



MSDS SHEETS & TECHNICAL WHITE PAPERS FOR:

**GACO ½ LB. OPEN CELL FOAM
GACO 2 LB. CLOSED CELL FOAM**

IGNITION BARRIER PAINT

TRIPOLYMER WALL INJECTION FOAM

Gaco WallFoam

SPRAY POLYURETHANE FOAM INSULATION

ENERGY-EFFICIENT.

STRONG.

HEALTHY.

GREEN.

QUIET.

SMART
FROM THE START.

GACO WALLFOAM
GACOGREEN 052
HALF POUND OPEN CELL FOAM

CONTRACTOR / APPLICATOR BENEFITS

SPRAYABILITY. Easy to spray with a more controlled rise, resulting in less waste.

PREDICTABILITY. Provides consistent and predictable yields.

EASE OF USE. Constant mixing is not required. Available pre-catalyzed or catalyzed in the field.

R-VALUE. One of the highest Aged R-Values available in the industry today.

OWNER / SPECIFIER BENEFITS

ENERGY EFFICIENT. Seamless air barrier reduces uncontrolled air leakage, lowering energy costs for building owner and homeowner.

STRONG. Improves overall structural strength of wall and roof systems.

HEALTHY. Reduces condensation, moisture and mold, improving occupant comfort, health and safety.

GREEN. Higher Aged R-Values than conventional insulation. Reduces energy consumption and contains no ozone-depleting chemicals. Earn up to 20 LEED credits.

QUIET. Provides a quieter home with improved acoustical properties.



Since 1955, Gaco Western has been manufacturing exceptional waterproofing and insulating products. This family owned company was built on three fundamental principles: superior products; sold by experts; at competitive prices. Today, Gaco Western coatings and spray foam insulation cover millions of square feet of commercial and residential buildings around the world, earning a reputation and trust in the construction industry as a producer of top-quality waterproof coatings, sealers, primers and insulation products.

Since 1955
GACO WESTERN

PRODUCT DATA – Gaco Western GacoGreen 052

GacoGreen is a water blown spray-applied system that cures to a semi-rigid very low-density foam. In-place density ranges from 0.45 – 0.55 lb/ft³. The cured product is dimensionally stable in all weather conditions and its insulating properties do not significantly diminish over time. GacoGreen is safe for the environment, containing no CFC's, HCFC's, HFC's, formaldehyde or ozone depleting chemicals. GacoGreen 052 is a Class I fire rated foam and meets the requirements of ICC-ES AC12 Acceptance Criteria for Foam Plastic Insulation.

TECHNICAL INFORMATION: GacoGreen forms a completely sealed air barrier in wall cavities and can be used to fill 2" x 6" stud wall construction in a single application. Its performance is superior to commonly used fiberglass batting or loose fill insulation. It adheres well to most building materials and will provide a continuous barrier against air infiltration for the life of the building. GacoGreen is semi-rigid in nature but is flexible enough to withstand normal expansion and contraction of building components. Yields up to 15,000 board feet per kit (1,020 Lbs.) are possible under optimum conditions.

PHYSICAL PROPERTIES

PROPERTY	TEST TEMPERATURE	ASTM TEST	UNIT	VALUE
Nominal Density (Sprayed In Place):	77°F (25°C)	D-1622-98	lbs/ft ³	0.45 - 0.55
Aged R-Value: * See Note Below	75°F (23.9°C) * See Note Below	C-518	R at 1" R at 4"	4.21 15.64
Tensile Strength:	77°F (25°C)	D-1623	psi	4.4
Closed Cell Content:	77°F (25°C)	D-2856-94	%	<0.6%
Water Vapor Transmission:	77°F (25°C)	E-96-95	perm-in	13.0
Fungus Resistance:		G21-96	0-4 Growth	0 (No Growth)
Dimensional Stability:	158°F (70°C) / 95% RH	D-2126-94	% Vol change	+2.7%
Air Permeance (3 inches @1.56 psf):	77°F (25°C)	E-283	ct/m ² /sq.ft.	0.04
Air Permeance (5 inches @1.56 psf):				0.01

* NOTE: Federal Trade Commission regulations published in the Federal Register 16 CFR Part 460 require that R value testing of polyurethane foam insulation must be conducted on aged samples at a 75°F mean test temperature. Failure to comply can result in substantial fines by the FTC.

SURFACE BURNING CHARACTERISTICS

Class I when tested per ASTM E84-05 (Also known as ANSI 2.5, NFPA 255, UBC 0-1 (42-1) and UL 723)

SYSTEM	THICKNESS	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
GacoGreen 052	6" (15.2 cm)	25	250

TYPICAL LIQUID CHEMICAL PROPERTIES

"A" Side contains polymeric isocyanate. "B" Side contains polyols, catalysts, fire retardants and blowing agents.

PROPERTY	TEST TEMPERATURE	ASTM TEST	UNIT	VALUE
Viscosity – "A" Component:	77°F (25°C)	D-2196-68	cps	180 ± 20
Viscosity – "B" Component:				300 ± 20
Lbs/gal/S.G. – "A" Component:	77°F (25°C)		lbs/gal/S.G.	10.3 / 1.23
Lbs/gal/S.G. – "B" Component:				9.5 / 1.15
Mixing Ratio – "A" & "B" Component	77°F (25°C)		By volume	1:1
Stability When Stored at 50°F to 70°F (10°C to 21°C)	77°F (25°C)		Months	"A" Component: 1 year "B" Component: 3 months*

* NOTE: Three-month period is for un-catalyzed material. After the catalyst has been added the shelf life will be two months when stored within recommended temperature range.

