

# M a t e r i a l   S a f e t y   D a t a   S h e e t

A. B. Chance Company  
210 N. Allen Street  
Centralia, Missouri 65240

**Product:** UPLIFT BRACKET KIT -  
PART A  
**Internal ID:** C-150-0227

**MSDS No:** ABC / C65  
**Revision:** 1  
**Date:** August 25, 1994

National Paint  
and Coatings  
Association  
  
Hazardous Material  
Identification  
System

HEALTH HAZARD	2*
FLAMMABILITY HAZARD	1 - Slight
REACTIVITY HAZARD	1 - Slight
PERSONAL PROTECTION	B - Glasses, Gloves

## SECTION I. MATERIAL IDENTIFICATION

**Trade/Material Name:** UPLIFT BRACKET KIT - PART A

**Description:** Epichlorohydrin/bisphenol A type diepoxide resin with an epoxy equivalent weight of about 175-195, plus ca. 2% additives for foam and viscosity control.

**Chemical Name:** Diglycidyl Ether of Bisphenol A (DGEBPA)

\* For acute and chronic health effects refer to the discussion in Section VI.

**Manufacturer:** A. B. CHANCE COMPANY  
210 N. ALLEN  
CENTRALIA, MO. 65240

**Phone:** EMERGENCY RESPONSE:  
573-682-8727  
**MSDS COPIES:** 573-682-8543

## SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	CAS Number:	Percent:	Exposure Limits:
Liquid epichlorohydrin/bisphenol A-type diepoxide*	25068-38-6	ca 98	ACUTE ORAL LD50: 11.4 G/KG (RAT) 15.6 G/KG (MOUSE). ACUTE DERMAL LD50: >20 ML/KG (RABBIT). ACUTE INHALATION LC50: NO DEATHS IN SAT'D AIR, 8 HR.**
Foam Control Additive Blend		ca 1	
Viscosity Control Additive Blend		ca 1	

\*THIS PRODUCT IS AN EPOXY RESIN PRODUCED BY THE CONDENSATION REACTION OF EPICHLOROHYDRIN AND BISPHENOL-A. THESE RAW MATERIALS ARE CONSUMED IN THE PROCESS. RESIDUAL LEVELS OF EPICHLOROHYDRIN ARE CONTROLLED TO 1 PPM, MAX., IN THE PRODUCT.

\*\* THIS INHALATION TEST MAY NOT BE RELEVANT DUE TO LOW VOLATILITY OF THE RESIN.

## Material Safety Data Sheet

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### SECTION III. PHYSICAL DATA

**Appearance & Odor:** Clear, colorless to pale yellow liquid; slight odor.

**Boiling point:** >500° F  
**Vapor pressure:** 0.03 mm Hg at 77°C  
**Water solubility (%):** Negligible  
**Specific gravity (H<sub>2</sub>O=1):** 1.17

### SECTION IV. FIRE AND EXPLOSION DATA

**Flash Point (method):** 480°F (FMCC).

**Extinguishing Media:** CO<sub>2</sub>, dry chemical, foam, or water spray. Use water spray, if leak or spill has not ignited, to cool fire-exposed containers, disperse vapors, flush spills away from exposures, and to protect workers.

**Unusual fire or explosion hazards:** In a fire, this material can produce toxic smoke and vapors, including carbon monoxide.

**Special fire-fighting procedures:** Material will not burn unless preheated. Do not enter 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 fire exposed containers with water.

### SECTION V. REACTIVITY DATA

Material is stable under dry, room temperature storage conditions. Hazardous polymerization will not occur under normal room temperature storage conditions.

**Chemical incompatibilities:** 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. Run-a-way cure reactions may char and decompose the resin system, generating unidentified fumes and vapors which may be toxic. See Section IX.

**Conditions to avoid:** Excessive heating over long periods of time degrades the resin. Avoid strong acids and bases in bulk.

