

4/1/81

NFCA 1-72

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor. Essentially similar to form OSHA 201)

DATE OF PREP 9/27/79

PLAINTIFF'S EXHIBIT

BIR-842

Section I

MANUFACTURER'S NAME Reichhold Chemicals, Inc.

STREET ADDRESS 525 No. Broadway

CITY, STATE AND ZIP CODE White Plains, New York 10603

EMERGENCY TELEPHONE NO 914/682-5700

PRODUCT CLASS Modified Urea-Formaldehyde Resin MANUFACTURER'S CODE IDENTIFICATION 21-133

TRADE NAME WETstrez

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		ppm	mg/m ³		
Formaldehyde, Maximum	2	2			
Note: With respect to formaldehyde, the 1976 "Registry of Toxic Effects of Chemical Substances" gives the OSHA standards as 3 ppm, TWA in air, with a ceiling of 5 ppm. The oral LD ₅₀ figures range from 260 - 800 mg/kg body weight while the LD ₅₀ via inhalation ranges from 250 - 900 mg/kg.					

Section III - PHYSICAL DATA

BOILING RANGE 200-215°F

VAPOR DENSITY

☒ HEAVIER☐ LIGHTER THAN AIREVAPORATION RATE ☐ FASTER ☒ SLOWER THAN WATER

PERCENT VOLATILE

44 - 46

WEIGHT PER GALLON

10.2 - 10.5 Lbs.

Section IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY N.A. - Nonflammable
Aqueous Solution

FLASH POINT None

EXTINGUISHING MEDIA

This essentially aqueous resin solution is not combustible. If evaporated to dryness, the resin solids may be ignited, in which case water is a suitable extinguishing agent.

UNUSUAL FIRE AND EXPLOSION HAZARDS

None known.

SPECIAL FIRE FIGHTING PROCEDURES

When exposed to heat, this resin may evolve formaldehyde fumes. Fire fighters should wear self contained breathing apparatus to avoid inhalation of vapors.

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Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

See attached Section V Supplement "Formaldehyde 777."

EMERGENCY AND FIRST AID PROCEDURES

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE

CONDITIONS TO AVOID

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS See attached Section VI Supplement No. VI A-175.

HAZARDOUS POLYMERIZATION ☒ MAY OCCUR ☐ WILL NOT OCCUR

CONDITIONS TO AVOID

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

See attached Section VII Supplement No. VII A-275.

WASTE DISPOSAL METHOD

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

See attached Section VIII Supplement No. VIII A-175.

VENTILATION

PROTECTIVE GLOVES

EYE PROTECTION

OTHER PROTECTIVE EQUIPMENT

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

Protect from exposure to above ambient storage temperature to assure normal storage life. Avoid contamination with strong acids as such will initiate premature gelation. Avoid physical contact.

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Section V Supplement:- Formaldehyde 777

The 1976 "Registry of Toxic Effects of Chemical Substances" (HEW - NIOSH) states that the lowest reported oral dose of formaldehyde (100% basis) to result in human fatality is 36 mg/kg of body weight. The lowest toxic (not lethal) concentration in air (breathing) is similarly reported to be 13.8 ppm. The LD₅₀ oral dose when tested on rats is 800 mg/kg. The 1974 USOS for formaldehyde is listed as 3 ppm TWA with a ceiling concentration of 5 ppm. The recommended threshold limit value for formaldehyde is stated to be 2 ppm or 3 mg/M³ (ACGIH, 1974 list).

Formaldehyde is highly irritating to the eyes, resulting in weeping and reddening. It is also highly irritating to the respiratory tract causing loss of breath, a burning sensation and coughing or, in extreme cases, bronchitis and/or laryngitis. Extensive contact with the skin will result in redness, dryness, cracking and, in sensitive people, dermatitis. Ingestion causes severe burning to the mucous membrane, nausea and dizziness.

In case of body contact, remove contaminated clothing and wash with water and, if available, a mild soap.

Eyes should be flushed with a gentle stream of water, as from an eye fountain, for fifteen (15) minutes.

For inhalation, remove patient to fresh air and keep warm and quiet.

For ingestion, give milk or 1% ammonium acetate solution and induce vomiting. Syrup of ipecac, USP, is the preferred emetic (2 - 3 teaspoons for an adult, repeated once only if indicated).

In all cases of overexposure, immediately secure medical attention.

For a more detailed discussion, see Chemical Safety Data Sheet SD-1 on "Formaldehyde," available from:

Manufacturing Chemists' Association, Inc.
1825 Connecticut Avenue, N. W.
Washington, D. C. 20009

Section VI Supplement
No. VI A-175

This resin is reasonably stable under normal storage conditions. Since it is designed to cure or harden, it is obvious that it is reactive under certain conditions. Thermal polymerization alone is generally too slow to be hazardous.

Normal, acid-catalyzed (acids or materials that liberate acid in the presence of formaldehyde) polymerization of this resin is vigorous but not necessarily hazardous.

Uncontrolled and possibly hazardous polymerization may result from the combination of acid catalyst and elevated temperatures depending on the amount of resin involved. Heat resulting from uncontrolled polymerization in closed or inadequately vented containers may generate sufficient vapor pressure to cause hazardous rupture of the drum or tank. This type of polymerization frequently generates large volumes of resin foam which may plug or block otherwise adequate vent lines or openings as the foam hardens.

Polymerization of this resin frequently results in evolution of formaldehyde fumes. See Sections V and VIII.

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Section VII Supplement
No. VII A-275

Small amounts of this resin may be washed up with water or the resin may be adsorbed on sawdust or the like and then burned.

Major spills should, if possible, be diked and reclaimed or pumped to a waste pond.

Large quantities of this resin can best be disposed of by incineration in an incinerator designed for aqueous wastes. Adequately diluted, the resin is biodegradable by acclimated organisms. If it is possible to mix the waste or spilled resin with an acid, the resin may be hardened and then buried or burned.

Refer to Section II for maximum concentration of hazardous materials present in this resin. Cleanup personnel may need be provided gas masks to protect against solvent vapors and/or formaldehyde fumes.

Section VIII Supplement
No. VIII A-175

Under normal conditions of use this resin does not present any unusual hazards. If, however, large volumes of resin are being handled in open containers, or if the resin is hot or is being handled in an enclosed location, certain precautions are recommended to protect personnel against possible exposure to methanol and/or formaldehyde fumes. See Section V for information as to which material is or may be present. Section II will indicate the maximum possible concentration of such materials as an indication of the degree or extent of hazard involved.

Under the working conditions described above, personnel handling the resin may need be provided canister-type gas masks approved for organic vapors. Extreme conditions may dictate need for some type of self-contained breathing apparatus.

Induced-draft or blower-type mechanical ventilation may substitute for personal respiratory protective devices. This will depend entirely where and how the resin is used or handled.

If a free-formaldehyde content is indicated, personnel handling this resin should be provided rubber or plastic gloves. Chemical-type safety goggles and rubber or plastic aprons may also be indicated. Physical contact with this resin should be avoided since many workers have or develop allergic sensitivity to formaldehyde on repeated physical contact.