

SECTION 1 - CHEMICAL IDENTIFICATION
PRODUCT NAME: IMIDAZOLE [GLYOXALINE] [1, 3-DIAZA-2-, 4-CYCLOPENTADIENE]

DOT CATALOG: DSI52000

SUPPLIER'S NAME: DOT Scientific, Inc.

SUPPLIERS ADDRESS: 4165 Lippincott
Burton, MI 48519

EMERGENCY CONTACT: 1-800-424-9300 (Reference Customer Number: 18739)

OTHER INFORMATION: 1-800-878-1785

SECTION 2 - HAZARDS IDENTIFICATION
2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

| | | |
|------|---------------------------|-------------|
| H302 | Acute Toxicity, Oral | Category 4 |
| H314 | Skin Corrosion/Irritation | Category 1B |
| H318 | Serious Eye Damage | Category 1 |
| H360 | Reproductive Toxicity | Category 1B |

2.2 GHS Label elements, including Hazard and Precautionary Statement(s)
Pictogram

Signal word: Danger
Hazard statement(s)

| | |
|------|--|
| H302 | Acute Toxicity |
| H314 | Causes Severe Skin Burns And Eye Damage. |
| H318 | Causes Serious Eye Damage |
| H360 | May Damage Fertility Or The Unborn Child |

Prevention, Response, Storage and Disposal Precautionary Statement(s)

| | |
|--------------------|---|
| P201 | Obtain special instructions before use |
| P202 | Do not handle until all safety precautions have been read and understood |
| P260 | Do not breathe dust or mist. |
| P264 | Wash skin thoroughly after handling |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P301 + P312 | IF SWALLOWED: Call a poison center or doctor/physician if you feel unwell. |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |

| | |
|--------------------|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER or doctor/ physician. |
| P321 | Specific treatment (see supplemental first aid instructions on this label). |
| P363 | Wash contaminated clothing before reuse. |
| P405 | Store locked up. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

According to European Directive 67/548/EEC as amended

Hazard symbol(s): R-phrases(s)/S-phrases(s):

| | |
|-----------|---|
| R61 | May cause harm to the unborn child |
| R22 | Also harmful if swallowed |
| R34 | Causes burns |
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice |
| S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection |
| S45 | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
| S53 | Avoid exposure - obtain special instructions before use. |

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

CAS NUMBER: 288-32-4
 EINECS NUMBER: 206-019-2
 MOLECULAR WEIGHT: 68.08g/mol
 MOLECULAR FORMULA: C₃H₄N₂

SECTION 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical,

physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides (NO_x), Sulfur oxides, Hydrogen chloride gas, Hydrogen fluoride

5.3 Precautions for fire-fighters: Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

5.4 Further information: no data available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions: Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections: For required PPE see section 8. For disposal see section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling:

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Moisture sensitive.

7.3 Specific end use(s): Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

8.2 Exposure Controls

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|-----------------------|----------------------------------|-------------------------|
| Appearance | White Powder | Vapor Pressure | No Data Available |
| Odor | No Data Available | Vapor Density | No Data Available |
| Odor Threshold | No Data Available | Relative Density | 1.030 g/cm ³ |
| pH | No Data Available | Water Solubility | 6.33 g/l at 20 °C |
| Melting / Freezing Point | 88-91° C (190-196 °F) | Partition Coefficient | No Data Available |
| Initial Boiling Point and Range | 256° C (493 °F) | Auto-Ignition Temperature | No Data Available |
| Flash Point | 145° C (293 °F) | Decomposition Temperature | No Data Available |
| Evaporation Rate | No Data Available | Viscosity | No Data Available |
| Flammability (Solid, Gas) | No Data Available | Explosive Properties | No Data Available |
| Upper / Lower Flammability Or Explosive Limits | No Data Available | Oxidizing Properties | No Data Available |

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under recommended transport or storage conditions.

Conditions to Avoid: Heat, moisture air or water, incompatibles

Incompatible Materials: Strong oxidizing agents

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

| LD50 Oral | LD50 Dermal | LD50 Inhalation |
|--------------------|--------------------|------------------------|
| 25,800 mg/kg (Rat) | Not Listed | Not Listed |

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Do not empty into drains

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-------------|--|--------------------|--|---------------------------|
| 1-Imidazole | 30 mg/L EC50 = 72 h 82 mg/L EC50 = 96 h | 280 mg/L LC50 48 h | = 1200 mg/L EC50 Pseudomonas putida 17 h = 231 mg/L EC50 Photobacterium phosphoreum 30 min | 341.5 mg/L EC50 = 48 h |

MOBILITY IN SOIL:

| Component | log Pow |
|-------------|---------|
| 1-Imidazole | -0.02 |

Persistence and degradability: Readily biodegradable

Bioaccumulative potential: No data available

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available

CHRONIC TOXICITY: There are no known carcinogenic chemicals in this product

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 - TRANSPORT INFORMATION

| | UN# | Proper Shipping Name | Hazard Class | Packaging Group |
|-----------------|------|--|--------------|-----------------|
| DOT | 3263 | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S | 8 | II |
| TDG | 3263 | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S | 8 | II |
| IATA | 3263 | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S | 8 | II |
| IMDG/IMO | 3263 | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S | 8 | II |

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

| INGREDIENT | | | | | CAS #: | | EINECS | | |
|-------------|--------|------|--------|-----|----------|--------|-----------|--------|--------|
| 1-Imidazole | | | | | 288-32-4 | | 206-019-2 | | |
| TSCA | DSL | NDSL | ELINCS | NLP | PICCS | ENCS | AICS | CHINA | KECL |
| Listed | Listed | - | - | | Listed | Listed | Listed | Listed | Listed |

USA FEDERAL REGULATION

TSCA 12(b): Not Applicable

SARA 313: Not Applicable



SARA 311/312 HAZARDOUS CATEGORIZATION (IONOMYCIN CALCIUM SALT)

| Acute Health Hazard | Chronic Health Hazard | Fire Hazard | Sudden Release Of Pressure Hazard | Reactive Hazard |
|----------------------------|------------------------------|--------------------|--|------------------------|
| Yes | No | No | No | No |

CLEAN WATER ACT/ CLEAN AIR ACT: Not Applicable

OSHA: Not Applicable

CALIFORNIA PROPOSITION 65: This product does not contain any Proposition 65 chemicals.

CERCLA: Not Applicable

STATE RIGHT TO KNOW: Not Applicable

US DEPARTMENT OF TRANSPORTATION

| REPORTABLE QUANTITY (RQ) | DOT MARINE POLLUTANT | DOT SEVER MARINE POLLUTANT |
|---------------------------------|-----------------------------|-----------------------------------|
| No | No | No |

U.S. DEPARTMENT OF HOMELAND SECURITY: This product does not contain any DHS chemicals.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

This SDS complies with the requirements of Regulation (EC)

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. DOT Scientific, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.