**Hazardous decomposition Products:** Thermal-oxidative decomposition may yield toxic vapors and gases, including carbon monoxide, carbon dioxide, aldehydes, and acids from incomplete combustion.

(Shelf life exceeds one year). It slowly increases in viscosity when heated above 100° C. It can undergo hazardous polymerization; for example, when mixed with certain curing agents, such as ethylene diamines, it can polymerize exothermally, even without additional heating.

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### SECTION VI. HEALTH HAZARD INFORMATION

This product is not considered a human carcinogen by IARC

**Summary of risks:** This material is low in acute toxicity as indicated by animal studies (see Sect. II). It is a primary skin irritant (moderate) and will cause dermatitis upon prolonged or repeated skin contact. Some susceptible individuals may become sensitized after repeated or prolonged contact and thereafter exhibit an allergic response. Inhalation exposure can become important if the resin is heated or misted or if a sensitized person is involved. Ingestion hazard is not great for industrial use.

#### Signs & symptoms of overexposure:

**Eye contact:** Product is moderately irritating to the eyes. Contact with product at elevated temperatures can result in thermal burns. Preexisting eye disorders may be aggravated by exposure to this product.

**Skin contact:** Product is moderately irritating to the skin, may cause skin sensitization. Contact with product at elevated temperatures can result in thermal burns. Skin sensitization (allergy) may be evidenced by rashes, especially hives. Preexisting skin disorders may be aggravated by exposure to this product. Preexisting skin allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

**Inhalation:** Because of its low volatility this product is not likely to be an inhalation hazard. Preexisting lung allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

**Ingestion:** Product is considered to have a low order of acute oral toxicity.

#### First aid:

**Eye contact:** Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention. If contact with hot product occurs immediately flush with cool water for 15 minutes. Get medical attention immediately.

**Skin contact:** Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent

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### HEALTH HAZARD INFORMATION continued from page 3

reuse. If contact with hot product occurs immediately flush with cool water for 15 minutes. Carefully remove clothing; if clothing is stuck cut around it. Get medical attention.

**Inhalation:** Remove to fresh air. Give oxygen if breathing is difficult. Consult a physician.

**Ingestion:** Do not induce vomiting. Get medical attention.\*

\*NOTE TO PHYSICIAN: In general, emesis induction is unnecessary in high viscosity, low volatility products, e.g., NEAT epoxy resins.

**CHRONIC STUDIES:** Recent 2-year bioassays in mice exposed by the dermal route to DGEBA, has yielded very limited evidence of weak carcinogenicity. DGEBA "was of no biological significance" and the resin "is not a systemic carcinogen when applied to the dorsal skin of CF1 mice." Based on this and other available information, The IARC concluded (1989) that DGEBA was not classifiable as a carcinogen (IARC GROUP 3) based on: Human and Animal Evidence-Inadequate.

**MUTAGENICITY:** Both Epon Resin 828 and DGEBA, have proved to be inactive when tested by In Vivo mutagenicity assays. They have shown activity by In Vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of this to man is unknown.

### SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

**Spill / Leak procedures:** May burn although not readily ignitable. Clean-up personnel must avoid skin contact as they scrape up spilled material for disposal. Use an absorbent material such as sawdust, sand, vermiculate, to help remove the last traces and avoid buildup of resin on floors. Flush spill site with water. Prevent residue from entering waterways. If a solvent is used for cleaning, take proper precautions against a fire and personal over-exposure.

**Waste management / Disposal:** Scrap material can be incinerated or buried in an approved landfill [mixing small amounts with curing agent and heating (caution!) to produce an inert solid is recommended for landfill disposal]. Follow Federal, State and local regulations.

Not a hazardous waste under RCRA (40 CFR 261).

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### SECTION VIII. SPECIAL PROTECTION INFORMATION

#### Personal protective equipment:

**Goggles:** Use goggles or a face shield for eye protection.

**Gloves:** Provide rubber gloves for workers handling this material to avoid any skin contact.

**Respirator:** Wear NIOSH approved organic vapor or self-contained respirators where ventilation is inadequate and in confined areas.

