1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: Clinic Ace

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

Use: Herbicide

1.3. Details of the supplier of the safety data sheet

Nufarm UK Limited
Wyke Lane
Wyke
Bradford
West Yorkshire BD12 9EJ
United Kingdom
Telephone: +44 (0)1274 691234
Telefax: +44 (0)1274 691176
E-mail address: infouk@uk.nufarm.com

1.4. Emergency telephone number

+44 (0)1274 696603

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Directive</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEC/99/45</td>
<td>Xi R41 - Risk of serious damage to eyes.</td>
</tr>
<tr>
<td>EEC/99/45</td>
<td>N R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
</tr>
<tr>
<td>EG_1272/08</td>
<td>EyeIrrit.2 H319 - Causes serious eye irritation.</td>
</tr>
<tr>
<td></td>
<td>AquaticChronic2 H411 - Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

2.2. Label elements

according directive 1999/45/EG

Pictogram:
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Clinic Ace
Version 8 (UK)
Issuing date: 2015/12/07

R41 - Risk of serious damage to eyes.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46 - If swallowed, seek medical advice immediately and show this container or label.
S35 - This material and its container must be disposed of in a safe way.
S57 - Use appropriate container to avoid environmental contamination.

REGULATION (EC) No 1272/2008

Pictogram:

Signal word: Warning

H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P338
P337 + - If eye irritation persists: Get medical advice/ attention.
P313
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Clinic Ace
Version 8 (UK) Issuing date: 2015/12/07

P273 - Avoid release to the environment.
P391 - Collect spillage.
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non hazardous waste.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Aqueous solution of the isopropylammonium salt Glyphosate 360g/L

3.2. Mixtures

Components:

Glyphosate IPA salt
CAS-No.: 38641-94-0
EINECS-No. / ELINCS No.: 254-056-8
REACH No.: Concentration: 41.5 % (w/w)
Classification: EG_1272/08 : AquaticChronic2 H411 - Toxic to aquatic life with long lasting effects.

talgalkyl amine, ethoxylated
CAS-No.: 61791-26-2
EINECS-No. / ELINCS No.: 500-153-8
REACH No.: Concentration: 8.1% - 13.5% (w/w)
Classification: EG_1272/08 : AcuteTox.4 H302 - Harmful if swallowed. EyeDam.1 H318 - Causes serious eye damage. AquaticChronic2 H411 - Toxic to aquatic life with long lasting effects.

4. FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin contact: Take off all contaminated clothing immediately. Wash off with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.

Inhalation: Move to fresh air. If symptoms persist, call a physician.

Ingestion: Do NOT induce vomiting. Rinse mouth. If conscious, drink plenty of water. If symptoms persist, call a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Dry powder, Sand, Foam, Carbon dioxide (CO2)

Extinguishing media which shall not be used for safety reasons: High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting: In the event of fire (NOx, COx, P2O5) may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters: Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

Further Information: Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. (see Chapter 8)

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Shovel into suitable container for disposal.

Additional advice: Never return spills in original containers for re-use.

6.4. Reference to other sections

see Chapter 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Keep out of reach of children. Wear personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Store in original container.

Advice on common storage: Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

none

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters (EH40/2005 Workplace exposure limits)

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>National occupational exposure limits</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyphosate IPA salt</td>
<td>38641-94-0</td>
<td>no classification available</td>
<td></td>
</tr>
<tr>
<td>talgalkyl amine, ethoxylated</td>
<td>61791-26-2</td>
<td>no classification available</td>
<td></td>
</tr>
</tbody>
</table>
8.2. Exposure controls

**Personal protective equipment**

**Respiratory protection** : No special protective equipment required.

**Hand protection** : PVC or nitrile-rubber gloves

**Eye protection** : Face-shield, or; Tightly fitting safety goggles

**Skin and body protection** : Long sleeved clothing

**Hygiene measures** : Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**Protective measures** : Avoid contact with skin, eyes and clothing. Keep working clothes separately.