EQUIPMENT SETTINGS

SETTING	VALUE
Pre-Heat: Iso (A)	125°F - 140°F (51.7°C - 60°C)
Pre-Heat: Poly (B)	125°F - 140°F (51.7°C - 60°C)
Hose Heat	125°F - 140°F (51.7°C - 60°C)
Recommended Spray Pressure	1,200 - 1,400 psi (dynamic)

PRODUCT CHARACTERISTICS

CHARACTERISTIC	VALUE
Cream Time	0 - 1 sec
Rise Time	3 - 4 sec
Tack Free Time	3 - 4 sec
Cure Time	4 hours

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Toll-Free: 877-699-4226

www.gaco.com

REV 9/09

18700 Southcenter Parkway
Tukwila, WA 98188
(206) 575-0450

GACO WESTERN

1245 Chapman Dr.
Waukesha, WI 53186
(262) 542-8072

F052 - A & B

CHEMICAL FAMILY: Polyurethane

TRADE NAME: Gaco Green

TRANSPORTATION EMERGENCY ASSISTANCE / CALL CHEMTREC / 1-800-424-9300

NFPA HAZARD RATINGS

A / B

H - 2 / 2

F - 0 / 0

R - 1 / 0

PP - 1 / 1

DEGREE OF HAZARD: 4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT

SECTION II - HAZARDOUS SUBSTANCES

	% BY WT.	ACGIH TWA	ACGIH STEL	VAPOR PRESSURE
A: 4,4' Diphenylmethane diisocyanate; CAS# 101-68-8 *	50.0 %	0.005ppm	0.02ppm	0.0003mm Hg
B: None Currently Known				

* THESE CHEMICALS ARE SUBJECT TO SARA TITLE III, SECTION 313 REPORTING

SECTION III - PHYSICAL DATA

BOILING RANGE: A: 646 °F (decomposes) B: 212 °F (water)	WEIGHT per GALLON: A: 10.2 Lbs. B: 9.2 Lbs.
VAPOR DENSITY (air=1): A: 8.5 B: NA	
% VOLATILE by VOLUME: A: Non-volatile B: 20 %	EVAPORATION RATE (CCl ₄ =1): A: N/A B: <1

SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT: A & B - Non-flammable liquids **LEL:** N/A **UEL:** N/A
EXTINGUISHING MEDIA: Foam, CO₂, dry chemical or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: "B" component boils at less than 100 °F and containers must be kept cool with water fog to prevent rupture. Fire fighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes.

UNUSUAL FIRE AND EXPLOSION HAZARD: Contamination of "A" side with water will generate CO₂ gas with possible build-up of pressure in confined spaces. Carbon monoxide may be evolved if combustion is incomplete. Both Polyfoam 052 components are non-flammable and will not explode due to mechanical impact.

WARNING! When exposed to open flame, cured polyurethane foam will present a serious fire hazard.

SECTION V - HEALTH HAZARD DATA

EFFECTS of OVEREXPOSURE: Product vapor can cause lacrimation, conjunctivitis and corneal edema giving rise to the perception of "blue haze" or "fog". The effect is temporary and has no known residual effects.

EMERGENCY & FIRST AID: Eye Contact: Flush with water for 15 minutes and contact a physician as soon as possible. Skin contact: Wash with soap and water and remove contaminated clothing. Ingestion: See a physician.

PRIMARY ROUTES of ENTRY: Dermal or inhalation most likely.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Repeated exposure can cause an allergic reaction with the development of occupational asthma. Long term exposure to low vapor concentrations may cause chronically progressive pulmonary disease. Repeated skin contact can result in sensitization

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Temperature extremes and water contamination.

INCOMPATIBILITY: "A" side reacts with water, alcohols, amines, ammonia and carboxylic acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete burning may produce nitrogen oxides, hydrogen cyanide, carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: "A" component reacts slowly with water to produce CO₂ gas.

SECTION VII - SPILL or LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: In enclosed areas, cleanup personnel should wear self-contained breathing apparatus. Cover spills with sawdust or other absorbent material to minimize spreading of the material before collecting. "A" component must be neutralized with an equal volume of a 6% ammonia solution in water and allow to react for 10 minutes. Collect into open containers and add more solution. Cover loosely to vent CO₂ gas generated.

WASTE DISPOSAL METHOD: Dispose in accordance with local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use organic vapor cartridges with a mechanical filter to remove airborne particles. Use self-contained breathing apparatus in enclosed areas.

VENTILATION: Mechanical equipment capable of keeping the vapor concentration below the TLV.

PROTECTIVE GLOVES: Chemical resistant rubber or plastic gloves.

EYE PROTECTION: Safety goggles or face shield.

OTHER PROTECTIVE EQUIPMENT: Eye wash & safety shower should be available.

SECTION IX - SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: Keep containers closed and store in a cool dry place away from direct sunlight. Opened "A" side containers should be blanketed with dry nitrogen before resealing if there is no moisture contamination. If water contamination is suspected, do not reseal.

TOXICOLOGICAL PROPERTIES: The International Isocyanate Institute is currently sponsoring a lifetime study on Polymeric MDI in rats for carcinogenicity. Monomeric MDI is positive for mutagenicity in the Ames assay. Oral LD50 (rats) is greater than 15800mg/Kg. Dermal LD50 (rabbits) is greater than 7900 mg/Kg. Inhalation LC50 (rats-2 hours) is greater than 400 mg/M³ on dust of monomeric MDI. DANGER! Harmful or fatal if swallowed. Vapor harmful. May cause skin or eye irritation. Keep out of the reach of children.

This information is furnished without warranty, representation, inducement or license of any kind, expressed or implied, including any implied warranty of merchantability or of fitness for a particular purpose, except that it is accurate to the best of Gaco Western's knowledge or obtained from sources believed to be accurate. Gaco Western does not assume any legal responsibility for use or reliance upon same. It is the user's obligation to determine the conditions of safe use of this product.

Revised 12/07

MATERIAL SAFETY DATA SHEET

Replaces 3/04

18700 Southcenter Parkway
Tukwila, WA 98188
(206) 575-0450

Gaco Western

521 Biddle Street
Waukesha, WI 53186
(262) 542-8072

F052 CATALYST

CHEMICAL FAMILY: Amine

TRADE NAME: GacoGreen Catalyst

TRANSPORTATION EMERGENCY ASSISTANCE / CALL CHEMTREC / 800-424-9300

HMS HAZARD RATINGS

H - 3

F - 2

R - 0

PP - I

DEGREE OF HAZARD: 4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT

SECTION II - HAZARDOUS SUBSTANCES

	% BY WT	OSHA PEL	ACGIH TLV
Bis(2-dimethylaminoethyl)ether CAS No. 3033-62-3	99.5	None Est.	.05 ppm TWA

SECTION III - PHYSICAL DATA

BOILING RANGE: 372 Deg. F	WEIGHT PER GALLON: 7.1 lbs
VAPOR DENSITY (air=1): Heavier	VAPOR PRESSURE (mm Hg @ 20C/68F): 0.28
% VOLATILE BY VOLUME: 99.5%	SOLUBILITY IN WATER: Soluble

SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT: 155 Deg F. (PMCC)

EXTINGUISHING MEDIA: Water, Foam, Dry Chemical, Carbon Dioxide, Sand

SPECIAL FIRE FIGHTING PROCEDURES: Cool containers with water fog to prevent Rupture. A solid stream of water directed into the burning material could spread the fire. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

UNUSUAL FIRE & EXPLOSION HAZARD: Reaction with peroxides may result in violent decomposition or combustion.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Inhalation of aerosols, mists or fogs of this product may irritate and/or severely damage contacted tissue and mucous membranes of the respiratory tract. Contact with undiluted product may cause severe skin irritation including blistering, burns and necrosis. May cause malaise and discomfort when absorbed through the skin. Contact of undiluted product with the eyes can cause severe irritation and pain including conjunctivitis, tearing and corneal edema. Corneal edema may give rise to a perception of "blue haze or halos" or "fog" around lights. If ingested, this product may cause severe gastrointestinal distress with blistering or burns of the mouth, throat, esophagus and stomach. Other symptoms could include headache, nausea and vomiting.

EMERGENCY & FIRST AID: If overcome by vapors, remove to fresh air and if breathing has stopped, give artificial respiration. Eye contact: Flush immediately with water and call a physician as soon as possible. Skin contact: Wash with soap and water and remove contaminated clothing. Ingestion: Give victim one or two glasses of water or milk. Do not induce vomiting. See a physician as soon as possible.

PRIMARY ROUTES OF ENTRY: Dermal or inhalation most likely.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: May aggravate existing eye or skin conditions.

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SECTION VI - REACTIVITY DATA

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STABILITY: Stable

SUBSTANCES TO AVOID: Mineral acids, organic acids, oxidizing agents, sodium or calcium hypochloride. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete combustion may produce carbon monoxide and/or carbon dioxide, oxides of nitrogen and ammonia gas.

HAZARDOUS POLYMERIZATION: Will not occur.

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SECTION VII - SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. In enclosed areas, cleanup personnel should wear self-contained breathing apparatus. Cover spills with sawdust, vermiculite, or other absorbent material. Collect material for disposal.

WASTE DISPOSAL METHOD: Dispose in accordance with local, state, and federal regulations.

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SECTION VIII - SPECIAL PROTECTION INFORMATION

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RESPIRATORY PROTECTION: The specific respirator selected must be based on contamination levels found in the workplace. Use organic vapor canisters for low concentrations. Use supplied air with full facepiece or self-contained breathing apparatus in enclosed areas involving higher vapor concentrations.

VENTILATION (Local Exhaust/Mechanical): Explosion proof mechanical equipment capable of keeping vapor concentration below the recommended exposure limit.

PROTECTIVE GLOVES: Butyl or nitrile gloves.

EYE PROTECTION: Contact lenses should not be worn. Safety goggles or full face shield.

OTHER PROTECTIVE EQUIPMENT: Eye bath & safety shower should be available.

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SECTION IX - SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES

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SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: Keep containers closed and store in a cool dry place with adequate ventilation. Keep away from heat and open flame.

TOXICOLOGICAL PROPERTIES: OSHA, NTP and IARC do not list this product as a Carcinogen. Severely irritating and corrosive.

KEEP OUT OF THE REACH OF CHILDREN.

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Gaco WallFoam

SPRAY POLYURETHANE FOAM INSULATION

ENERGY-EFFICIENT.

STRONG.

HEALTHY.

GREEN.

QUIET.

SMART
FROM THE START.

GACO WALLFOAM
SYSTEM 183
TWO POUND CLOSED CELL FOAM

CONTRACTOR BENEFITS

SPRAYABILITY. Superior formulation utilizing Transcend™ technology provides a consistent, user friendly foam with predictable yields.

LESS VISCOUS FORMULATION. Reduces wear and tear on equipment with less clogging of guns.

LOWER ODOR FORMULA. Reduces odor in application, improving work environment.

WINTER AND SUMMER FORMULATIONS. Allows you to expand your spray window in colder temperatures.

LOWER SPRAY TEMPERATURE. Easier on Equipment and more comfortable to apply.

OWNER/SPECIFIER BENEFITS

ENERGY EFFICIENT. Seamless air barrier reduces uncontrolled air leakage, lowering energy costs for building owner and homeowner.

STRONG. Improves overall structural strength of wall and roof systems.

HEALTHY. Reduces condensation, moisture and mold, improving occupant comfort, health and safety.

GREEN. Higher Aged R-Values than conventional insulation. Reduces energy consumption, and contains no ozone-depleting chemicals. Earn up to 20 LEED credits.

QUIET. Provides a quieter home with improved acoustical properties.



Since 1955, Gaco Western has been manufacturing exceptional waterproofing and insulating products. This family owned company was built on three fundamental principles: superior products; sold by experts; at competitive prices. Today, Gaco Western coatings and spray foam insulation cover millions of square feet of commercial and residential buildings around the world, earning a reputation and trust in the construction industry as a producer of top-quality waterproof coatings, sealers, primers and insulation products.

Since 1955
GACO WESTERN

PRODUCT DATA – Gaco WallFoam System 183

Gaco Western WallFoam 183 is an HFC blown (zero-ozone depleting) liquid spray system that cures to a medium-density rigid polyurethane insulation material. Gaco WallFoam 183 contains material derived from naturally renewable resources and does not contain CFC's, HCFC's or other gases harmful to the environment. This system can be sprayed on clean, dry substrates down to 40°F (4.4°C). Refer to Gaco Western General Instructions, SG-GacoFoam for spraying instructions. Gaco WallFoam 183 is a class I fire rated foam.

TECHNICAL INFORMATION

To ensure optimum performance, a minimum pass thickness of 3/4" (1.9 cm) is recommended with the maximum not to exceed 2" (5.1 cm) per pass. For typical equipment settings, consult Gaco Western's GacoFoam Spray Guide.

