Bond & Fill, Inc.

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MATERIAL SAFETY DATA SHEET 24 – HOUR EMERGENCY PHONE NUMBER: INFOTRAC 1-800-535-5035

I. PRODUCT NAME: BOND & FILL RESIN

II. COMPOSITION/INFORMATION ON INGREDIENTS OSHA HAZARDOUS COMPONENTS

(29 CFR 1910.1200)

Exposure Limits – 8 hrs. TWA (ppm)

CHEMICAL NAME WT CAS # ACGIH TLV OSHA PEL OTHER

Methyl Methacrylate (MMA) 40-75 80-62-6 100 ppm 100 ppm 100 ppm (Canada)

Cumene Hydroperoxide 1-10 80-15-9 1 ppm None Skin

p-toulenesulfonyl 1-10 98-59-9 None None None

Methacrylic Acid 1-10 79-41-4 20 ppm (skin) None

III. HAZARDOUS INFORMATION

EMERGENCY OVERVIEW:

PHYSICAL STATE: Liquid COLOR: Milky White ODOR: Pungent. Acrylic. WARNING! FLAMMABLE LIQUID AND VAPOR. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE, SKIN, AND RESPIRATORY IRRITATION.

POTENTIAL HEALTH EFFECTS:

EYE: Moderate eye irritation. Redness. Excess tearing.

SKIN: Allergic skin reaction. Itching, Moderate skin irritation. Redness.

INGESTION: Toxicity by ingestion is not likely to occur.

INHALATION: Moderate respiratory tract irritation. Shortness of breath. Coughing.

CHRONIC: Detailed information provided in section XI

CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory disorders. Skin

disorders. Eye disorders.

IV. FIRST AID MEASURES

EYE: Immediately flush eyes with water for at least 20 minutes. Get immediate medical attention.

SKIN: Wash thoroughly with soap and water. Discard contaminated clothing. Do not Use organic solvents. If irritation occurs, get medical attention.

INHALATION: Remove person to fresh air or apply artificial respiration if not breathing. Get medical attention if short of breath or if respiratory symptoms develop. INGESTION: Give 1-2 glasses of milk or water to conscious person. Get medical

attention.

DO NOT INDUCE VOMITING

FIRE FIGHTING MEASURES V.

Flashpoint and Method: 51F (TCC)

Autoignition Temperature: NA

Flammable Limits: 2.1 MMA, Upper 12.5 frp MMA

EXTINGUISHING MEDIA: Flammable Liquid, insoluble in water

Use DRY Chemical Powder.

SPECIAL FIRE FIGHTING INSTRUCTIONS: Fire fighters should

Wear positive pressure self-contained breathing apparatus

(SCBA) and fill turnout gear.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon and

Nitrogen. Hydrogen cyanide.

Methylene bisphenyl isocyanate. Hydrocarbons. Smoke.

Cyclopentanone. Butanediol. Tetrahydrofuran.

VI. ACCIDENTAL RELEASE MEASURES

Remove sources of ignition. Use with ventilation. Dike area to Prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as a chemical waste in accordance with current local state, and Federal Regulations. Do not discharge into water. Incineration recommended. Wash spill area with strong detergent. After proper mixing of resin and activator sides, the material will polymerize into a cured solid state, which can be treated as a non hazardous solid. Applicable CERLA/RCRS waste code: 0001 (ignitability) U162 (MMA)

VII. STORAGE AND HANDLING

STORAGE: Avoid storage over 100 degrees F, contamination with incompatible materials. Store in cool place. Do not store in direct sunlight. Recommended storage in flammable containment area. HANDLING: Avoid prolonged or repeated breathing of vapor. Avoid contact with skin and eyes. Wash hands before smoking or eating.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust ventilation of the potential for airborne exposure exists.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Use NIOSH approved

Respirator if there is potential to exceed any exposure limit(s). SKIN PROTECTION: Use chemical resistant, impermeable Clothing including gloves and either an apron or body suit to Prevent skin contact.

EYE PROTECTION: Chemical splash goggles or safety Side shields.

OTHER PROTECTIVE EQUIPMENT: NA IX. PHYSICAL AND CHEMICAL PROPERTIES

Vapor pressure: 29mm at 20C Vapor Density: >1 Heavier then air

3.5 for MMA.

Solubility in Water: Slight Specific Gravity: 09.94-1.0 Boiling Point: 214F for MMA Freezing Point: NA

Physical State: Liquid pH: NA

Odor: Pungent. Acrylic Appearance: Light gel, milky white in

Color.