**Other:** Rubber sleeves, aprons and other protective clothing should be used as conditions require. Approved barrier creams can sometimes provide added protection in conjunction with protective coverings and good practice.

#### Workplace considerations:

**Ventilation:** Provide general ventilation and/or local exhaust ventilation to keep airborne exposure low.

#### Safety stations:

Provide eyewash station and washing facilities.

### SECTION IX. SPECIAL PRECAUTIONS

**Storage segregation:** Store epoxy resin in a cool, clean area away from incompatibles (see Sect V). Keep away from open flames and high temperatures. Heating this resin above 300°F in the presence of air may cause slow oxidative decomposition. Above 500°F, polymerization may occur. In large masses, runaway polymerization may occur with charring of reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes.

**Engineering controls:** Containers, even those that have been emptied, can contain hazardous product residues. Handle in accordance with the hazard potential of curing agent(s) use.

**Other precautions:** Use good hygienic practice and workplace cleanliness with this material. Avoid skin contact to eliminate most hazards, including sensitization. Sensitized persons can have allergic response to very low levels in air. No smoking or eating in use area! Avoid breathing vapors that may result from the oven heating or curing of this material. Note that the curing agents and reactive diluents used with these epoxy resins frequently offer greater hazards and sensitization problems than do the epoxy resins themselves.

**CAUTION:** May cause irritation. Avoid contact with eyes. Avoid prolonged contact with skin. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

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SPECIAL PRECAUTIONS continued from page 5

DEPARTMENT OF TRANSPORTATION CLASSIFICATION: NOT HAZARDOUS BY D.O.T. REGULATIONS.

This product is listed on the EPA/TSCA inventory of chemical substances.

Protection of stratospheric ozone (pursuant to Section 611 of the clean air act amendments of 1990): Per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

In accordance with SARA TITLE III, Section 313, the attached ENVIRONMENTAL DATA SHEET (EDS) should always be copied and sent with the MSDS.

The following chemicals are specifically listed by individual States. For details on your regulatory requirements, contact the appropriate Agency in your State:

1. Diglycidyl ether, CAS NO. 2238-07-5, 2 PPM, Massachusetts Subst. List.
2. Phenyl glycidyl ether, CAS NO. 122-60-1, 6 PPM, California Safe Drinking Water and Toxics Enforcement Act List.

**DOT Class:** Not Regulated

**Prepared/revised by:** W. M. Rinehart, Chief Chemical Engineer  
573-682-8413

August 25, 1994

Judgements as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, A. B. Chance Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for the consequences of its use. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this MSDS. The ultimate compliance with Federal, State, or Local regulations concerning the use of this compound, or compliance with respect to products liability, rests solely upon the purchaser thereof.

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210 N. Allen Street  
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**Product:** UPLIFT BRACKET KIT -  
PART B  
**Internal ID:** C-150-0227

**MSDS No:** ABC / C66  
**Date:** April 13, 1994

National Paint and Coatings Association  Hazardous Material Identification System	HEALTH HAZARD	3 - Serious
	FLAMMABILITY HAZARD	1 - Slight
	REACTIVITY HAZARD	0 - Minimal
	PERSONAL PROTECTION	C - Glasses, Gloves, Apron

## SECTION I. MATERIAL IDENTIFICATION

**Trade/Material Name:** UPLIFT BRACKET KIT - PART B

**Description:** Curing agent blend for epoxy resins. Pale yellow liquid with ammonia like odor.

**CAS:** Mixture

**Chemical Name:** Polyoxyalkyleneamine plus a polyethylenepolyamine adduct.

**WARNING STATEMENT:**

Danger - Causes severe eye & skin burns & may cause blindness. Serious injury may result if swallowed. Serious injury may result if absorbed through skin. See Section VI.

