
	<h1>Material Safety Data Sheet</h1>		<b>24 Hour Emergency Phone Numbers:</b> <b>Medical/Poison Control:</b> <b>In U.S.: Call 1-800-222-1222</b> <b>Outside U.S.: Call your local poison control center</b> <b>Transportation/National Response Center:</b> <b>1-800-535-5053</b> <b>1-352-323-3500</b>
			<p>.....</p> <p>•NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.</p> <p>.....</p>

**IMPORTANT:** Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

## Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.  
 On peut demander cette fiche signalétique (MSDS) a la langue francaise-canadienne.  
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere .

<b>Product Name:</b>	FRP Adhesive	<b>Revision Date:</b>	12/03/2008
<b>Product UPC Number:</b>	070798604803, 070798604810	<b>Supersedes:</b>	06/09/2004
<b>Product Use/Class:</b>	Construction Adhesive Latex	<b>MSDS Number:</b>	00070041001
<b>Manufacturer:</b>	<b>DAP Inc.</b> <b>2400 Boston Street Suite 200</b> <b>Baltimore, MD 21224-4723</b> <b>888-327-8477 (non-emergency matters)</b>		

## Section 2 - Hazards Identification

**Emergency Overview:** A white to off-white paste product with a very slight ammonia odor. **WARNING!** May cause eye, skin, nose, throat and respiratory tract irritation. Harmful if swallowed or absorbed through the skin. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

**Effects Of Overexposure - Eye Contact:** May cause eye irritation.

**Effects Of Overexposure - Skin Contact:** May cause skin irritation and/or dermatitis. May cause sensitization by skin contact. May cause allergic skin reaction or sensitization. Harmful if absorbed through the skin.

**Effects Of Overexposure - Inhalation:** Harmful if inhaled. Inhalation of vapors may cause irritation of the nose, throat, lungs and respiratory tract.

**Effects Of Overexposure - Ingestion:** Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death. Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. Ingestion may result in obstruction when material hardens.

**Effects Of Overexposure - Chronic Hazards:** Repeated or prolonged exposure may cause skin, respiratory, kidney and liver damage. Prolonged and repeated skin contact may cause irritation and possibly dermatitis.

The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer

to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2).

Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

**Primary Route(s) Of Entry:** Skin Contact, Inhalation, Ingestion, Eye Contact

**Medical Conditions which May be Aggravated by Exposure:** None known.

**Carcinogenicity:**

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
14808-60-7	Silica, crystalline	Suspected human carcinogen.	Not Listed.	Human carcinogen.	Known carcinogen.
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.

Section 3 - Composition / Information On Ingredients		
Chemical Name	CASRN	Wt%
Limestone	1317-65-3	30-60
Polyacrylic acid emulsion	28411-49-6	0.5-1.5
Urea	57-13-6	0.5-1.5
Silica, crystalline	14808-60-7	0.1-1.0
Ethylene glycol	107-21-1	0.1-1.0
Formaldehyde	50-00-0	<0.02

## Section 4 - First Aid Measures

**First Aid - Eye Contact:** In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

**First Aid - Skin Contact:** Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing. If skin irritation persists, call a physician.

**First Aid - Inhalation:** If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

**First Aid - Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

**Note to Physician:** None.

**COMMENTS:** If over-exposure occurs, call your poison control center at 1-800-222-1222.

## Section 5 - Fire Fighting Measures

**Extinguishing Media:** Carbon Dioxide, Dry Chemical, Foam, Water Fog

**Unusual Fire And Explosion Hazards:** No special protective measures against fire required.

**Special Firefighting Procedures:** Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

## Section 6 - Accidental Release Measures

**Steps To Be Taken If Material Is Released Or Spilled:** Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

## Section 7 - Handling And Storage

**Handling:** KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Wash thoroughly after handling.

**Storage:** Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Close container after each use. Store away from caustics and oxidizers.

## Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Limestone	1317-65-3	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Polyacrylic acid emulsion	28411-49-6	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Urea	57-13-6	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.025 MGM.	N.E.	N.E.	10/(%SiO <sub>2</sub> + 2) MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Formaldehyde	50-00-0	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No

### Exposure Notes:

14808-60-7 The 2002 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

The TLVs for crystalline silica represent the respirable fraction.

