MATERIAL SAFETY DATA SHEET
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PRODUCT IDENTIFICATION
Product Name: Prefere 148001, Liquid Phenol Formaldehyde Resin
Chemical Name: Phenol-Formaldehyde Polymer.
CAS Number: 9003-35-4
NFPA Classification: Health: 1; Flammability: 1; Instability: 0

HAZARDOUS COMPONENTS
Formaldehyde, CAS No. 50-00-0, <0.10% by weight as free formaldehyde.
Exposure Limits: OSHA; 0.75 ppm 8 hour TWA, 2.0 ppm STEL. ACGIH; 0.3 ppm Ceiling.
Toxicity: skn-rbt LD$_{50}$: 270 mg/kg; orl-rbt DL$_{50}$: 100 mg/kg; inh-rat LC$_{50}$: 200 mg/m$^3$/4h
Warning: Formaldehyde is classified as an IARC Group I Human carcinogen (nose and pharynx) and a
tential human carcinogen by NTP and OSHA. It is irritating and potentially harmful to the eyes, skin,
and respiratory system and may cause skin allergies to sensitive individuals.

EMERGENCY OVERVIEW
Pale red-brown to maroon liquid with faint aromatic odor. Dangerous if ingested. May cause irritant
dermatitis to skin. Can cause irritation to eyes. Do not store near strong acids or alkalies. Formaldehyde
is classified as an IARC Group I Human carcinogen (nose and pharynx) and a potential human carcinogen
by NTP and OSHA.

HAZARDS IDENTIFICATION
Exposure Effects
Eyes: may cause irritation.
Inhalation: may cause mild irritation to mucous membranes, upper respiratory tract and lungs.
Ingestion: Dangerous if ingested. Causes irritation to mouth, esophagus, stomach, and other contacted
tissues.
Skin: may cause dermatitis.

FIRST AID
Treat as an emergency - never give anything to an unconscious person.
Eyes: irrigate with a gentle stream of water, for at least fifteen minutes. Secure medical attention.
Inhalation: remove patient to fresh air, keep warm and quiet. Use oxygen if required. Secure medical
attention.
Ingestion: do NOT induce vomiting. Wash mouth. If conscious administer 8 oz (240 ml) of milk or
water. Secure medical attention immediately. If vomiting occurs, administer fluids above again. If
unconscious or in convulsions, secure transportation to a hospital immediately
Skin: remove contaminated clothing, flush contaminated skin with water and wash with mild soap.

FIRE FIGHTING
Fire Fighting Procedure: use water spray, dry chemical, foam, or CO$_2$. Use water spray to cool
containers. Keep product out of sewers and public waters.
Special equipment required: wear full protective clothing and NIOSH or National Standard CAN/CSA
94.4 – 93 approved self-contained breathing apparatus.
Hazardous combustion products: may be formaldehyde and oxides of carbon, nitrogen, sodium, and
potassium.
ACCIDENTAL RELEASE PROCEDURES
Large spills or leaks should be confined by diking so as to prevent entry into natural waters. Minimal quantities of water should be used to wash spilled materials to waste storage or sumps. Recovered material may be recycled after proper adjustment in product use. Spilled material may be recovered with sorbent material. Dispose of sorbents in compliance with all Federal, Provincial, State and local regulations. Check the pH of the waste to verify that it is NOT a RCRA hazardous waste.

HANDLING AND STORAGE
Store in cool place. Rotate stock to use oldest first. Do not store near strong acids. Avoid contact with magnesium, aluminum, zinc (galvanized), tin, chromium, brass and bronze. Contact with these materials may generate hydrogen, which is explosive.

EXPOSURE CONTROLS AND PERSONAL PROTECTION
Respiratory protection: exposure should be minimized by engineering or administrative controls so as to prevent overexposure. In the absence of suitable controls and/or if overexposure may occur, wear a NIOSH or National Standard CAN/CSA 94.4 – 93 approved respirator suitable for formaldehyde. Eyes: chemical safety goggles are recommended. Skin: avoid repeated or prolonged skin contact. Wash hands and face with soap and water prior to eating or drinking. Wear chemical resistant gloves such as rubber of neoprene if handling in open containers.

PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Amber to maroon or brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint Formaldehyde or phenolic</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH</td>
<td>8.0 – 12.5</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>~ 100°C (212°F)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>0°C (32°F)</td>
</tr>
<tr>
<td>Evaporation Rate: water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Coefficient of oil/water distr.:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 200°F</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Volatile Wt%</td>
<td>40 - 65%</td>
</tr>
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STABILITY AND REACTIVITY
Exposure to elevated temperatures or strong acids will cause rapid, but non-explosive, polymerization with evolution of formaldehyde and water.

TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Not TDG Regulated</td>
</tr>
<tr>
<td>USA</td>
<td>&lt;100,000 lbs – Not regulated</td>
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REGULATORY INFORMATION
SARA Title III
Section 304 emergency notification substances contained: none. Section 311/312 hazard categories: acute hazard, chronic hazard. Section 313 emissions reporting: none

Canadian WHMIS Classification: D2A, D2B
WHMIS Label Code: 134
Prepared by Arclin, HSE Group, Telephone: 905-712-0900