**Manufacturer:** A. B. Chance Company  
210 N. Allen  
Centralia, Missouri 65240

**Phone:** EMERGENCY RESPONSE:  
573-682-8727  
MSDS COPIES: 573-682-8543.

## SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	CAS Number:	Percent:	Exposure Limits:
1. Polyoxyalkyleneamine	9046100	60 - 70	Med. Lethal Dose (LD <sub>50</sub> LC <sub>50</sub> ): Oral = 1.1 g/kg rat (mod.toxic); Inhl = pract.non-toxic; Dermal = 0.98 g/kg rabbit (modtox). Irrit. rabbit: Skin = 4.6/8.0 (corrosive) ; Eyes = 60.7/110 (extremely irritating)
2. Epoxy Resin/Amine Adduct.	98610-56-0	20 - 30	NO DATA AVAILABLE.
3. Diethylenetriamine (DETA).	111-40-0	4 - 10	Acute Oral LD <sub>50</sub> : 2.33 g/kg (rat);

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INGREDIENTS AND HAZARDS continued from page 1

4. Phenol.	108-95-2	<0.8	Acute Dermal LD <sub>50</sub> : 1.09 ml/kg (rabbit); Acute Inhalation LC <sub>50</sub> : >300 ppm/8 hr (rat). Acute Oral LD <sub>50</sub> : 530 mg/kg (rat); Acute Dermal LD <sub>50</sub> : 850 mg/kg (rabbit).
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Product is hazardous according to OSHA (1910.1200). Component(s) is hazardous according to OSHA or one or more State Right-To-Know laws.

**WARNING STATEMENT:**

**DANGER! CORROSIVE - CAUSES EYE AND SKIN BURNS. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT IRRITATION AND CAN CAUSE DAMAGE. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE.**

SEE SECTION VI FOR MORE INFORMATION.

SECTION III. PHYSICAL DATA

**Appearance & Odor:** Pale yellow liquid, ammoniacal odor.

<b>Boiling point:</b> >400°F	<b>Evaporation rate:</b> <1 (Bu Ac = 1)
<b>Vapor pressure:</b> <0.1 mm Hg @ 20 C.	<b>Specific gravity (H<sub>2</sub>O=1):</b> 1.01
<b>Water solubility (%):</b> PARTIAL	
<b>Vapor density (air=1):</b> >1.	
<b>pH:</b> >7.0	

SECTION IV. FIRE AND EXPLOSION DATA

**Flash Point (method):** >200°F (SETAFLASH)

**NFPA Flammable/Combustible Liquid Classification:** IIIB

**NFPA Fire Hazard Symbol Codes: Flammability:** 1 **Health:** 3 **Reactivity:** 0 **Special:**

**Extinguishing Media:** According to the National Fire Protection Association Guide, use water fog, dry chemical, "alcohol" foam, or carbon dioxide. Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

**Unusual fire or explosion hazards:** DETA AND PHENOL VAPORS MAY BE RELEASED UNDER FIRE



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FIRE AND EXPLOSION DATA continued from page 2

CONDITIONS AND NITROGEN OXIDES AND NITROGEN  
CONTAINING ORGANIC COMPOUNDS MAY BE PRODUCED UPON  
COMBUSTION.

**Special fire-fighting procedures:** MATERIAL WILL NOT BURN UNLESS PREHEATED. 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 FIRE EXPOSED CONTAINERS WITH WATER.

### SECTION V. REACTIVITY DATA

Material is stable Hazardous polymerization will not occur

**Chemical incompatibilities:** This material can react with strong oxidizing agents and Lewis or mineral acids. Do not mix large batches of epoxy resin and Part B without planning for development of exothermic heat. This material is strongly alkaline.

**Conditions to avoid:** Excessive heating over long periods of time degrades the resin.

**Hazardous decomposition Products:** Ammonia, combustion products of nitrogen, irritating aldehydes and ketones, carbon monoxide, and carbon dioxide may be formed on burning in limited air supply.