PROPERTY	TEST TEMPERATURE	ASTM TEST	UNIT	VALUE
Nominal Density (Sprayed In Place):	77°F (25°C)	D-1622-03	lbs/ft ³	1.8 - 2.0
R-Value (Initial/Aged): * See Note Below	75°F (23.9°C) * See Note Below	C-518	R at 1"	6.6 / 6.1
Compressive Strength (Parallel to Rise):	77°F (25°C)	D-1621-04a	psi	42.25
Tensile Strength:	77°F (25°C)	D-1623	psi	65.0
Water Absorption:	77°F (25°C)		%	0.62
Water Vapor Transmission:	77°F (25°C)	E-96-05	perm-in	1.44
Dimensional Stability (28 Days):	158°F (70°C) / 95% RH 176°F (80°C) / Ambient RH -4°F (-20°C) / Ambient RH	D-2126-99	% Vol change	3.0 -4.0 -2.5
Recommended Service Temperature Range:			°F / °C	-40°F to 200°F (-40°C to 93°C)
Closed Cell Content:	77°F (25°C)	D-2856(-94)	%	97

* NOTE: Federal Trade Commission regulations published in the Federal Register 16 CFR Part 460 require that R value testing of polyurethane foam insulation must be conducted on aged samples at a 75°F mean test temperature. Failure to comply can result in substantial fines by the FTC.

SURFACE BURNING CHARACTERISTICS

ASTM E84-05 (Also known as ANSI Z.5, NFPA 255, UBC 9-1 (42-T) and UL 723)

SYSTEM	THICKNESS	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
WallFoam 183	4" (10.2 cm)	15	400

TYPICAL LIQUID CHEMICAL PROPERTIES

"A" Component contains polymeric isocyanate. "B" Component contains polyol, catalysts and blowing agents.

PROPERTY	TEST TEMPERATURE	ASTM TEST	UNIT	VALUE
Viscosity – "A" Component: Viscosity – "B" Component:	77°F (25°C)	D-2196-68	cps	180 ± 20 550 ± 50
Specific Gravity – "A" Component: Specific Gravity – "B" Component:	77°F (25°C)	D-1638-70	S.G.	1.22 1.19
Weight/Gallon – "A" Component: Weight/Gallon – "B" Component:	77°F (25°C)		lbs/gal	10.2 9.9
Mixing Ratio – "A" & "B" Component	77°F (25°C)		By volume	1:1
Stability When Stored at 50°F to 70°F (10°C to 21°C)			Months	"A" Component: 1 year "B" Component: 6 months

EQUIPMENT SETTINGS

SETTING	VALUE
Pre-Heat: Iso (A)	110°F - 125°F (43.3°C - 51.7°C)
Pre-Heat: Poly (B)	110°F - 125°F (43.3°C - 51.7°C)
Hose Heat	110°F - 125°F (43.3°C - 51.7°C)
Recommended Spray Pressure	800 - 1,000 psi (dynamic)

PRODUCT CHARACTERISTICS

CHARACTERISTIC	VALUE
Cream Time	0 - 1 sec
Rise Time	3 - 4 sec
Tack Free Time	3 - 4 sec
Cure Time	4 hours

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www.gaco.com

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Tukwila, WA 98188
(800) 456-4226

GACO WESTERN

1245 Chapman Dr.
Waukesha, WI 53186
(800) 331-0196

WALLFOAM 183/193 A & B

CHEMICAL FAMILY: Polyurethane

TRADE NAME: Gaco WallFoam

TRANSPORTATION EMERGENCY ASSISTANCE / CALL CHEMTREC / 1-800-424-9300

NFPA HAZARD RATINGS

A / B

H - 2 / 1

F - 0 / 0

R - 1 / 0

PP - 1 / 1

DEGREE OF HAZARD: 4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT

SECTION II - HAZARDOUS SUBSTANCES

	% BY WT.	ACGIH TWA	OSHA PEL	VAPOR PRESSURE
A: 4,4' Diphenylmethane diisocyanate; CAS# 101-68-8 ⁽¹⁾	50	0.005ppm	0.02ppm	0.0003mm Hg
B: 1,1,1,3,3-Pentafluoropropane; CAS# 460-73-1 ⁽¹⁾	6 - 12	None	None	17.8 psia @ 68°F
Trans-1,2-Dichloroethylene; CAS# 156-60-5 ⁽¹⁾	0.5-3.5	200ppm	200ppm	400 mm HG @87°F

(1) This chemical is subject to SARA Title III, Section 313 reporting

SECTION III - PHYSICAL DATA

BOILING RANGE: A: 646 °F (decomposes) B: ~80°F	WEIGHT per GALLON: A: 10.2 Lbs. B: 9.9 Lbs.
VAPOR DENSITY(air=1): A: 8.5 B: 4.6	
% VOLATILE by VOLUME: A: Non-volatile B: 11 - 14 %	EVAPORATION RATE(ether=1): A: <1 B: >1

SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT: A & B - Non-flammable liquids LEL: N/A UEL: N/A

SPECIAL FIRE FIGHTING PROCEDURES: "B" component boils at approximately 80°F and containers must be kept cool with water fog to prevent rupture. Fire fighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes. Do not spray pool fires directly. A solid stream of water directed into hot burning liquid can cause frothing.

UNUSUAL FIRE AND EXPLOSION HAZARD: Contamination of "A" side with water will generate CO₂ gas with possible build-up of pressure in confined spaces. Carbon monoxide may be evolved if combustion is incomplete. Both Polyfoam components are non-flammable and will not explode due to mechanical impact.

WARNING! When exposed to open flame, cured polyurethane foam will present a serious fire hazard.

SECTION V - HEALTH HAZARD DATA

EFFECTS of OVEREXPOSURE: Vapors from the "B" component may displace enough air to cause suffocation. Skin contact with "A" or "B" components may cause irritation. Eye contact with "A" or "B" component causes irritation, redness, tearing and blurred vision.

EMERGENCY & FIRST AID: Eye Contact: Flush with water for 15 minutes and contact a physician as soon as possible. Skin contact: Wash with soap and water and remove contaminated clothing. Ingestion: See a physician
PRIMARY ROUTES of ENTRY: Dermal or inhalation most likely.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Repeated exposure can cause an allergic reaction with the development of occupational asthma. Long term exposure to low vapor concentrations may cause chronically progressive pulmonary disease. Repeated skin contact can result in sensitization

SECTION VI - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Temperature extremes and water contamination.
INCOMPATIBILITY: "A" side reacts with water, alcohols, amines, ammonia and carboxylic acids.
HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete burning may produce nitrogen oxides, hydrogen cyanide, carbon monoxide and/or carbon dioxide.
HAZARDOUS POLYMERIZATION: "A" component reacts slowly with water to produce CO₂ gas.