OSHA PEL TWA for Quartz is calculated using the following formula:  $10 \text{ mg/m}^3 / (\% \text{ SiO}_2 + 2)$ . Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size selector with the following characteristics.

Aerodynamic diameter ( unit density sphere )	Percent passing selector
2	90
2.5	75

3.5 .....	.....50.....
5.0 .....	.....25.....
10 .....	.....0.....

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exists. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

**Precautionary Measures:** Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

**Engineering Controls:** Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m<sup>3</sup>) as determined by a full shift sample up to 10-hour work shift.

**Skin Protection:** Rubber gloves.

**Eye Protection:** Goggles or safety glasses with side shields.

**Other protective equipment:** Not required under normal use.

**Hygienic Practices:** Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

**Important:** Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

**Note:** An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

## Section 9 - Physical And Chemical Properties

<b>Boiling Range:</b>	Not Established	<b>Vapor Density:</b>	Heavier Than Air
<b>Odor:</b>	Very Slight Ammonia	<b>Odor Threshold:</b>	Not Established
<b>Color:</b>	White to Off-White	<b>Evaporation Rate:</b>	Slower Than n-Butyl Acetate
<b>Solubility in H<sub>2</sub>O:</b>	Not Established	<b>Specific Gravity:</b>	1.5
<b>Freeze Point:</b>	Not Established	<b>pH:</b>	Between 7.0 and 12.0
<b>Vapor Pressure:</b>	Not Established	<b>Viscosity:</b>	Not Established
<b>Physical State:</b>	Paste	<b>Flammability:</b>	Non-Flammable
<b>Flash Point, F:</b>	greater than 200 degrees Fahrenheit	<b>Method:</b>	(Seta Closed Cup)
<b>Lower Explosive Limit, %:</b>	Not Established	<b>Upper Explosive Limit, %:</b>	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

## Section 10 - Stability And Reactivity

**Conditions To Avoid:** Excessive heat and freezing.

**Incompatibility:** Incompatible with strong bases and oxidizing agents.

**Hazardous Decomposition Products:** Normal decomposition products, i.e., COx, NOx.

**Hazardous Polymerization:** Hazardous polymerization will not occur under normal conditions.

**Stability:** Stable under recommended storage conditions.

## Section 11 - Toxicological Information

**Product LD50:** Not Established

**Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50
57-13-6	Urea	Rat:8471 mg/kg	-----
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg
50-00-0	Formaldehyde	-----	Rat:203 mg/m3

**Significant Data with Possible Relevance to Humans:** This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the significance of which to humans is unknown. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde.

## Section 12 - Ecological Information

**Ecological Information:** Ecological injuries are not known or expected under normal use.

## Section 13 - Disposal Information

**Disposal Information:** Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

**EPA Waste Code if Discarded (40 CFR Section 261):** This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261.

## Section 14 - Transportation Information

<b>DOT Proper Shipping Name:</b>	N.A.	<b>Packing Group:</b>	N.A.
<b>DOT Technical Name:</b>	None	<b>Hazard Subclass:</b>	N.A.
<b>DOT Hazard Class:</b>	N.A.	<b>DOT UN/NA Number:</b>	None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

## Section 15 - Regulatory Information

**CERCLA - SARA Hazard Category:**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

**SARA Section 313:**

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None.

**Toxic Substances Control Act:**

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None.

**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Water	7732-18-5
Non-Hazardous Polymer	Proprietary

**Pennsylvania Right-to-Know:**

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Water	7732-18-5
Non-Hazardous Polymer	Proprietary

**California Proposition 65:**

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**Section 16 - Other Information**

**HMIS Ratings:**

Health: 1                      Flammability: 1                      Reactivity: 0                      Personal Protection: X

**Volatile Organic Compounds (VOC), less water less exempts:** g/L: 31.4      lb/gal: 0.3      wt:wt%: 1.1

**Volatile Organic Compounds (VOC), less water less exempts, less LVP -VOCs:**      wt:wt%: 0.4

**REASON FOR REVISION:** Periodic Update

**Legend:**                      N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

C – Degree Celsius

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>