---

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

**Appearance**

- **Physical state** : liquid
- **Colour** : light brown
- **Odour** : odourless

- **Flash point** : >160 °C

- **Vapour pressure** : 1.31E+00 Pa at 25 °C

- **Density** : 1.17 g/cm³ at 20 °C

- **Water solubility** : 10.5 g/l at 20 °C

- **pH** : 4.5 - 5.2

- **Partition coefficient: n-octanol/water** : log POW = < -3.2 at 25 °C

(Glyphosate), (pH 5)
Viscosity, dynamic: 45.4 mPa.s at 20 °C

9.2. Other information

none

10. STABILITY AND REACTIVITY

10.1. Reactivity

no data available

10.2. Chemical stability

No spontaneous or exothermic decomposition up to 100 °C.

10.3. Possibility of hazardous reactions

No decomposition if stored and applied as directed.

10.4. Conditions to avoid

No dangerous reaction known under conditions of normal use.

10.5. Incompatible materials to avoid

Strong bases

10.6. Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity: LD50 rat
Dose: > 2,000 mg/kg

Acute dermal toxicity: LD50 rat
Dose: > 4,000 mg/kg

Acute inhalation toxicity: LC50 rat
Exposure time: 4 h
Dose: 3.18 mg/l
Skin irritation: rabbit
Result: No skin irritation

Eye irritation: rabbit
Result: Moderate eye irritation

Sensitisation: Guinea-pig
Result: Did not cause sensitization on laboratory animals.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to bees
Not toxic to bees.

Toxicity to earthworms
LD50 Eisenia fetida (earthworms)
Dose: > 5,000 mg/kg
Testing period: 14 d

Toxicity to fish
LC50 Oncorhynchus mykiss (rainbow trout)
Dose: 7.5 mg/l
Testing period: 96 h

NOEC Oncorhynchus mykiss (Rainbow trout)
Dose: 5.6 mg/l
Testing period: 96 h

NOEC Oncorhynchus mykiss (Rainbow trout)
Dose: 2.4 mg/l
Testing period: 28 d

Toxicity to daphnia
EC50 Daphnia
Dose: 8.5 mg/l
Testing period: 48 h

NOEC Daphnia
Dose: 3.2 mg/l
Testing period: 48 h
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Clinic Ace
Version 8 (UK)
Issuing date: 2015/12/07

NOEC Daphnia
Dose: 15 mg/l
Testing period: 21 d

Toxicity to algae : EbC50 Scenedesmus subspicatus
Dose: 16 mg/l
Exposure time: 72 h

EyC50 Scenedesmus subspicatus
Dose: 31 mg/l
Exposure time: 72 h

NOEC Scenedesmus subspicatus
Dose: 6.25 mg/l

EC50 Lemna gibba (Duckweed)
Dose: 15.4 mg/l
Exposure time: 7 d

12.2. Persistence and degradability

Biodegradability : Not readily biodegradable.

Stability in soil : DT50: ca. 4 d
DT90 : < 20 d
(Glyphosate)

12.3. Potential bioaccumulation

Bioaccumulation : Does not bioaccumulate.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects

none
13. DISPOSAL CONSIDERATIONS

According to European Directive 2000/532/EC as amended:

Waste Code : 02 01 08 (agrochemical waste containing dangerous substances)

13.1. Waste treatment methods

Product : Dispose of product and packaging in accordance with The Green Code. (The Code of Practice for the safe use of Pesticides on Farms and Holdings.) A MAFF Publication.

Contaminated packaging : Do not dispose with household waste. Do not re-use empty containers. Dispose at licensed waste disposal site capable of accepting pesticides in compliance with applicable regulations.

14. TRANSPORT INFORMATION

14.1. UN number

UN3082

14.2. Proper shipping name

UN3082 Environmentally hazardous substance, liquid, n.o.s.(Glyphosate, Tallow alkylamine ethoxylate)

14.3. Transport hazard class(es)

ADR/RID : 
Class : 9

IMDG :
Class : 9

IATA-DGR :
Class : 9

14.4. Packaging group

ADR/RID : III

IMDG : III
IATA-DGR : III

14.5. Environmental hazards

IMDG
Marine Pollutant : Y

14.6. Special precautions for user
none

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

15.2. Chemical Safety Assessment
none

16. OTHER INFORMATION

Print Date : 2015/12/07

The date format YYYY/MM/DD is used according to ISO 8601.
(Alterations are indicated in the left hand margin by: || )

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.