)

Pressure: 1,005 - 1,021 hPa

Thermal decomposition: not determined
Viscosity, dynamic: approx. 13.9 mPa.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.

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

Possibility of hazardous reactions
Corrodes aluminum.
The product is stable 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 oxidizing agents, strong acids

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:
Of moderate toxicity after single ingestion. Of moderate toxicity after short-term skin contact. Virtually nontoxic by inhalation.

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride

Experimental/calculated data:
LD50 rat (oral): 522 mg/kg
Literature data.
Information on: Chlormequat chloride
Experimental/calculated data:
LC50 rat (by inhalation): > 5.2 mg/l 4 h
An aerosol was tested.

Information on: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Experimental/calculated data:
LD50 rabbit (dermal): 1,250 mg/kg
Literature data.

Irritation
Assessment of irritating effects:
Not irritating to the eyes. Not irritating to the skin.

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant
Literature data.

Information on: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Experimental/calculated data:
Serious eye damage/irritation rabbit: non-irritant
Literature data.

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.

Information on: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity
Assessment of mutagenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity
Assessment of carcinogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity
Assessment of reproduction toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity
Assessment of teratogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)
Assessment of repeated dose toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organotoxicity was observed after repeated administration of high doses to animals.

Other relevant toxicity information
Misuse can be harmful to health.
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: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride

Toxicity to fish:
LC50 (96 h) > 100 mg/l, Cyprinus carpio (OECD 203; ISO 7346; 84/449/EEC, C.1, static)
The details of the toxic effect relate to the nominal concentration.

Information on: chlormequat chloride (ISO); 2-chloroethyltrimethylammonium chloride
Aquatic invertebrates:
EC50 (48 h) 16.9 mg/l, Daphnia magna (DIN 38412 Part 11)
The details of the toxic effect relate to the nominal concentration.

Information on: Chlormequat chloride
Aquatic plants:
EC50 (96 h) > 100 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) The product has not been tested. The data have been deduced from values for a preparation or mixture with a lower substance concentration.

EC50 (7 d) 28.0 mg/l (growth rate), Lemna gibba (static)
The product has not been tested. The data have been deduced from values for a preparation or mixture with a lower substance concentration.

No observed effect concentration (7 d) 0.1 mg/l (growth rate), Lemna gibba (static)
The product has not been tested. The data have been deduced from values for a preparation or mixture with a lower substance concentration.

Information on: Chlormequat chloride
Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d), 3.86 mg/l, Daphnia magna

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.

Information on: Chlormequat chloride
Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Bioaccumulative potential

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

Information on: Chlormequat chloride
Bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

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.

Information on: Chlormequat chloride
Assessment transport between environmental compartments:
Following exposure to soil, the product trickles away and can – dependant on degradation - be transported to deeper soil areas with larger water loads.
Results of PBT and vPvB assessment

The product does not contain a substance fullfilling 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

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

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

| Hazard class: | 8 |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains CHLORMEQUATCHLORIDE 63%) CORROSIVE ON ALUMINIUM |

RID

| Hazard class: | 8 |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains CHLORMEQUATCHLORIDE 63%) CORROSIVE ON ALUMINIUM |

Inland waterway transport

ADN

| Hazard class: | 8 |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains CHLORMEQUATCHLORIDE 63%) CORROSIVE ON ALUMINIUM |

Sea transport

IMDG

| Hazard class: | 8 |
| ID number: | UN 1760 |
| Hazard label: | 8 |
| Marine pollutant: | NO |
| Proper shipping name: | CORROSIVE LIQUID, N.O.S. (contains CHLORMEQUATCHLORIDE 63%) CORROSIVE ON ALUMINIUM |
Air transport
IATA/ICAO

Hazard class: 8
Packing group: III
ID number: UN 1760
Hazard label: 8
Proper shipping name: CORROSIVE LIQUID, N.O.S. (contains CHLORMEQUATCHLORIDE 63%)
CORROSIVE ON ALUMINIUM

Further information
This product is subject to the most recent edition of „The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations“ and their amendments (United Kingdom).

15. Regulatory Information
Safety, health and environmental regulations/legislation specific for the substance or mixture
If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

To avoid risks to man and the environment, comply with the instructions for use. The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, „COSHH Essentials“ (United Kingdom). This product is classified under the Chemicals (Hazard Information and Packaging) Regulations, (CHIP) (United Kingdom).

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.
21/22 Harmful in contact with skin and if swallowed.
Acute Tox. Acute toxicity
H312 Harmful in contact with skin.
H302 Harmful if swallowed.

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

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.
MAPP 13973
A soluble concentrate containing 720 g/l (63.2% w/w) chlormequat chloride.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

10 litres

SAFETY PRECAUTIONS

Operator protection
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective clothing.
WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
WASH CONCENTRATE from skin or eyes immediately.
DO NOT BREATHE SPRAY.
WASH HANDS AND EXPOSED SKIN before meals and after work.
WHEN USING DO NOT EAT, DRINK OR SMOKE.
IF YOU FEEL UNWELL, seek medical advice (show label where possible).

Environmental protection
DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

Storage and disposal
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
KEEP OUT OF REACH OF CHILDREN.
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.
DO NOT RE-USE CONTAINER for any purpose.
Keep dry and frostproof in a suitable pesticide store.

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<thead>
<tr>
<th>UN 1760</th>
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<tr>
<td>Packing Group: III</td>
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<tr>
<td>Corrosive liquid, N.O.S. (contains chlormequat chloride)</td>
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<tr>
<td>Corrosive to aluminium</td>
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Supplied by:
BASF plc
Crop Protection
PO Box 4, Earl Road
Cheadle Hulme, CHEADLE
Cheshire SK8 6QG
Tel: 0161 485 6222
Emergency Information:
(24 hours freephone):
0049 180 2273112
Technical Enquiries:
0845 602 2553 (office hours)

This label is compliant with the CPA Voluntary Initiative Guidance

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