SECTION VII - SPILL or LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: In enclosed areas, cleanup personnel should wear self contained breathing apparatus. Cover spills with sawdust or other absorbent material to minimize spreading of the material before collecting. "A" component must be neutralized with an equal volume of a 6% ammonia solution in water and allow to react for 10 minutes. Collect into open containers and add more solution. Cover loosely to vent CO₂ gas generated.
WASTE DISPOSAL METHOD: Dispose in accordance with local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use self-contained or supplied air breathing apparatus in areas where the isocyanate concentrations are above the PEL or when the material is being heated, spray applied or applied in poorly ventilated areas.
VENTILATION: Mechanical equipment capable of keeping the vapor concentration below the applicable PEL.
PROTECTIVE GLOVES: Chemical resistant rubber or plastic gloves.
EYE PROTECTION: Safety goggles or face shield.
OTHER PROTECTIVE EQUIPMENT: Eye wash & safety shower should be available.

SECTION IX - SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: Keep containers closed and store in a cool dry place away from direct sunlight. Opened "A" side containers should be blanketed with dry nitrogen before resealing if there is no moisture contamination. If water contamination is suspected, do not reseal.
TOXICOLOGICAL PROPERTIES: The International Isocyanate Institute is currently sponsoring a lifetime study on Polymeric MDI in rats for carcinogenicity. Monomeric MDI is positive for mutagenicity in the Ames assay. Oral LD50 (rats) is greater than 15800mg/Kg. Dermal LD50 (rabbits) is greater than 7900 mg/Kg. Inhalation LC50 (rats-2 hours) is greater than 400 mg/M³ on dust of monomeric MDI. DANGER! Harmful or fatal if swallowed. Vapor harmful. May cause skin or eye irritation. Keep out of the reach of children.

This information is furnished without warranty, representation, inducement or license of any kind, expressed or implied, including any implied warranty of merchantability or of fitness for a particular purpose, except that it is accurate to the best of Gaco Western's knowledge or obtained from sources believed to be accurate. Gaco Western, Inc. does not assume any legal responsibility for use or reliance upon same. It is the user's obligation to determine the conditions of safe use of this product.

MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS, AND RELATED MATERIALS

DATE OF PREP: July 18, 2005

SECTION I

MANUFACTURER'S NAME: Flame Control Coatings, LLC

STREET ADDRESS: 4120 Hyde Park Blvd., P.O. Box 786

CITY, STATE, AND ZIP CODE
Niagara Falls, New York, 14302

EMERGENCY TELEPHONE NUMBER: 800-535-5053
(for emergency info only)

PRODUCT CLASS: Paint

MANUFACTURER'S CODE IDENTIFICATION:
No. 20-20A Flat (Water Base)
Intumescent Fire Retardant Paint

TRADE NAME: Flame Control

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	ACGIH TLV PPM	OSHA PEL PPM	LEL	VAPOR PRESSURE
Titanium Dioxide CAS 13463-67-7	4-9	10 mg/m ³	10 mg/m ³	NA	NA
1,3,5 Triazine , 2,4,6, Triamine CAS 108-78-1	4-9	NE	NE	NA	NA

SECTION III PHYSICAL DATA

Boiling Range: 212F (100C)
Evaporation Rate: Slower than ether
Weight Per Gallon: 10.8 lbs.

Vapor Density: Lighter than air
Percent Volatile by Volume: 49
V.O.C. 0.52 lbs./gl. (63 g/L)

SECTION IV FIRE AND EXPLOSIVE HAZARD DATA

DOT CATEGORY:
Paint, Water Base

FLASH POINT: No flash to boiling (Closed Cup)
LEL: N/A

EXTINGUISHING MEDIA:
Nonflammable

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Containers will generate pressure in a fire and could rupture.

SPECIAL FIRE FIGHTING PROCEDURES: None

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: See Section II

EFFECTS OF OVEREXPOSURE: N/A

EMERGENCY AND FIRST AID PROCEDURES:

Do not ingest. In case of ingestion, induce vomiting. Rinse eyes with water for 15 minutes.

SECTION VI REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID):

HAZARDOUS DECOMPOSITION PRODUCTS: In a fire condition carbon monoxide and/or carbon dioxide can be produced.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Wipe up immediately and discard saturated absorbents. In event of large spills, dike area and pump material into waste tank.

WASTE DISPOSAL METHOD:
Dispose of in accordance with local, state and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:
Respirator or face mask suitable for removing spray mist.

VENTILATION:
MECHANICAL: (General) Acceptable.

PROTECTIVE GLOVES: Yes
EYE PROTECTION: Chemical safety goggles or face shield.
OTHER PROTECTIVE EQUIPMENT: Eye bath

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Keep from freezing and do not store at temperature above 100F.

OTHER PRECAUTIONS:
Avoid skin contact and breathing of vapors. Use with adequate ventilation.

Substances Control Act (TSCA) Inventory Status:
All materials are listed on the EPA TSCA Inventory of Chemical Substances.

HAZARD RATING SYSTEM:
*) This information is for people trained in:
National Paint & Coatings Association's (NPCA) Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704) Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704	HSI
HEALTH	1	1	4 = Severe
FLAMMABILITY	1	1	3 = Serious
REACTIVITY	0	0	2 = Moderate
			1 = Slight
			0 = Minimal

The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Flame Control Coatings, LLC assumes no responsibility for injury from the use of the product described herein.

TECHNICAL SPECIFICATIONS

A. Manufacturing

Foam-in-place insulation shall be TRIPOLYMER® PRIMU or 105 manufactured by C.P. Chemical Company. Both the A component (resin) and B component (catalyst) shall bear the manufacturing lot #, date and product descriptions.

B. Material

The foam-in-place TRIPOLYMER® system shall consist of the A component (resin) and B component (catalyst) supplied by C.P. Chemical. Thickness shall be in accordance with architectural drawings. The insulation shall have the following physical properties:

1. Density of .8 – 1.3 lb./ft.³
2. Compressive Strength 35 psi.
3. Fire Characteristics ASTM E-84
 - Flame Spread 5
 - Smoke 10
 - Fuel 0
4. Thermal Conductivity C-177. @74°F
K factor of 0.219 BTU in/hr - ft² F
5. Water Vapor Transmission ASTM C-355
Permeability - perms-in 15.5 to 16.9
6. Fire Hour Rating ASTM E-119 - 2 Hrs.

