MATERIAL SAFETY DATA SHEET

Date: August 22, 2001

IDENTITY (AS USED ON LABEL AND LIST)

EPOXY RESIN

SECTION I

MANUFACTURER'S NAME:

Color-Crown Corporation
928 Sligh Ave.
Seffner, FL 33584

EMERGENCY TELEPHONE NUMBER
Chemtrec (800) 424-9300
TELEPHONE NUMBER FOR INFORMATION
(8130 655-4880

SECTION II HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance & Odor: Light yellow liquid.
Health Hazards: May be harmful if absorbed through the skin. Causes skin irritation. May cause allergic skin reaction.

HEALTH EFFECTS

Inhalation: Not expected to be a relevant route of exposure. Irritating to respiratory system.

Eye Contact: May cause temporary discomfort or irritation to the eye.

Skin Contact: Irritating to the skin causing a burning sensation, redness and/or swelling. Slightly toxic and may be harmful if absorbed through the skin. Repeated skin contact may result in an allergic skin reaction causing itching, burning, redness and swelling. Prolonged or repeated skin contact can cause defatting and drying of the skin which may result in a burning sensation and a dried, cracked appearance.

Ingestion: Not expected to be relevant route of exposure.

SECTION III FIRST AID MEASURES

Inhalation: Move victim to fresh air. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Eye: Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persist, consult a physician.

Skin: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. Flush with large amounts of water for at least 15 minutes, by the clock, and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Ingestion: DO NOT induce vomiting. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

SECTION IV FIRE FIGHTING MEASURES

Flash point: >200ºF / > 93.33ºC

Extinguishing Media: Use water fog, "alcohol foam", dry chemical or carbon dioxide (CO2) to extinguish flames.

Fire Fighting Instructions: Material will not burn unless preheated. Clear fire area of all non-emergency personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure. NIOSH approved, self-contained breathing apparatus. Cool surrounding equipment, fire exposed containers and structures with water. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

SECTION V ACCIDENTAL RELEASE MEASURES

May burn although not readily ignitable.

Protective Measures: Wear appropriate personal protective equipment (refer to Section 8) when responding to spills.

Spill Management: Use cautious judgment when cleaning up large spills. Shut off source of leak if safe to do so. Dike and contain spill. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue. Contain run-off from residue flush and dispose of properly. Place in container for proper disposal. Prevent entry into waterways, sewer, basements or confined areas. For small spills: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Disposal: Proper disposal should be evaluated based on regulatory status of this material (refer to Section 13), potential contamination from subsequent use and spillage, and regulations governing disposal in local area.

Reporting: Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

SECTION VI HANDLING AND STORAGE

Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated contact with eyes, skin and clothing. Wash thoroughly after handling.

Handling: Heating this resin above 300º F in the presence of air may cause slow oxidative decomposition; above 500º F, polymerization may occur. Some curing agents, e.g., aliphatic polyamines, can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Surfaces that are sufficiently hot may ignite liquid material. This resin may be handled, shipped and stored at elevated temperature in bulk. The recommended pumping temperature is 180ºF.

Keep away from heat, sparks and flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors have dissipated. Use explosion-proof ventilation to prevent vapor accumulation while in use. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. Keep containers closed when not in use. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Storage: Keep containers closed when not in use.

Do not pressurize drum containers to empty. Avoid contact with hot liquid to prevent thermal burns. Containers, even those that have been emptied, can contain hazardous residues.

SECTION VII EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.
Appropriate measures include:
Adequate ventilation to control airborne concentrations. Eye washes and showers for emergency use.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

Eye Protection: Chemical goggles, if liquid contact is likely, or Safety glasses.

Skin Protection: Use protective clothing which is chemical resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection (s) should take into account such factors as job task, type of exposure and durability requirements.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include
Air-Purifying Respirator for Organic Vapors, Supplied-Air Respirator

SECTION VIII PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Light yellow liquid.

