SAFETY DATA SHEET
ENSTAR

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: ENSTAR
Product number: PST034/2

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

Identified uses: Herbicide.

1.3. Details of the supplier of the safety data sheet

Supplier: Headland Amenity Ltd
1 Burr Elm Court
Main Street
Caldecote
Cambridge
Cambridgeshire
CB23 7NU
Tel. +44 (0)1223 491090
sds.enquiries@headlandamenity.com

Contact person: Wendy Johnson

Manufacturer: Barclay Chemicals Manufacturing Ltd
Damastown Industrial Park
Damastown Way
Mulhuddart
Dublin 15
+353 1 811 29 00
info@barclay.ie

1.4. Emergency telephone number

Emergency telephone: +353 86 385 77 69

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards: Not Classified

Health hazards: Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H336 Asp. Tox. 1 - H304

Environmental hazards: Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

Pictogram: [Image]
Signal word

Danger

Hazard statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.
H304 May be fatal if swallowed and enters airways.

Precautionary statements

P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing.
P391 Collect spillage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/ container in accordance with national regulations.

Contains

2-ETHYLHEXYL 2, 4-DICHLOROPHENOXYACETATE, HYDROCARBONS, C10, AROMATICS, <1% NAPTHALENE, DICAMBA (ISO), TALLOW ALKYLAMINE ETHOXYLATE, 2-METHYLPROPAN-1-OL

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>2-ETHYLHEXYL 2, 4-DICHLOROPHENOXYACETATE</th>
<th>30-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 1928-43-4</td>
<td>EC number: 217-673-3</td>
</tr>
<tr>
<td>M factor (Acute) = 1</td>
<td>M factor (Chronic) = 1</td>
</tr>
</tbody>
</table>

Classification

Acute Tox. 4 - H302
Skin Sens. 1 - H317
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

<table>
<thead>
<tr>
<th>FLUOROXYPYR-MEPTYL (ISO)</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 81406-37-3</td>
<td>EC number: 279-752-9</td>
</tr>
<tr>
<td>M factor (Acute) = 1</td>
<td>M factor (Chronic) = 1</td>
</tr>
</tbody>
</table>

Classification

Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC)

N; R50/53
ENSTAR

HYDROCARBONS, C10, AROMATICS, <1% NAPTHALENE 10-30%
CAS number: —  EC number: 918-811-1

Classification
STOT SE 3 - H336
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

CALCIUM DODECYLBENZE SULPHONATE 1-5%
CAS number: 26264-06-2  EC number: 247-557-8

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

TALLOW ALKYLAMINE ETHOXYLATE 1-5%
CAS number: 61791-26-2  EC number: 500-153-8

Classification
Acute Tox. 4 - H302
Acute Tox. 2 - H330
Eye Dam. 1 - H318
Aquatic Chronic 2 - H411

DICAMBA (ISO) 1-5%
CAS number: 1918-00-9  EC number: 217-635-6

Classification
Acute Tox. 4 - H302
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

Classification (67/548/EEC or 1999/45/EC)
Xn; R22. Xi; R41. R52/53

2-METHYLPROPAN-1-OL 1-5%
CAS number: 78-83-1  EC number: 201-148-0

Classification
Flam. Liq. 3 - H226
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
STOT SE 3 - H335, H336

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information  Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Show this Safety Data Sheet to the medical personnel. Treat symptomatically.
ENSTAR

Inhalation
Remove affected person from source of contamination. Remove person to fresh air and keep comfortable for breathing. Loosen tight clothing such as collar, tie or belt. No special treatment required. Get medical attention if any discomfort continues.

Ingestion
Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Keep affected person under observation. Do not induce vomiting unless under the direction of medical personnel. Show this Safety Data Sheet to the medical personnel.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Keep affected person under observation. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

Eye contact
Remove affected person from source of contamination. Get medical attention immediately. Remove any contact lenses and open eyelids wide apart. Rinse cautiously with water for several minutes. Keep affected person under observation. Show this Safety Data Sheet to the medical personnel.

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

<table>
<thead>
<tr>
<th>General information</th>
<th>See Section 11 for additional information on health hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Coughing. Sore throat.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause stomach pain or vomiting.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause skin irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation. Profuse watering of the eyes. Redness.</td>
</tr>
</tbody>
</table>

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

Notes for the doctor
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards
None known.

Hazardous combustion products
None known.

5.3. Advice for firefighters

Protective actions during firefighting
Do not use water jet as an extinguisher, as this will spread the fire. Avoid breathing fire gases or vapours. Contain and collect extinguishing water. Fight fire from safe distance or protected location. If risk of water pollution occurs, notify appropriate authorities. Move containers from fire area if it can be done without risk.