### SECTION VI. HEALTH HAZARD INFORMATION

**Summary of risks:** Primary amines are strongly alkaline. Contact can cause severe burns of the skin, eyes or other tissue. It is a primary irritant. Excessive inhalation of mist or vapor can irritate the respiratory tract and cause nausea and vomiting. Repeated minor skin contacts readily cause sensitization of the skin and subsequent allergic dermatitis.

#### Signs & symptoms of overexposure:

**Eye contact:** Product may be corrosive to the eyes and may cause severe damage including blindness. May cause temporary vision disturbance and permanent corneal injury.

**Skin contact:** Corrosive; expected to cause severe skin damage with burns and blistering. Toxic effects expected from absorption through the skin and may be fatal, even if moderate amounts are absorbed through the skin. May produce liver, kidney, and heart damage. May produce CNS depression; may produce respiratory arrest.

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HEALTH HAZARD INFORMATION continued from page 3

**Inhalation:** Vapors of mist, generated from heating or from poorly ventilated areas are irritating and cause nasal discharge, coughing, and discomfort in nose, throat, and chest. Severe overexposure may result in difficulty breathing, headache, nausea, vomiting, and drowsiness. Prolonged or repeated overexposure may result in lung damage. Extreme cases may be fatal. May produce liver, kidney and heart damage. May produce CNS depression.

**Ingestion:** Causes burning of mouth, throat, an stomach with abdominal an chest pain. Nausea, vomiting, diarrhea, thirst, weakness, and collapse. Aspiration may occur during swallowing or vomiting, resulting in lung damage. May produce liver, kidney and heart damage. May produce CNS depression or respiratory arrest.

### First aid:

**Eye contact:** IMMEDIATELY wash eyes in plenty of running water for 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Then get medical help promptly. Continue flushing with water for an additional 15 minutes if medical attention is not immediately available.

**Skin contact:** Remove contaminated clothing and shoes. Wipe excess from skin and wash exposed areas promptly with soap and water. Do not use solvents to clean skin. Get medical help for exposures of large areas of skin or for persistent irritation. Do not reuse clothing until thoroughly decontaminated. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

**Inhalation:** Remove to fresh air. Give oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

**Ingestion:** Contact physician at once. If conscious, promptly give 2 glasses of water. Never give anything by mouth to an unconscious person. Induce vomiting only on physician's instructions.

**NOTE TO PHYSICIAN:** Due to the corrosive nature of this material, swallowing may result in severe ulceration, inflammation, and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration of this product during induced emesis can result in severe lung injury. Evacuation of stomach contents should be done by means least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a Poison Control Center for additional treatment information.

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PART B  
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**Date:** April 13, 1994

### HEALTH HAZARD INFORMATION continued from page 4

Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Impaired kidney, liver and heart functions from preexisting disorders may be aggravated by exposure to this product.

Skin sensitization (allergy) may be evidenced by rashes, especially hives. Lung sensitization (allergy, asthma) may be evidenced by wheezing with shortness of breath and cough. Kidney damage may be evidenced by changes in urine output, appearance or edema.

### SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

**Spill / Leak procedures:** Clean-up personnel must avoid skin contact as they scrape up spilled material for disposal. Use an absorbent material such as sawdust, sand, vermiculate, to help remove the last traces and avoid buildup of resin on floors. Flush spill site with water. Prevent residue from entering waterways. If a solvent is used for cleaning, take proper precautions against a fire and personal over-exposure. Spill may be covered lightly with sodium bisulfate powder to neutralize.

**Waste management / Disposal:** The materials in this product have all been evaluated for RCRA characteristics and do not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. This is because product uses transformations, mixtures, processes, etc. may render the resulting materials hazardous.

It is recommended that small amounts be converted into an inert solid by reacting with epoxy resin prior to disposal. Follow all disposal Regulations.

Keep out of surface waters, sewers, and waterways entering or leading to surface waters. Notify Authorities if any exposure to the general public or environment occurs or is likely to occur.