C. Installation

Materials shall be installed according to the manufacturer's instructions through equipment manufactured by C.P. Chemical and by a factory trained / certified insulation contractor with a current certification card.

Product Description

TRIPOLYMER® products are phenolic-based methylene linked synthetic polymers. They are made exclusively by C.P. Chemical Company, Inc. Both the chemical and equipment are patented products. The TRIPOLYMER® system consists of two components: an aqueous resin solution (A) and foaming agent / catalyst (B). These materials are ratioed together with compressed air in specially engineered metering and pumping equipment.

Installation

TRIPOLYMER® can be installed in any cavity through 1" – 2" holes or sprayed into new stud construction. Initial set takes approximately 10 – 30 seconds. Final curing is within 48 – 72 hrs., depending upon thickness. TRIPOLYMER® is a cold setting process independent of ambient temperatures. There is no further expansion once the foam leaves the delivery hose.

TRIPOLYMER® is installed by C.P. Chemical's network of certified insulation applicators. Specially engineered equipment have

been designed by C.P. Chemical Company for the application of TRIPOLYMER® insulation and are required in the installation of the foam.

Thermal Stability

There is no thermal degradation or reduction in R value over time with TRIPOLYMER® products. Most polyisocyanurates, polyurethane, and expanded polystyrenes degrade over time, resulting in lower R values.

NOTE: TRIPOLYMER® is not a polyurethane, polyisocyanurate or expanded polystyrene product. It does not contain any petrochemicals or fire retardant chemicals.

TRIPOLYMER®, when exposed to intensive heat or flame, does NOT drip or produce smoke.

Limitations

This material should not be used against surfaces with temperature in excess of 212°F for prolonged periods of time. The foam will not support compressive load nor should it be used for flotation, or underground without adequate protection.

Original Equipment Manufacturing

TRIPOLYMER® is an excellent product for continuous process manufacturing and original equipment manufacturers. Computerized equipment for in-plant installations of TRIPOLYMER® is available. This equipment can be adapted for a number of OEM purposes. For additional information please contact C.P. Chemical.

Properties	ASTM Test Method	Results
Fire Hour Rating	ASTM E-119	2 – (4) Hours
Thermal Conductivity (1)	ASTM C-177	
R, Hr.-Ft. 2 -°F/BTU		
at 75°F mean		4.8
at 35°F mean		5.1
Surface Burning Characteristics (2)	ASTM E-84	
Flame Spread		5
Smoke Development		10
Heat of Combustion	ASTM D-240-73	6,435 btu per lb.
Corrosiveness	DOE (e)(3) HUD 6.2.8	No Perforations No Pitting Less than 0.05g
Water Vapor Transmission	ASTM C-355	
perms - in.		15.9 – 16.9
Sound Transmission Loss	ASTM E413-73	STC 53
Density	ASTM D-1622	
lbs./ft. ³		0.8 – 1.2
Compressive Strength	ASTMD-1621	
psi	Proc A	May-45
Gel Time	DOE (3)(8) HUD 6.2.3	25 sec.
Shrinkage (variable)	DOE (e)(11) HUD 6.2.5	approx. 0 – 1.5%
Fungi Resistance	HUD procedure	No Growth
Toxicity	FHSA	Non Toxic

For Questions Regarding Installation & Use:

Thickness	at 35°F Mean Temperature	at 75°F Mean Temperature
1/2"	3.75	3.6
1"	5.1	4.8
1 1/2"	7.5	7.2
2"	10	9.6
3 1/2"	17.5	16.8
4"	20	19.2

Finished Foam

C.P. CHEMICAL
25 HOME ST
WHITE PLAINS, NY 10606

Material Safety Data Sheet

Phone # 914-428-2517

NAME: TRIPOLYMER® 105/C.M.U. FOAM

TYPE: PHENOLIC BASED, MELAMINE, METHYLENE LINKED, SULFONAMIDE, AMINO FOAM

APPLICATION: THERMAL/ACOUSTICAL/FIREPROOFING CELLULAR INSULATION / INERT ENVIRONMENTAL MEDIA. PROPRIETARY PRODUCT OF C.P. CHEMICAL CO. INC.

SIGNAL WORD

THIS MATERIAL IS NOT A 'HEALTH HAZARD' OR A 'PHYSICAL HAZARD' AS DETERMINED WHEN REVIEWED ACCORDING TO THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 29 CFR 1910.1200

CHEMICAL HAZARD RATING

HEALTH = 1 (SLIGHT)

FIRE = 0 (LEAST)

REACTIVITY = 0 (LEAST)

CAS REGISTRY NO. MATERIAL DESCRIPTION

NONE KNOWN TO C.P. CHEMICAL CO., INC.

PHYSICAL DATA

APPEARANCE	LIGHT DENSITY CELLULAR INSULATION
COLOR	WHITE/BEIGE
WEIGHT	1-2 LBS. CF.
ODOR	DRY/MUSTY.
COMPRESSIVE STRENGTH	5-45 LBS. PER IN. SQ. AT 10% DEFLECTION
PH AT 70°F, CURED DRY FOAM	6-7.0
FREE C6H5OH IN CURED DRY FOAM	< 0.01 % (LESS THAN, NOT DETECTED)
FLAME SPREAD	5
FUEL CONTRIBUTION	0 ASTM-E84
SMOKE DEVELOPED	0
OXYGEN INDEX	28-29
HEAT OF COMBUSTION	6435 Btu PER POUND
ELECTRICAL RESISTANCE (DAMP FOAM)	38 KILO-OHMS (AT 100 MM)
ELECTRICAL RESISTANCE (CURED FOAM)	>20 MEGA-OHMS (AT 100 MM)

ACUTE HEALTH HAZARD DATA

SKIN ABSORPTION: NOT ABSORBED THROUGH THE SKIN

INGESTION: INGESTION OF LARGE AMOUNTS OF CELLULAR INSULATION WILL CAUSE STOMACH UPSET AND/ OR CONSTIPATION

INHALATION: NOT EXPECTED TO BE HARMFUL UNDER NORMAL CONDITIONS OF USE, HOWEVER, IF DUST IS ALLOWED TO BECOME AIRBORNE, IT MAY CAUSE IRRITATION OF NOSE, AND THROAT AND MUCOUS MEMBRANES.

SKIN: FRESHLY GENERATED DAMP FOAM MAY CAUSE IRRITATION ON PROLONGED OR REPEATED CONTACT.

