ACRIFLAVINE NEUTRAL

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION:
Synonyms: Acriflavine Base, Euflavine
CAS No.: 8048-52-0
Molecular Weight: 259.7
Chemical Formula: C14H14CIN3

2. COMPOSITION, INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acriflavine Neutral</td>
<td>8048-52-0</td>
<td>&gt; 92%</td>
<td>No</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION:

Emergency Overview
Appearance: Orange to red to red-brown powder. CAUTION! May cause eye and skin irritation. May cause respiratory and digestive tract irritation. The toxicological properties of this material have not been fully investigated.

Target Organs:

Potential Health Effects
Eyes: May cause eye irritation and possible burns.
Skin: May cause skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.
Inhalation: May cause respiratory tract irritation. The toxicological properties of this material have not been fully investigated.

4. FIRST AID MEASURES:
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin: In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothes and shoes. Get medical attention if irritation develops or persists.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls water or milk to drink. Do NOT induce vomiting. NEVER give anything by mouth to an unconscious person. Get medical attention if irritation or symptoms appear.
Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
Notes to Physician: Treat symptomatically and supportively.
5. FIRE FIGHTING MEASURES:
General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH approved or equivalent, and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff from fire control or dilution water may cause pollution. Extinguishing Media: In case of fire use water spray to cool fire expose containers. Use water spray, dry chemical, Carbon dioxide, or appropriate foam. Use agent most appropriate to extinguish fire.
Flash Point: Not applicable.
Auto-ignition Temperature: Not applicable.
Explosion Limits, Lower/Upper: Not available.
NFPA Rating: (estimated) Health: 1 Flammability: 1 Instability: 0.

6. ACCIDENTAL RELEASE MEASURES:
General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

7. HANDLING AND STORAGE:
Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION:
Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PEL’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acriflavine Neutral</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Acriflavine Neutral: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: 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.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES:
Physical State: Powder
Appearance: Orange to red to red-brown
Odor: Not available.
**Freezing/Melting Point:** 179 – 181°C (dec.)
**pH:** Not available.
**Vapor Pressure (mm Hg):** Not available.
**Vapor Density (Air = 1):** Not available.
**Evaporation Rate:** Not available.
**Viscosity:** Not available.
**Boiling Point:** Not available.
**Decomposition Temperature:** 181°C
**Solubility:** Soluble in water.
**Specific Gravity/Density:** Not available.

10. **STABILITY AND REACTIVITY:**
**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.
**Conditions to Avoid:** Dust generation, excess heat, incompatible material, strong oxidants.
**Incompatibilities with Other Materials:** Strong oxidizing agents.
**Hazardous Decomposition Products:** Hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide.
**Hazardous Polymerization:** Has not been reported.

11. **TOXICOLOGICAL INFORMATION:**
**RTECS:** CAS# 8048-52-0: AR9660000
**LD50/LC50:** CAS# 8048-52-0: Not available.
**Carcinogenicity:** CAS#8048-52-0: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
**Epidemiology:** No information available.
**Teratogenicity:** No information available.
**Reproductive Effects:** No information available.
**Neurotoxicity:** No information available.
**Mutagenicity:** No information available.
**Other Studies:** No data available.

12. **ECOLOGICAL INFORMATION:**
**Environmental Fate:** No information available.
**Environmental Toxicity:** No data available.

13. **DISPOSAL CONSIDERATIONS:**
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3.
Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

14. **TRANSPORT INFORMATION:**
Not regulated.
15. REGULATORY INFORMATION:

US FEDERAL

**TSCA** CAS# 8048-52-0 is not listed on the TSCA inventory. It is for research & development use only.

**Health & Safety Reporting List** None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules** None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b** None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule** None of the chemicals in this material have a SNUR under TSCA.

**SARA**

**CERCLA Hazardous Substances and corresponding RQs** None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances** None of the chemicals in this product have a TPQ.

**SARA Codes** CAS# 8048-52-0: delayed.

**Section 313** No chemicals are reportable under Section 313.

**Clean Air Act** This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

**Clean Water Act** None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA** None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE** CAS#8048-52-0 is not present on state lists from CA, PA, MA, MN, FL, or NJ.

**California No Significant Risk Level** None of the chemicals in this product are listed.

**EUROPEAN/INTERNATIONAL REGULATIONS**

**European Labeling in Accordance with EC Directives**

**Hazardous Symbols:** XI

**Risk Phrases:** R 36/37/38 Irritating to eyes, respiratory system and skin.

**Safety Phrases:** S 24/25 Avoid contact with skin and eyes.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

S 28A After contact with skin, wash immediately with plenty of water.

**WGK (Water Danger/Protection)** CAS# 8048-52-0: No information available.

**Canada – DSL/NDSL** CAS#8048-52-0 is not listed on Canada’s DSL List.

**Canada – WHMIS** This product has a WHMIS classification D2B.

**CAS#8048-52-0** is not listed on Canada’s Ingredient Disclosure List.

**Exposure Limits**

16. DISCLAIMER INFORMATION:

**DISCLAIMER**

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