The reportable quantity for this product is 125,000 lbs. (based on the phenol content in product).

### SECTION VIII. SPECIAL PROTECTION INFORMATION

#### Personal protective equipment:

**Goggles:** Avoid eye contact. Wear chemical type goggles and possibly a face shield if there is a likelihood of contact with eyes. Do not wear contact lenses.

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### SPECIAL PROTECTION INFORMATION continued from page 5

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**Gloves:** Provide rubber gloves for workers handling this material to avoid any skin contact.

**Respirator:** Wear NIOSH approved organic vapor or self-contained respirators where ventilation is inadequate and in confined areas.

**Other:** Rubber sleeves, aprons and other protective clothing should be used as conditions require. Approved barrier creams can sometimes provide added protection in conjunction with protective coverings and good practice.

#### Workplace considerations:

**Ventilation:** Provide general ventilation and/or local exhaust ventilation to keep airborne exposure low. If exhaust ventilation is not available or inadequate, use MSHA or NIOSH approve respirator as appropriate.

#### Safety stations:

Provide eyewash station and washing facilities.

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### SECTION IX. SPECIAL PRECAUTIONS

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**Storage segregation:** Store in a cool, dry place with adequate ventilation. Keep away from flames and high temperatures.

**Other precautions:** Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed.

Use good hygienic practice and workplace cleanliness with this material. Avoid skin contact to eliminate most hazards, including sensitization. Sensitized persons can have allergic response to very low levels in air. No smoking or eating in use area. Wash with soap and water before eating, drinking, smoking, applying cosmetics or using toilet facilities. Avoid breathing vapors that may result from the oven heating or curing of this material.

D.O.T. PROPER SHIPPING NAME: CORROSIVE LIQUID, N.O.S.

LABEL REQUIRED: CORROSIVE

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

The following chemicals are specifically listed by individual states; other product 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.

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SPECIAL PRECAUTIONS continued from page 6

DIETHYLENETRIAMINE (DETA); CAS NO: 111-40-0; 8.3%.

PHENOL; CAS NO: 108-95-2; <0.8%

These materials are on the following lists: California Haz. Subst. List; Florida Subst. List; Illinois Tox. Subst. List; Massachusetts Subst. List; Maine Haz Subst. List; Minnesota Haz. Subst. List; New Jersey Haz. Subst. List; Pennsylvania Haz. Subst. List; and Rhode Island Haz. Subst. List.

**DOT Class:** 8:CORROSIVE

**UN Register:** UN 1760

**Prepared/revised by:** W. M. Rinehart, Chief Chemical Engineer  
573-682-8413

April 13, 1994

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**M a t e r i a l   S a f e t y   D a t a   S h e e t**

A. B. Chance Company  
210 N. Allen Street  
Centralia, Missouri 65240

**Product:** UPLIFT BRACKET KIT -  
PART C  
**Internal ID:** C-150-0227

**MSDS No:** ABC / C67  
**Date:** April 15, 1994

National Paint  
and Coatings  
Association  
  
Hazardous Material  
Identification  
System

HEALTH HAZARD	3 - Serious
FLAMMABILITY HAZARD	0 - Minimal
REACTIVITY HAZARD	0 - Minimal
PERSONAL PROTECTION	E - Glasses, Gloves, Dust Resp

