MATERIAL SAFETY DATA SHEET

Section 1 - Identification of Product

Product Name:  RP, SI, FS, HT, MG Series
Product Type:  Ethyl-2-Cyanoacrylate Ester
Molecular Formula:  C6H7NO2

HMIS RATINGS

Health:  2
Flammability:  2
Reactivity:  2

NFPA

Health:  2
Flame:  2
Reactivity:  2

Least:  0
Moderate:  2
Extreme:  4

Section 2 - Hazardous Ingredients

Exposure Limits (TWA)

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>Cas #</th>
<th>% Wt</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl-2-Cyanoacrylate</td>
<td>7085-85-0</td>
<td>86-99.9</td>
<td>0.2ppm (TWA)</td>
<td>N/A</td>
<td>0.3ppm (STEL)</td>
</tr>
</tbody>
</table>

Section 3 - Physical Data

Form:  Liquid
Color:  Water White/Straw Colored
Odor:  Sharp, irritating
Boiling Point:  >100°C
Vapor Pressure:  <0.5mm Hg
Specific Gravity @ 25°C:  1.1
VOC:  81.6%  (EPA METHOD 24)
Solubility in Water:  Immiscible in water
Flash Point:  >81°C

Section 4 - Fire & Explosion Hazard Data

Flash Point:  150 - 200°F (>81°C) (method TCC)
Extinguishing Media:  Carbon dioxide, foam, dry chemical, water spray
Special Fire Fighting Procedures: Wear self-contained breathing apparatus
Hazardous Products Formed by
Fire or Thermal Decomp: Irritating organic vapors may be formed
Unusual Fire or Explosion Hazards: No applicable information found
Explosive Limits:
(% by volume in air) Lower Not available
(% by volume in air) Upper Not available

Section 5 - Health Hazard Data

Primary Route(s) of Entry: None known
Toxicity:
Skin contact may cause burns
Bonds skin rapidly
Skin and eye irritant
Estimated oral LD 50 more than 5,000 mg/kg
Estimated dermal LD 50 more than 2,000 mg/kg

Symptoms of Exposure:
Vapors is irritating to mucous membranes when above TLV.
Prolonged and repeated overexposure to vapors may produce allergic reactions with asthma like symptoms in sensitive individuals.

Existing conditions aggravated by exposure: None known

Ethyl Cyanoacrylate is not listed as a carcinogen in the US National Toxicology Program Annual report on carcinogens, or by the International Agency for Research on Cancer.

Target Organs and Other Health Effects:

<table>
<thead>
<tr>
<th>Carcinogens</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Cyanoacrylate:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly (methyl methacrylate):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>Allergen, irritant, respiratory</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Irritant</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>ACGIH animal carcinogen, blood</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Bone marrow, central nervous system, eye, immune system, irritant, liver, skin, mutagen, thyroid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

First Aid Measures and Personal Protection:
Ingestion: Ingestion is not likely due to polymerization.
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.
Skin Contact: Soak in warm soapy water.
Eye Contact: Flush with water. Seek medical attention.
Personal Protection: Chemical safety glasses or goggles
Eye: Polyethylene gloves and/or aprons. DO NOT use cotton/cloth type gloves.
Ventilation: Positive draft exhaust ventilation should be provided to maintain vapor concentration levels below TLV.

Supplement:

Skin Adhesion: First immerse the bonded surface in warm soapy water. Peel or roll the surface apart with the aid of a blunt edge such as a pencil, spoon handle, etc. Do this gradually in a gentle fashion, with care not to be too forceful. Then remove the adhesive from the skin with soap and water. DO NOT try to pull surface apart with a direct opposing action.

Eyelid to Eyelid or Eyeball Adhesion: In the event that eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. The eye will open without further action, typically in one to four days. There will be no residual damage. Do not try to open eyes by manipulation. Let the natural cleansing action of the eye take place.

Adhesive on the Eyeball: Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will disassociate from it over intermittent periods, generally covering several hours. This will cause periods of tearing until clearance is achieved. The adhesive residue will flush out of the eye normally in a matter of hours.

Mouth: If lips are accidentally stuck together, apply lots of warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll the lips apart. Do not try to pull the lips apart with a direct opposing action. It is almost impossible to swallow cyanoacrylate. The adhesive solidifies and adheres in the mouth. Saliva will lift the adhesive in 12 to 48 hours.

Burns: Cyanoacrylates give off heat on solidification. In rare cases a large amount will increase in temperature enough to cause a burn. Should this occur treat using normal medical procedures.

### Section 6 - Reactivity Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Incompatibility</td>
<td>Polymerized by contact with water, bases, amines</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Will not occur</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### Section 7 - Spill or Leak Procedures

If a spill or leak occurs, ventilate area of spill. Flood area with water to polymerize (cure) the material. Absorb with sand/earth and dispose to chemical waste bin. Dispose in accordance with pertinent national legislation.

Disposal:

- Incinerate following EPA and local regulations.
- EPA Hazardous Waste Number: NH – Not a RCRA Hazardous Waste Material
Section 8 - Special Protection Information

Note: See Section 5 for emergency procedures and additional first aid information. (See Section 2 for exposure limit information.)

Eyes: Chemical safety glasses or goggles suitable for use with chemicals.

Skin: Coveralls, Nitrile/Polyethylene gloves and aprons. DO NOT use cotton or cloth materials.

Ventilation: Good general or local exhaust ventilation is required for ventilation.

Respiratory: Always use appropriate filter mask/respirator.

Section 9 – Special Precautions

Precautions to be taken in handling and storing: When using large volumes ensure that operational area is well ventilated.

Store between 5-25°C; avoid strong light and heat sources. Incompatible with amine, bases, water. Avoid skin contact and inhalation of vapor.

Cyanoacrylates must be disposed of in accordance with all national and local regulations.

Section 10 - Regulatory Information

CA Proposition 65: No Prop 65 Chemicals known to be present

DOT (49CFR 172)
Domestic Ground Transport
Proper Shipping Name: Unrestricted
Hazard Class: Not Regulated

IATA
Proper Shipping Name: Unrestricted
Class or Division: Unrestricted
UN or ID Number: None

Not considered hazardous for the purpose of transportation.

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