EYES: MAY CAUSE IRRITATION ON PROLONGED OR REPEATED CONTACT IF DUST IS ALLOWED TO BECOME AIRBORNE.

READ NEXT PAGE (CP568-1)

C.P. CHEMICAL
25 HOME STREET
WHITE PLAINS, NY 10606

914-428-2517

NAME: TRIPOLYMER CELLULAR INSULATION #105/CMU
TYPE: PHENOLIC BASED, MELAMINE, METHYLENE LINKED, SULFONAMIDE, AMINO FOAM
APPLICATION: PROPRIETARY PRODUCT C.P. CHEMICAL CO., INC.

HANDLING PRECAUTIONS

INHALATION: IF DUST BECOMES AIRBORNE,
AVOID PROLONGED OR REPEATED INHALATION.

SKIN: AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. FRESHLY
GENERATED DAMP FOAM MAY CAUSE DRYING OF SKIN.

EYES: AVOID CONTACT WITH EYES.

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY
PRACTICES.

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: IF SWALLOWED, INDUCE VOMITING IMMEDIATELY BY GIVING TWO
GLASSES OF WATER AND STICKING FINGER DOWN THROAT. NEVER GIVE
ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.

INHALATION: REMOVE TO FRESH AIR

SKIN CONTACT: IN CASE OF IRRITATIONS, FROM AIRBORNE DUST FLUSH WITH
WATER.

EYE CONTACT: FLUSH THOROUGHLY WITH WATER, IF IRRITATION PERSISTS,
CALL A PHYSICIAN.

FIRE AND EXPLOSION HAZARD DATA

WILL NOT BURN, WILL NOT MELT,
SELF EXTINGUISHING WILL NOT SUPPORT COMBUSTION.

REACTIVITY DATA

STABLE -NON REACTIVE WITH ALKALINE OR ACIDIC SOLUTIONS, METALS, METAL
POWDERS, SOLVENTS, PETRO CHEMICALS, OR COMBUSTIBLE ORGANIC
MATERIALS. DO NOT USE NEAR OR CONTAMINATE WITH OXIDIZERS

CONTROL MEASURES

IF AIRBORNE DUST CONTAMINANTS ARE GENERATED WHEN THE MATERIAL IS
HANDLED, SUFFICIENT VENTILATION IN VOLUME AND AIR FLOW PATTERNS
SHOULD BE PROVIDED TO KEEP AIR CONTAMINANT CONCENTRATION LEVELS
BELOW ACCEPTABLE CRITERIA.

READ NEXT PAGE
(CP568-2)

C.P. CHEMICAL
25 HOME STREET
WHITE PLAINS, NY 10606

914-428-2517

NAME: TRIPOLYMER CELLULAR INSULATION #105/CMU
TYPE: PHENOLIC BASED, MELAMINE, METHYLENE LINKED, SULFONAMIDE, AMINO FOAM
APPLICATION: PROPRIETARY PRODUCT C.P. CHEMICAL CO., INC.

PERSONAL PROTECTION INFORMATION

WHERE AIR CONTAMINANTS CAN EXCEED ACCEPTABLE CRITERIA, USE NIOSH/MSHA APPROVED RESPIRATORY PROTECTION EQUIPMENT. RESPIRATORS SHOULD BE SELECTED BASED ON THE FORM AND CONCENTRATION OF CONTAMINANTS IN AIR IN ACCORDANCE WITH OSHA 29 CFR 1910.134 OR OTHER APPLICABLE STANDARDS OR GUIDELINES. USE GOGGLES IF CONTACT IS LIKELY.

WASTE DISPOSAL METHOD

RECOVER FOAM. RECOVER WASTE AND DISPOSE OF ACCORD TO LOCAL STATE, AND FEDERAL REQUIREMENTS. WILL NOT LEACH TOXIC MATERIALS.

STORAGE PRECAUTIONS

NOT EFFECTED BY HEAT, COLD, SUNLIGHT OR PRECIPITATION. DOES NOT CONTAIN OR EMIT CFC'S, SOLVENTS, PETROLEUM DISTILLATES, LEAD OR LEAD DERIVATIVES OR ASBESTOS DURING USE OR STORAGE.

DOT CLASSIFICATION

NOT REGULATED

THIS IS THE LAST PAGE
(CP568-3)

MSFGFOAM
LAST REVISED 11/20/04

Material Safety Data Sheet

C.P. Chemical Co., Inc.
25 Home St.
White Plains, NY 10606
(914) 428-2517

NAME: TRIPOLYMER #105 C.M.U. FOAMING RESIN

TYPE: LIQUID, WATER BASED PHENOLIC MODIFIED, MELAMINE, SULFONAMIDE,
METHYLENE LINKED AMINO COPOLYMER RESIN

APPLICATION: PROPRIETARY PRODUCT OF C.P. CHEMICAL CO., INC.

SIGNAL WORD

THIS MATERIAL IS NOT A 'HEALTH HAZARD' OR A 'PHYSICAL HAZARD' AS DETERMINED WHEN REVIEWED ACCORDING TO THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 29 CFR 1910.1200 "HAZARD COMMUNICATIONS" STANDARD

GAS REGISTRY NO. MATERIAL DESCRIPTION
NONE KNOWN TO C.P. CHEMICAL CO., INC.

PHYSICAL DATA

APPEARANCE

COLOR

WHITE/HAZY LIQUID

ODOR

GLUE/PASTE/MUSTY

WEIGHT PER GALLON

10.1 - 10.4 LBS.

STORAGE LIFE AT 70F

45 DAYS

Ph @ 21C

7.0 - 7.3

FREE C₆H₅OH IN CURED FOAM RESIN

<0.01%

ACTIVITY INDEX

45 - 50%

CARRIER (VEHICLE)

WATER

ACUTE HEALTH HAZARD DATA

SKIN ABSORPTION: NO HAZARDS KNOWN TO C.P. CHEMICAL CO., INC.

INGESTION: GIVE THE EMPLOYEE LARGE AMOUNTS OF WATER TO DRINK, AND STICK FINGER DOWN THROAT TO INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON. CALL A PHYSICIAN IMMEDIATELY

INHALATION: NOT EXPECTED TO BE HARMFUL UNDER NORMAL CONDITIONS OF USE, HOWEVER, IF ATOMIZED LIQUID IS ALLOWED TO BECOME AIRBORNE, IT MAY CAUSE IRRITATION OF NOSE, THROAT, AND MUCOUS MEMBRANES.