SECTION I. MATERIAL IDENTIFICATION

**Trade/Material Name:** UPLIFT BRACKET KIT - PART C

**Description:** Silica sand and glass beads.

**Chemical Name:** Silicon Dioxide and Soda-Lime Glass

**Manufacturer:** A. B. Chance Company  
210 N. Allen  
Centralia, Missouri 65240

**Phone:** EMERGENCY RESPONSE:  
573-682-8727  
**MSDS COPIES:** 573-682-8543

SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	CAS Number:	Percent:	Exposure Limits:
Silica Sand (mainly if the form of Quartz).	14808-60-7	50% - 70%	ACGIH-TLV: 0.1 mg/m <sup>3</sup> (respirable). OSHA-PEL: 0.1 mg/m <sup>3</sup> (respirable). NIOSH has recommended that the PEL be changed to 50 micrograms respirable free silica/ft <sup>3</sup> of air avg. over a shift of up to 10 hrs/day, 40 hrs/week.
Soda-Lime Glass Beads	65997-17-3	30% - 50%	Nuisance Dust:  ACGIH-TLV: 5 mg/m <sup>3</sup> (respirable), 10 mg/m <sup>3</sup> (other). OSHA-PEL: 5 mg/m <sup>3</sup> (respirable), 15 mg/m <sup>3</sup> (other).

## Material Safety Data Sheet

A. B. Chance Company  
210 N. Allen Street  
Centralia, Missouri 65240

**Product:** UPLIFT BRACKET KIT -  
PART C  
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**MSDS No:** ABC / C67  
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### INGREDIENTS AND HAZARDS continued from page 1

Silica dust particles must be respirable to pose a danger to the lungs. Silica dust particles smaller than 10 micrometers (1/2500th of an inch) are considered respirable dusts. Prolonged overexposure to Crystalline Free Silica Dust above the Threshold Limit value specified above may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis, may result from breathing free silica. Silicosis is a form of disabling, progressive and sometimes fatal pulmonary fibrosis characterize by the presence of typical nodulation in the lungs. (Reference: H.E.W. publication #NIOSH 75-120) Crystalline Free Silica has been classified as having "limited evidence" of carcinogenicity in humans by the International Agency For Research on Cancer. (Reference: IARC Monographs Volume 42)

### SECTION III. PHYSICAL DATA

**Appearance & Odor:** White to tan sand mixed with odorless white powder.

**Water solubility (%):** Insoluble

**Specific gravity ( $H_2O=1$ ):** Glass Beads:  
2.46 - 2.49.  
Sand: 2.65  
**Melting point:** Glass Beads:  
846°C. Sand:  
1710°C.

### SECTION IV. FIRE AND EXPLOSION DATA

**Flash Point (method):** No flash point,  
open or closed cup.

**Extinguishing Media:** This material is noncombustible. Use extinguishing media appropriate to the surrounding fire.

**Special fire-fighting procedures:** Fire fighters should use self-contained breathing apparatus and eye protection in heavy concentrations of dust.

### SECTION V. REACTIVITY DATA

Material is stable (inert) Hazardous polymerization will not occur

**Chemical incompatibilities:** It is attacked by strong alkalis. It will combine chemically with many metallic oxides upon heating at high temperature. It reacts with hydrofluoric acid to generate volatile  $SiF_4$ . It is incompatible with oxygen difluoride, chlorine trifluoride, manganese trifluoride, and certain other powerful oxidizers and fluorine-containing compounds.

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REACTIVITY DATA continued from page 2

**Hazardous decomposition Products:** None known.

When exposed to high temperatures, quartz (or amorphous silica) can change crystal structure to form tridymite (above 870°C) or crystalite (above 1470°C) which have greater health hazards than quartz.

### SECTION VI. HEALTH HAZARD INFORMATION

This product when respirable, is considered a suspected carcinogen by NTP and IARC but not by Federal OSHA.

**Summary of risks:** Health hazards can occur from excessive inhalation of silica dust, otherwise nontoxic. Crystalline silica in the lung can produce a pneumoconiosis, commonly called silicosis, which is a chronic, slowly developing disease. Symptoms are usually delayed (10 years or more) but may appear in as little as 8-18 months after initial exposure. Symptoms are dyspnea-caused by the many lung scars that develop from the silica dust - pain in the chest, decreased vital capacity, and cough. Chronic lung scarring leads to a progressive massive fibrosis that is often accompanied by increased susceptibility to pulmonary tuberculosis and other respiratory infections. (See comments.)

