1 Identification

Product Name: LOVELAND PRODUCTS RADIATE GROWTH PROMOTANT

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use:

Details of Manufacturer or Importer:
Landmark Operations Limited
Suite 3, Level 1, Building B
11 Talavera Road
Macquarie Park NSW 2113

Phone Number: 02 9889 5400

Emergency telephone number: National Poison Information Centre: 13 11 26

2 Hazard(s) Identification

Hazardous Nature:
Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Serious Eye Damage/Irritation 2A H319 Causes serious eye irritation.

Signal Word Warning

Hazard Statements
H319 Causes serious eye irritation.

Precautionary Statements
P264 Wash hands thoroughly after handling.
P280 Wear eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>Acute Toxicity (Oral)</th>
<th>Skin Corrosion/Irritation</th>
<th>STOT SE</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>133-32-4</td>
<td>4-(indol-3-yl)butyric acid</td>
<td>3, H301; 2, H315; 3, H335</td>
<td>2A, H319; 3, H335</td>
<td>0.884%</td>
<td></td>
</tr>
<tr>
<td>7647-01-0</td>
<td>Hydrochloric acid</td>
<td>1A, H314; 1, H318; 3, H335</td>
<td>2A, H319; 3, H335</td>
<td>0.624%</td>
<td></td>
</tr>
</tbody>
</table>

4 First Aid Measures

Inhalation: If inhaled, remove to fresh air. Seek medical attention if breathing problems develop.

(Contd. on page 2)
Skin Contact:  
In case of skin contact, wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:  
In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention if symptoms occur.

Ingestion:  
If swallowed, do not induce vomiting. Give a glass of water. Never give anything by mouth to an unconscious person. Seek medical attention if symptoms occur.

Symptoms Caused by Exposure:  
Eye Contact: Causes serious eye irritation.

5 Fire Fighting Measures

Suitable Extinguishing Media:  
Water fog or fine spray, alcohol foam, dry chemical or carbon dioxide. Do not use full water jet as this may spread the fire.

Specific Hazards Arising from the Chemical:  
Hazardous by-products may be generated in fire.  
Product is not flammable but may burn in a fire.  
Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

Special Protective Equipment and Precautions for Fire Fighters:
When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:  
Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

Environmental Precautions:  
In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:  
Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal. Flush contaminated area thoroughly with water. Small spills can be wiped up with clean rags or paper towels. Never return spilt product to original container for reuse.

7 Handling and Storage

Precautions for Safe Handling:  
Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:  
Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Protect from direct sunlight. Do not store with water, food or animal feed.
8 Exposure Controls and Personal Protection

Exposure Standards:
7647-01-0 Hydrochloric acid
WES Peak limitation: 7.5 mg/m³, 5 ppm

Engineering Controls:
Maintain air concentration below occupational exposure standards, providing adequate ventilation.

Respiratory Protection:
Use an approved vapour respirator with an N, R, P or HE filter under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:
Chemical resistant gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.
Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:
Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 Physical and Chemical Properties

Appearance:
Form: Liquid
Colour: Yellow
Odour: Strong
Odour Threshold: No information available
pH-Value: 3.1 - 3.7
Melting point/freezing point: <0 °C
Initial Boiling Point/Boiling Range: 100 °C
Flash Point: >100 °C
Flammability: Product is not flammable.
Auto-ignition Temperature: No information available
Decomposition Temperature: No information available
Explosion Limits:
Lower: No information available
Upper: No information available
Vapour Pressure: No information available
Density: 1.04 g/cm³
Vapour Density: No information available
Evaporation Rate: No information available
Solubility in Water: Soluble
Partition Coefficient (n-octanol/water): No information available
Viscosity at 20 °C: 3.28 mm²/s (Kinematic)
10 Stability and Reactivity

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: Direct sunlight.

Incompatible Materials: No further relevant information available.


11 Toxicological Information

Toxicity:

<table>
<thead>
<tr>
<th>LD₅₀/LC₅₀ Values Relevant for Classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>133-32-4 4-(indol-3-yl)butyric acid</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>7647-01-0 Hydrochloric acid</td>
</tr>
<tr>
<td>Oral</td>
</tr>
</tbody>
</table>

Acute Health Effects

Inhalation: No adverse health effects expected.

Skin: No adverse health effects expected.

Eye: Causes serious eye irritation.

Ingestion: No adverse health effects expected.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity:

Hydrochloric acid is classified by IARC as Group 3 - Not classifiable as to its carcinogenicity to humans.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:
Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: No information available

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information: No information available

12 Ecological Information

Ecotoxicity:
This product is not classified as environmentally hazardous, but large spills may still be harmful to the environment. This product is acidic.

Aquatic toxicity: This product is not intended for use in aquatic settings.
Persistence and Degradability: No further relevant information available.
Bioaccumulative Potential: No further relevant information available.
Mobility in Soil: No further relevant information available.
Other adverse effects: No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.
Special Precautions for Landfill or Incineration: Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number Not regulated
Proper Shipping Name Not regulated
Dangerous Goods Class Not regulated
Packing Group: Not regulated

15 Regulatory Information

Australian Inventory of Chemical Substances:
133-32-4 4-(indol-3-yl)butyric acid
7647-01-0 Hydrochloric acid

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 5

16 Other Information

Date of Preparation or Last Revision: 06.03.2018
Prepared by: MSDS.COM.AU Pty Ltd www.msds.com.au

Abbreviations and acronyms:
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC₅₀L: Lethal concentration, 50 percent
LD₅₀L: Lethal dose, 50 percent
IARC: International Agency for Research on Cancer
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Acute Toxicity (Oral) 3: Acute toxicity – Category 3
Skin Corrosion/Irritation 1A: Skin corrosion/irritation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Disclaimer
This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - February 2016”
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