Special protective equipment for firefighters
Use air-supplied respirator, gloves and protective goggles.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
For personal protection, see Section 8. Keep unnecessary and unprotected personnel away from the spillage.
6.2. Environmental precautions

Environmental precautions

Very toxic to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Contain spillage with sand, earth or other suitable non-combustible material. Environmental Manager must be informed of all major spillages.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Contain spillage with sand, earth or other suitable non-combustible material. Collect spillage. Place waste in labelled, sealed containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Avoid contact with eyes. Do not empty into drains. Do not eat, drink or smoke when using this product. Protect from freezing and direct sunlight.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Keep away from food, drink and animal feeding stuffs. Keep only in the original container. Protect from freezing and direct sunlight.

Storage class

Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

DICAMBA (ISO)

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³

2-METHYLPROPAN-1-OL

Long-term exposure limit (8-hour TWA): WEL 50 ppm 154 mg/m³

Short-term exposure limit (15-minute): WEL 75 ppm 231 mg/m³

WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment

Eye/face protection

Tight-fitting safety glasses.

Hand protection

Wear protective gloves made of the following material: Nitrile rubber.

Hygiene measures

Do not eat, drink or smoke when using this product. Promptly remove any clothing that becomes wet or contaminated. Provide eyewash station. Wash hands thoroughly after handling.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
ENSTAR

**Appearance**
Clear liquid.

**Colour**
Brown.

**Odour**
Characteristic.

**pH**
\( \text{pH (concentrated solution): 4.0} \)

**Melting point**
Not applicable.

**Initial boiling point and range**
Not known.

**Flash point**
Not known.

**Evaporation rate**
Not known.

**Vapour pressure**
Not known.

**Vapour density**
Not known.

**Relative density**
1.050 - 1.090 @ 20°C

**Bulk density**
Not known.

**Solubility(ies)**
Miscible with water.

**Viscosity**
Not known.

**Comments**
Information given is applicable to the product as supplied.

**9.2. Other information**
Other information
None.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**
Reactivity
There are no known reactivity hazards associated with this product.

**10.2. Chemical stability**
Stability
Stable at normal ambient temperatures and when used as recommended.

**10.3. Possibility of hazardous reactions**
Possibility of hazardous reactions
No potentially hazardous reactions known.

**10.4. Conditions to avoid**
Conditions to avoid
Avoid freezing. There are no known conditions that are likely to result in a hazardous situation.

**10.5. Incompatible materials**
Materials to avoid
None known.

**10.6. Hazardous decomposition products**
Hazardous decomposition products
Does not decompose when used and stored as recommended.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity - oral**

ATE oral (mg/kg)
1,428.57
ENSTAR

Acute toxicity - inhalation
ATE inhalation (dusts/mists mg/l) 8.84

Aspiration hazard
Aspiration hazard May be fatal if swallowed and enters airways.

Ingestion Harmful if swallowed.
Skin contact May cause skin irritation.
Eye contact Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity
Acute toxicity - fish LC₅₀, 96 hours: 4.8 mg/l, Fish
Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 33.6 mg/l, Daphnia magna
Acute toxicity - aquatic plants EC₅₀, 72 hours: 2.1 mg/l, Algae

12.2. Persistence and degradability
Persistence and degradability The degradability of the product is not known.
Biodegradation Not available.

12.3. Bioaccumulative potential
Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil
Mobility The product is miscible with water and may spread in water systems.

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects
Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
General information This material and its container must be disposed of as hazardous waste. Dispose of waste product or used containers in accordance with local regulations

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 3082
UN No. (IMDG) 3082
UN No. (ICAO) 3082
UN No. (ADN) 3082
ENSTAR

14.2. UN proper shipping name

Proper shipping name (ADR/RID)  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Hydrocarbons, C10, aromatics, >1% napthalene, Tallow alkylamine ethoxylate)

Proper shipping name (IMDG)  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Hydrocarbons, C10, aromatics, >1% napthalene, Tallow alkylamine ethoxylate)

Proper shipping name (ICAO)  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Hydrocarbons, C10, aromatics, >1% napthalene, Tallow alkylamine ethoxylate)

Proper shipping name (ADN)  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Hydrocarbons, C10, aromatics, >1% napthalene, Tallow alkylamine ethoxylate)

14.3. Transport hazard class(es)

ADR/RID class  9
ADR/RID classification code  M6
ADR/RID label  9
IMDG class  9
ICAO class/division  9
ADN class  9
Transport labels

14.4. Packing group

ADR/RID packing group  III
IMDG packing group  III
ICAO packing group  III
ADN packing group  III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

EmS  F-A, S-F
ADR transport category  3
Emergency Action Code  •3Z
Hazard Identification Number (ADR/RID)  90
Tunnel restriction code  (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
ENSTAR

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

EU legislation

15.2. Chemical safety assessment
An Exposure Scenario has not been prepared as a CSR was not required for registration.

SECTION 16: Other information

Revision comments
This is the first issue.

Revision date
02/05/2019

Revision
1

SDS number
20551

Hazard statements in full
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.