**Chronic effect(s):** Crystalline silica in the lung can produce a pneumoconiosis, commonly called silicosis, which is a chronic, slowly developing disease.

**Signs & symptoms of overexposure:**

**Eye contact:** Eye irritation.

**Skin contact:** Skin irritation.

**Inhalation:** Shortness of breath, coughing, reduced pulmonary function.

**Ingestion:** May cause gastrointestinal discomfort.

**First aid:**

**Eye contact:** Flush eyes thoroughly with running water, including under the eyelids for at least 15 minutes. If irritation or redness persists see a physician.

**Skin contact:** Wash affected area with soap and water. If irritation persists see a physician.



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### HEALTH HAZARD INFORMATION continued from page 3

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**Inhalation:** Remove to fresh air. Give oxygen with intermittent positive-pressure and/or artificial respiration as needed. Seek medical attention for treatment, observation, and support as needed.

**Ingestion:** Give one or two glasses of water. If discomfort persists see a physician.

In a diseased lung, dust particles under 3 microns greatly outnumber larger ones, and many particles are less than 1 micron. Symptoms of silicosis become progressive with continued exposure and advancing age. Smoking can increase the risk of injury. Provide preplacement and annual physical exams for exposed workers with emphasis on respiratory and cardiovascular systems. Preclude from exposure those individuals with pulmonary disease.

**NTP:**  
Respirable Crystalline Silica has been listed in the 6th Annual Report on Carcinogens.

**IARC:**  
Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (vol 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and there is limited evidence of carcinogenicity of crystalline silica to humans.

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### SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

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**Spill / Leak procedures:** Notify safety personnel of major spills. Provide ventilation. Clean-up personnel need protection against eye contact and inhalation of dust. Pick up spills taking care to avoid raising dust clouds (use vacuum or wet sweeping). Place in closed container for disposal. Dispose of in a facility approved for silica.

**CAUTION!** Spillage may result in slippery conditions.

**Waste management / Disposal:** Use waste containers suitable for transportation and dispose in approved landfill. Follow Federal, State, and Local regulations.

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### SECTION VIII. SPECIAL PROTECTION INFORMATION

#### Personal protective equipment:

**Goggles:** Workers should wear safety goggles for eye protection.

**Gloves:** Wear work gloves for skin protection.

**Respirator:** Use NIOSH approved equipment. Positive pressure supplied-air type recommended.

**Other:** Sand blasters require special protective equipment and safety precautions.

#### Workplace considerations:

**Ventilation:** Provide adequate general and local exhaust ventilation to meet TLV requirements.

#### Safety stations:

Eye wash fountains should be available to areas of use and handling.

**Other:** Avoid generating dust. Train all exposed persons in all sections of this M.S.D.S. and the proper handling of silica before they work with this product.

See OSHA Hazard Communication Rule CFR 1910.1200, 1915.99, 1917.28, 1928.21, State, local worker, or community "right-to-know" laws and regulations. We recommend that smoking be prohibited in all areas where respirators must be used.

WARN YOUR EMPLOYEES (AND YOUR CUSTOMER USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARD AND OSHA PRECAUTIONS TO USE. PROVIDE TRAINING ABOUT OSHA PRECAUTIONS.

### SECTION IX. SPECIAL PRECAUTIONS

**Storage segregation:** Store powdered silica in closed containers in a dry, well-ventilated area. Keep dust in work area at a minimum and maintain air concentration of silica as far below TLV as feasible. Use good housekeeping techniques, such as, vacuuming and wet sweeping to remove collected dust and prevent formation of dust clouds.

**Other precautions:** Avoid inhalation of dust. Avoid contact of materials with eyes. NIOSH (1976) warns of increased risk of impaired health due to a combination of smoking and silica dust exposure.

**DOT Class:** Non-Flammable Solid (Not listed in 49 CFR 172.101)

**Prepared/revised by:** W. M. Rinehart, Chief Chemical Engineer  
573-682-8413

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SPECIAL PRECAUTIONS continued from page 5

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