Flash Point	>200ºF (Setaflash Closed Cup)	**Solubility (in Water)**	Slight
Specific Gravity	1.1	**Stability**	Stable
Vapor Density (Air=1)	>1	Vapor Pressure	<1

The information contained herein is believed to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

Stability: Material is stable under normal conditions.

Conditions to Avoid: Avoid high temperatures. Avoid heat and open flames

Materials to Avoid: Can react vigorously with strong oxidizing agents, strong Lewis or mineral acids, and strong mineral and organic bases, especially primary and secondary aliphatic amines. Reaction with some curing agents may produce considerable heat and possible violent decomposition.

SECTION X TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material Tested	Effects	Test Results
Alkyl (C12-C14) Glycidyl Ether	Dermal – LD50	> ml/kg (Rabbit)
Alkyl (C12-C14) Glycidyl Ether	Oral – LD50	19.2 ml/kg (Rat)

Eye Irritation: Mild irritation (Rabbit) Material Tested – Alkyl (C12-C14) Glycidyl Ether

Skin Irritation: Draize – 3.4-5.7 (Rabbit 24 hour(s)) Material Tested – Alkyl (C12-C14) Glycidyl Ether

Carcinogenicity: Recent 2 year bioassays in rats and mice exposed by the dermal route to the diglycidyl ether of bisphenol A (BADGE) yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. Note: BADGE is a component in all BPA/ECH based liquid epoxy resins.

The International Agency for Research on Cancer (IARC) concluded that digylcidyl ether of bis-phenol A is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate. This product contains trace residual quantities of epichlorohydrin (ECH), CAS no. 106-89.8. It is very unlikely that normal work practices with this product could result in measurable ECH concentrations in this workplace atmosphere. Nevertheless, you should be aware the ECH has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been classified by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (IARC Group 2A) based on the following conclusions: Human evidence – inadequate; animal evidence – sufficient. ECH has been classified as an anticipated human carcinogen by the National Toxicology Program (NTP).

CARCINOGENICITY CLASSIFICATION

Chemical Name	NTP	IARC	ACGIH	OSHA Table Z
BADGE Resin		Group 3- Not Classifiable		

Mutagenicity: Resins of this type, liquid resins based on diglycidyl ether of bisphenol A, have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. A component of this material has been reported to show negative results in in vivo mutagenicity testing. A component of this material has been reported to show positive results in in vitro mutagenicity testing. The significance of these tests to man is unknown.

Component 2 has been reported to show negative results in in vivo mutagenicity testing. Component 2 has also been reported to show positive results in in vitro mutagenicity testing.

SECTION XI ENVIRONMENTAL FATE AND EFFECTS

This section will be updated as ecological reviews are completed.

SECTION XII DISPOSAL CONSIDERATIONS

General Recommendations: If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

SECTION XIII TRANSPORT INFORMATION

US Department of Transportation Classification: This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Internation Air Transportation Association Classification: This material is not classified as hazardous under IATA regulations.

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International Maritime Organization: This material is not classified as hazardous under IMO regulations.

SECTION XIV REGULATORY INFORMATION

The regulatory information provided is not intended to be comprehensive. Other federal, state and local regulations may apply to this material

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Federal Regulatory Status

Superfund Amendment & Reauthorization Act (SARA) Title III:

SARA Hazard Categories (311/312):
Immediate (Acute) Health Hazard. Delayed (Chronic) Health Hazard.

Toxic Substances Control Act (TSCA) Inventory Status:
Component(s) of this material is (are) listed on the EPA TSCA Inventory of Chemical Substances.

State Regulatory Status

The following chemicals are specifically listed by individual state; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

Epichlorohydrin (106-89-8)	<2 ppm (m)	CA_65 C/R
Phenyl glycidyl ether (122-60-1)	<5 ppm (m)	CA_65 C

CA_65 C= The chemical identified with this code is known to the State of California to cause cancer.
CA_65 C/R= The chemical identified with this code is known to the state of California to cause both cancer and birth defects or other reproductive harm.

SECTION XV OTHER INFORMATION

Product Codes: K144A

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