1. IDENTIFICATION OF COMPANY & PRODUCT

- **Product Name**: Imidacloprid 17.8% SL
- **Chemical Name**: (E)-1-(6-chloro-3-pyridylmethyl)-N-nitroimidazolidin-2-ylideneamine
- **Brand Name**: IMIGROW
- **Users**: Insecticide
- **Molecular Formula**: C9H10ClN5O2
- **Manufacturer**: CROP LIFE SCIENCE LTD.
- **Address**: Plot No. 5165, 5166, 5151, G.I.D.C., Ankleshwar-393002 Gujarat, India
- **Tele Fax Number**: 91 2646 238479

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Percent or content (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid a.i.</td>
<td>138261-41-3</td>
<td>17.80 %</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>-</td>
<td>82.20 %</td>
</tr>
</tbody>
</table>

3. HEALTH HAZARDS IDENTIFICATION

- **Ingestion**: Amount swallowed incidental to normal handling procedures and use are not expected to cause injury.
- **Inhalation**: Not a likely route of exposure when handling the concentrate. Care should be taken to avoid inhalation of excessive amount of material during field spraying. May be irritating to the respiratory system.
- **Eye irritation**: No eye irritation.
- **Skin irritation**: Minimally toxic and not irritating.
4. FIRST AID MEASURES

Eye contact: immediately flush the eyes with gently flowing, lukewarm water or saline solution for 20 minutes, occasionally lifting the upper and lower lids. Obtain medical attention if necessary.

Skin contact: Remove contaminated clothing, shoes and leather goods, gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap.

Ingestion: Wash mouth out with water. If vomiting occurs, give more water to drink to assist dilution.

5. FIRE FIGHTING MEASURES

Flash point: 88°C

Suitable extinguishing media: Preferred extinguishing media are Carbon Dioxide, dry chemical, Foam, water Fog.

Fire and explosion hazard: Fire may involve dehydrated compounds, which may emit oxides of carbon, nitrogen and possibly hydrogen chloride.

Protective equipment for firefighting: Wear positive-pressure, self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak: For small dry spills, sweep up with damp earth or sand or other suitable absorbents, such as sawdust, taking care not to raise a dust cloud. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. For large spills contact the manufacturer. Contain liquid far ahead of spill. Contain spillage and contaminated water and soil for subsequent disposal. Do not flush spilled material into drains. Keep spectators away and upwind.

7. HANDLING AND STORAGE

Handling Information: Laboratory fume hood or local exhaust ventilation.

Ventilation: Keep the place of work clean. Avoid contact with the product. Keep working clothes separate. Change badly soiled or soaked clothing. Wash hands before breaks & at the end of work. Store the material in a dry place & protect from
temp. Below 0 & above 40°C Keep away from food, drink and animal feeding stuffs.

Special Instructions for storage: Store the product in closed original containers. Protect from light.
Storage Compatibility with other products: Store separately from feed, food and stimulants.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye protection: Goggles or appropriate respirator.
Skin protection: Impervious gloves and body covering to prevent skin covering.
Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.
Breathing protection: Use respirator or laboratory fume hood. In production settings, airline supplied hood-type respirators are preferred to provide face, eye and respiratory protection. Shower and change clothing is skin contact occurs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colour less to Yellow liquid
Odour: Specific odour
Relative density: 1.13 g/ml
Solubility: In water 0.61 g/L at 20°C
In dichloromethane 55 g/L 20°C
In Isopropanol 1.2 g/L 20°C
In Toluene 0.68 g/L 20°C
In n-hexane <0.1 g/l 20°C
pH: 6.8 to 7.2 (1% solution in water)
Melting point: 144°C

10. STABILITY AND REACTIVITY

Stability: Stable under normal, dry storage conditions. Slowly decomposed by heat and moisture.
Incompatibilities: Incompatible with oxidation materials and acids. The Product is compatible with many other pesticides when used at normal rates. However, a compatibility test is required before using with other products. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.
Hazardous polymerization: will not polymerize.
Hazardous decomposition products: Thermal decomposition products may emit oxides of carbon and nitrogen. And possibly hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

- **Acute Oral Toxicity**: LD50 (Male rats) 480 mg/kg, LD50 (Female rats) 650 mg/kg
- **Acute Dermal Toxicity**: LD50 (Rats) >5000 mg/kg
- **Acute Inhalation**: LC50 (rats) : >5.9 mg/L
- **Eye Irritation**: Rabbit: Non-irritant
- **Skin Irritant**: Rabbit: Non-irritant
- **Skin sensitization**: Guinea pig: Non-sensitizer

12. ECOLOGICAL INFORMATION

- **Birds**: Acute oral LC50 for Japanese quail 31 mg/kg, Bobwhite quail 152 mg/kg, Dietary LC50 (5 d) bobwhite quail 2225 mg/kg, Mallard ducks >5000 mg/kg
- **Fish**: LC50 (96 h) for Golden orfe 237 mg/l, Rainbow trout 211 mg/l
- **Bees**: Harmful to honey bees by direct contact, but no problems expected when not sprayed into flowering crop or when used as a seed treatment. LD50: 0.008 mg/bee

13. DISPOSAL CONSIDERATIONS

- **Waste Disposal Method**: Dispose of any cleanup materials and waste residue according to applicable federal, state and local regulations. Avoid contamination of water sources.
- **Container disposal method**: Contain and sweep up small spills. Contain large spills. Be aware of potential for dust explosion. When using electrical equipment. Wear protective equipment, including eye protection, to avoid exposure.
14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Rail/Road (RID/ADR)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipper Name</td>
<td>PESTICIDE, LIQUID, TOXIC, N.O.S</td>
</tr>
<tr>
<td>Class</td>
<td>6.1</td>
</tr>
<tr>
<td>UN No.</td>
<td>2588</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sea (IMDG – Code)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipper Name</td>
<td>PESTICIDE, LIQUID, TOXIC, N.O.S</td>
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<table>
<thead>
<tr>
<th>Air (ICAO/IATA)</th>
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<tbody>
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</tr>
</tbody>
</table>

Packing Instructions: Packing instructions on sea: P002
Packing instructions on air: 619/645

15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>EU- Classification Hazard Symbol</th>
<th>Xn N</th>
<th>Harmful Dangerous for the environment</th>
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</thead>
<tbody>
<tr>
<td>Safety Advice (S- Phrases)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S13</td>
<td></td>
<td>Keep away from food, drink and animal foodstuffs</td>
</tr>
<tr>
<td>S20/21</td>
<td></td>
<td>When using do not eat, drink or smoke</td>
</tr>
<tr>
<td>S24</td>
<td></td>
<td>Avoid contact with skin</td>
</tr>
<tr>
<td>S25</td>
<td></td>
<td>Avoid contact with eyes</td>
</tr>
<tr>
<td>S28</td>
<td></td>
<td>After contact with skin, wash immediately with plenty of water and soap.</td>
</tr>
<tr>
<td>S36/37</td>
<td></td>
<td>Wear suitable protective clothing and gloves</td>
</tr>
</tbody>
</table>

International WHO Toxicity Classification | II | Highly Toxic/hazardous |
16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.