VOC: 1.98; 1.92 g/l (adhesive & activator mixed)

X. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: No

Known conditions to avoid. Oxidizing agents, Alkalis, Moisture. Strong acids. Strong bases. Reducing agent. Ultraviolet radiation. Amines.

HAZARDOUS POLYMERIZATION: Non known

XI. TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGY DATA: None available

Ingredients	Carcinogen	Target Organ
NTP IARC OSHA		
Methyl Methacrylate	No N/A No	Allergen. Irritant. Nervous System. Respiratory. Kidney. Liver.

Organic		Allergen. Central Nervous
Peroxide	No No No	System. Corrosive. Irritant.

		Mutagen
Methacrylic		Allergen. Corrosive. Irritant.
Acid	No No No	
p-toluenesulfonyl Chloride	No No No	Allergen. Corrosive.
		Irritant.

XII. ECOLOGICAL INFORMATION: Not available

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose according to EPA and local government regulations. EPE Hazardous waste #0001; U162; D003

XIV. TRANSPORT INFORMATION

DOT (49 CFR 172)

PROPER SHIPPING NAME: Adhesives / Consumer Commodity

IDENTIFICATION NUMBER: Un1133 HAZARD CLASS: 3 PACKING GROUP: II

EXCEPTIONS: Single unit less than or equal to 1 liter CLASS/DIVISION: ORM-D – 3 INTERNATIONAL AIR

TRANSPORTATION (IATA)

EXCEPTIONS: Consumer Commodity, class 9, ID 8000, less than

500 ml.

XV. REGULATORY INFORMATION

TCA (Toxic Substance Control Act): All components are listed on Or exempt from listing on the Toxic Substances Control Act Inventory.

CERLA (Comprehensive Emergency Response, Compensation, And Liability Act): NA

SARA Title III (Superfund amendments and Reauthorization Act): 313 Reportable Ingredients: Methyl Methacrylate, Cumene Hydroperoxide.

CANADIAN INVENTORY STATUS: All Components are listed on or Are exempt from listing on the Canadian Domestic Substances
List

CALIFORNIA PROPOSITION 65: This product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

XVI. OTHER INFORMATION

NFPA: Health 2 Fire 3 Reactivity 2 Special None

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) RATINGS:

Health <u>2</u> Flammability <u>3</u> Reactivity <u>2</u> Protective Equipment: see Section VIII

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e-mail: info@bondfill.com www.bondfill.com

Material Safety Data Sheet 24-Hour Emergency

Phone Number: Infotrac 1-800-535-5035

I. PRODUCT NAME: BOND & FILL ACTIVATOR

II. COMPOSITION/IMFORMATION ON INGREDIENTS OSHA HAZARDOUS COMPONENTS

(29 CFR 1910.1200)

Exposure limits – 8 hrs. TWA (ppm)

CHEMICAL NAME WT CAS # ACGIH TLV OSHA PEL OTHER

Methyl Methacrylate (MMA) 30-60 80-62-6 100 ppm 100 ppm 100 ppm (Canada)

Amine Condensate 1-10 Trade Secret None None None

III. HAZARDOUS INFORMATION

EMERGENCY OVERVIEW:

PHYSICAL STATE: Liquid COLOR: Milky white. ODOR Pungent. Acrylic.

WARNING! FLAMABLE LIQUID AND VAPOR. MAY CAUSE ALLERGIC SKIN

REACTION. MAY CAUSE EYE, SKIN, AND RESPIRATORY IRRITATION.

POTENTIAL HEALTH EFFECTS:

EYE: Moderate eye irritation. Redness. Excess tearing.

SKIN: Allergic skin reaction. Itching, moderate skin irritation. Redness

INGESTION: Toxicity by ingestion is not likely to occur.

INHALATION: Moderate respiratory tract irritation. Shortness of breath. Coughing.

CRONIC: Detailed information provided in section XI

CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory disorders. Skin disorders.

Eye disorders.

IV. FIRST AID MEASURES

EYE: Immediately flush eyes with water for at least 20 minutes. Get immediate medical attention.

SKIN: Wash thoroughly with soap and water. Discard contaminated clothing.

Do not use organic solvents. If irritation occurs, get medical attention.

INHALATION: Remove person to fresh air or apply artificial respiration if not breathing. Get medical attention if short of breath or if respiratory symptoms develop.

INGESTION: Give 1-2 glasses of milk or water to conscious person. Get medical attention

DO NOT INDUCE VOMITING.

V. FIRE FIGHTING MEASURES

Flashpoint and Method: 51F (TCC)

Auto Ignition Temperature: NA

Flammable Limits: 2.1 MMA, Upper 12.5 fpr MMA

EXTINGUISHING MEDIA: Flammable liquid, insoluble in water.

