Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: Liquid Phenol Formaldehyde Resin Solution
Company Name: Kennal Chemical Co.,Lt d.
Chemical Name: Phenol-Formaldehyde Polymer.
CAS Number: 9003-35-4
NFPA Classification: Health: 1; Flammability: 1; Instability: 0

2. HAZARDOUS COMPONENTS

Formaldehyde, CAS No.50-00-0,0.2-≤1.00% by weight as free formaldehyde.
Exposure Limits: OSHA 0.75ppm 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}:200mg/m^3/4h
Warning: Formaldehyde is classified as an IARC Group I Human carcinogen (nose and pharynx) and a potential 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 that may emit hydrogen cyanide when burned. May cause irritant dermatitis to skin. Can cause severe irritation to eyes and temporary corneal abrasion. 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.

3. HAZARDS IDENTIFICATION

Exposure Effects
Eyes: may cause severe irritation and temporary comeal abrasion
Inhalation: may cause mild irritation to mucous membranes and irritation of the upper respiratory tract.
Ingestion: Causes irritation to mouth,esophagus, stomach,and other contatd tissues.
Skin: may cause dermatitis.

4. FIRST AID MEASURES

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.

5. FIRE FIGHTING MEASURES

Fire Fighting Procedure: use water spray, dry chemical, foam, or CO2 Use water spray to cool containers. Keep product out of sewers and public waters.

Special equipment required: wear full protective clothing and NIOSH approved self-contained breathing apparatus.

Hazardous combustion products: may be oxides of carbon, nitrogen, sodium and potassium; formaldehyde, and hydrogen cyanide.

6. ACCIDENTAL RELEASE PROCEDURES

Large spills or leads should be confined by diking so as to prevent entry into natural waters. Minimal quantities of water should be used to wash spiled materials to waste storage or sumps. Recovered material may be recycled after proper adjustment in product use. Spillde material may be recoverde with sorbent material. Dispose of sorbents in compliance with all Federal, Provincial, State and local regulations. Check pH of the waste to verify that it is NOT a RCRA hazardous waste.

7. 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.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiatory 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/MSHA or National Standard CAN/CSA94.4-93 approved respirator suitable for formaldehyde.

Eyes: chemical safety goggles are recommended.

Skin: avoid repeated or prologed skin contact. Wash hands and face with soap and water prior to eating or drinking. Wear rubber gloves if handling in open containers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber to maroon	Odor: faint Formaldehyde	Physical Stale: Liquid
pH.8.7-11.5	Vapor Pressure: Not available	Vapor Density: Not available
Boiling Point:～100℃(212^{0}F)	Freezing Point: 0℃(32^{0}F)	Specific Gravity:1.1-1.3
Evaporation Rate: of water	Coefficient: of oil/water Distr: Not applicable	Flash Point: ＞200^{0}F
Odor Threshold: Not available	Volatile Wt^{0}F%:40-65%	

10. STABILITY AND REACTIVITY

Exposure to elevated temperature or strong acids will be cause rapid, but non-explosive, polmerization with evolution of formaldehyde and water.

11. TOXICOLOGICAL INFORMATION

Formaldehyde may cause temporary irritation to eyes, nose, and throat. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and the preexisting respiratory disorders may be aggravated by exposure. Formaldehyde is listed by IARC as a probable human carcinogen. The NTP includes formaldehyde in the Annual Report on Carcinogens. Formaldehyde is regulated by OSHA as a potential cancer agent. In studies involving rats, formaldehyde has been shown to cause nasal cancer after long-term exposure to very high concentrations (14+ ppm), far above those normally found in the workplace using this product. The National Cancer Institute (NCI) conducted an epidemiological study of industrial workers exposed to formaldehyde (published June 1986). The NCI concluded that the data provides little evidence that mortality from cancer is associated with formaldehyde exposure at the levels experienced by workers in the study. Polyurethane film is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

12. ECOLOGICAL INFORMATION

Information obtained from component material safety data sheet and is based on similar materials. Data has not been verified.
Ecotoxicity: Material is moderately toxic to fish and aquatic invertebrates on an acute basis. LC50 1-10 mg/l
Mobility: No information available in sources utilized.
Persistence and Degradability: Based on test results, not considered readily biodegradable.
Bioaccumulation Potential: No information available in sources utilized.

13. DISPOSAL CONSIDERATIONS

GENERAL: Follow all applicable local, national, provincial, territorial, and international regulations. As supplied, this material is not regulated as a hazardous waste under the US EPA Resource Conservation and Recovery Act (RCRA). Refer to the European Waste Catalog (EWC) for appropriate waste code(s).

14. TRANSPORT INFORMATION

ADR Class: Not dangerous according to ADR / RID / IMDG / IATA.
Road / railway (adr/rid): Not dangerous
Airway: Not dangerous
Seaway: Not dangerous

15. REGULATORY INFORMATION

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the components of this product are listed on the Canadian Domestic Substances List (DSL) or are exempt from listing.
EPA TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS: All of the components of this product are listed on the TSCA inventory or are exempt from listing.
EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the components of this product are listed on the EINECS inventory, are no longer polymers (NLP), or are polymer exempt.

16. OTHER INFORMATION

This fact sheet is for products that have not been used.

MSDS Status: Updated to new format.

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Current Issue: 11/02/10

Previous Issue: 11/22/08