Use DRY chemical powder.

SPECIAL FIRE FIGHTING INSTRUCTIONS: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon and Nitrogen. Hydrogen cyanide.

Methylene bisphenyl isocyanate. Hydrocarbons. Smoke.

Cyclopentanone. Butanediol. Tetrahydrofuran.

VI. ACCIDENTAL RELEASE MEASURES

Remove sources of ignition. Use with ventilation. Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as a chemical waste in accordance with currant local state, and Federal Regulations. Do not discharge into water. Incineration recommended. Wash spill area with strong detergent. After proper mixing of Activator and activator sides, the material will polymerize into a cured solid state, which can be treated as a nonhazardous solid. Applicable CERCLA/RCRS waste code: 0001 (ignitability) U162 (MMA)

VII. STORAGE AND HANDLING

STORAGE: Avoid storage over 100 degrees F, contamination with incompatible materials. Store in cool place. Do not store in direct sunlight. Recommended storage in flammable containment area. HANDLING: Avoid prolonged or repeated breathing of vapor. Avoid contact with skin and eyes. Wash hands before smoking or Eating.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION ENGINEERING CONTROLS: Use local exhaust ventilation of the potential for airborne exposure exists. PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Use NIOSH approved respirator if

there is potential to exceed any exposure limit(s).

SKIN PROTECTION: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

EYE PROTECTION: Chemical splash goggles or safety glasses

With side shields.

OTHER PROTECTIVE EQUIPMENT: NA

IX. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: 29mm at 20C Vapor Density: > 1 Heavier then air,

3.5 for MMA

Solubility in Water: Slight Specific Gravity: 1.0 - 1.1Boiling Point: 214F for MMA Freezing Point: NA

Physical State: Liquid pH: NA

Odor: Pungent. Acrylic Appearance: Light gel, milky white in

Color.

VOC: 1.18; 1.12 g/l (adhesive & activator mixed)

X. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: NO

known conditions to avoid. Oxidizing agents, Alkalis, Moisture. Strong acids. Strong bases. Reducing agent. Ultraviolet radiation. Amines.

HAZARDOUS POLYMERIZATION: NON KNOWN

XI. TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGY DATA: None available

INGREDIENTS	CARCINOGEN	TARGET ORGAN
NTP IARC OSHA		
METHYL	NO/NA/NO	Allergen. Irritant. Nervous
METHACRYLATE		System. Respiratory.
		Kidney. Liver
AMINE	NO/NA/NO	Not Available
CONDENSATE		
	0	

XII. ECOLOGICAL INFORMATION: Not available

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose according to EPA and local government regulations. EPE Hazardous waste #0001; U162; D003

XIV. TRANSPORT INFORMATION

DOT (49 CFR 172)

PROPER SHIPPING NAME: Adhesive/Consumer Commodity

Identification Number: Un1133

Hazard Class: 3 Packing Group: 11

EXCEPTIONS: Single Unit less than or equal to 1 liter CLASS/DIVISION: ORM-D 3 INTERNATIONAL AIR

TRANSPORTATION (IATA)

EXCEPTIONS: Consumer Commodity, class9, ID 8000, less than

500 ml

XV. REGULATORY INFORMATION

TCA (Toxic Substance Control Act): All components are listed on Or exempt from listing on the Toxic Substances Control Act Inventory.

CERLA (Comprehensive Emergency Response, Compensation, And Liability Act): NA

SARA TITLE 111 (Superfund Amendments and Reauthorization Act): 313 Reportable Ingredients: Methyl Methacrylate, Cumene Hydroperoxide.

CANADIAN INVENTORY STATUS: All Components are listed on or Are exempt from listing on the Canadian Domestic Substances List. CALIFORNIA PROPOSITION 65: This product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

XV. OTHER INFORMATION

NFPA:

Health <u>2</u> Fire <u>3</u> Reactivity <u>2</u> Special None HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) RATINGS:

Health <u>2</u> Flammability <u>3</u> Reactivity <u>2</u> Protective Equipment: see Section VII

The information in this MSDS was obtained from current and reliable source. However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling storage and disposal of the product are beyond AE&S Inc. Control: It is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, damage or expense arising out of the product's improper use. No warranty, expressed or implied regarding the product described herein shall be created by or inferred from any statement or omissions in this MSDS. Various government agencies (e<g> DOT, EPA, FDA) may have specific regulations concerning the transportation, handling, storage use or disposal of the product, which may not be reflected in this MSDS. The user should review those regulations to ensure full compliance. 07/14/03