SKIN: MAY CAUSE IRRITATION ON PROLONGED OR REPEATED CONTACT

EYES: MAY CAUSE IRRITATION ON PROLONGED OR REPEATED CONTACT

READ NEXT PAGE (CP568-1)

C.P. Chemical Co., Inc.
25 Home St.
White Plains, NY 10606
(914) 428-2517

NAME: TRIPOLYMER #105 C.M.U. FOAMING RESIN

TYPE: LIQUID, WATER BASED PHENOLIC MODIFIED, MELAMINE, METHYLENE LINKED SULFONAMIDE, AMINO COPOLYMER RESIN

APPLICATION: PROPRIETARY PRODUCT OF C.P. CHEMICAL CO., INC.

HANDLING PRECAUTIONS

INHALATION: AVOID PROLONGED OR REPEATED BREATHING IF LIQUID BECOMES AEROSOL

SKIN: AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WILL CAUSE DRYING OF SKIN

EYES: AVOID CONTACT WITH EYES. USE PROPER EYE PROTECTION. IF RESIN SOLUTION ENTERS THE EYE, FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF COOL WATER. SEE A DOCTOR IMMEDIATELY.

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGENE AND SAFTEY PRACTICES.

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: IF SWALLOWED, INDUCE VOMITING IMMEDIATELY BY GIVING TWO GLASSES OF WARM WATER AND STICKING FINGER DOWN THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON. CALL A PHYSICIAN.

INHALATION: REMOVE TO FRESH AIR.

SKIN CONTACT: IN CASE OF IRRITATIONS, FROM LIQUID RESIN FLUSH WITH COOL WATER.

EYE CONTACT: FLUSH IMMEDIATELY WITH WATER, SEE A PHYSICIAN IMMEDIATELY.

FIRE AND EXPLOSION HAZARD DATA

WILL NOT BURN UNLESS WATER IS EVAPORATED.

SELF EXTINGUISHING WILL NOT SUPPORT COMBUSTION.

REACTIVITY DATA

IF WATER IS ALLOWED TO EVAPORATE, DRY POWDER WILL BECOME FLAMABLE WITH STRONG OXIDIZERS. DO NOT STORE NEAR STRONG OXIDIZERS.

RESIN WILL REACT WITH STRONG ACIDS OR ALKALIS TO FORM SOLID MASSES.

MATERIAL IS STABLE AND NON-REATIVE WITH METALS, METAL POWDERS, SOLVENTS, PETRO-CHEMICALS. OR COMBUSTIBLE MATERIALS.

CONTROL MEASURES

IF AIRBORNE CONTAMINANTS ARE GENERATED WHEN MATERIAL IS HANDLED, SUFFICIENT VENTILATION IN VOLUME AND AIRFLOW PATTERNS SHOULD BE PROVIDED TO KEEP AIR CONTAMINANT CONCENTRATION LEVELS BELOW ACCEPTABLE CRITERIA.

READ NEXT PAGE (CP568-2)

C.P. Chemical Co., Inc.
25 Home St.
White Plains, NY 10606
(914) 428-2517

NAME: TRIPOLYMER #105 C.M.U. FOAMING RESIN

TYPE: LIQUID, WATER BASED PHENOLIC MODIFIED, MELAMINE, METHYLENE LINKED SULFONAMIDE, AMINO COPOLYMER RESIN

APPLICATION: PROPRIETARY PRODUCT OF C.P. CHEMICAL CO., INC.

PERSONAL PROTECTION INFORMATION

WHERE AIR CONTAMINANTS CAN EXCEED ACCEPTABLE CRITERIA, USE MIOSH / MSHA APPROVED RESPIRATORY PROTECTION EQUIPMENT. RESPIRATORS SHOULD BE SELECTED BASED ON THE FORM AND CONCENTRATION OF CONTAMINANTS IN AIR IN ACCORDANCE WITH OSHA 29 CFR 1910.1200 OR OTHER APPLICABLE STANDARDS OR GUIDELINES. USE GOGGLES IF CONTACT IS LIKELY. WEAR IMPERVIOUS GLOVES AS REQUIRED TO PREVENT SKIN CONTACT.

WASTE DISPOSAL METHOD

RECOVER FREE LIQUID, ABSORB RESIDUE AND DISPOSE OF ACCORDING TO LOCAL, STATE, AND FEDERAL REQUIREMENTS.

STORAGE PRECAUTIONS

DO NOT FREEZE

STORE IN A COOL PLACE, HIGH TEMPERATURES SHORTEN STORAGE LIFE. PMIU RESIN THICKENS WITH AGE, ROTATE STOCK IN STORAGE TO USE OLDEST FIRST. REFER TO PRODUCT SPECIFICATIONS.

DOT CLASSIFICATION

NOT REGULATED

THIS IS THE LAST PAGE
(CP568-3)

MSFGresin
LAST REVISED 03/30/03

MATERIAL SAFETY DATA SHEET

C.P. CHEMICAL CO., INC.
25 Home Street
White Plains, NY 10606
(914) 428-2517

NAME: TRIPOLYMER 105 / C.M.U. FOAMING AGENT

TYPE: LIQUID ACIDIC FOAMING & EMULSIFYING AGENT

APPLICATION: PROPRIETARY PRODUCT C.P. CHEMICAL CO., INC.

SIGNAL WORD = CORROSIVE

THIS MATERIAL WILL CAUSE IRRITATION TO SKIN AND EYES. FLUSH SKIN OR EYES WITH COPIUS AMOUNTS OF WATER. SEE A PHYSICIAN FOR EYE CONTACT OR IF INGESTED.

FIRST AID AS FOR STRONG ACID

CHEMICAL HAZARD RATING

HEALTH = 2 (MODERATE)

FIRE = 0 (LEAST)

REACTIVITY = 0 (LEAST)

29CFR1910.1200 HAZARDOUS INGREDIENTS / REPORTED HEALTH EFFECTS

CAS REGISTRY NO. 7664-38-2

PHOSPHORIC ACID

CAS REGISTRY NO. 27176-87-0

DODECYLBENZENESULFONIC ACID

CAS REGISTRY NO. 14260-98-1

2-BUTOXYETHANOL DIHYDROGEN PHOSPHATE

PHYSICAL DATA

APPEARANCE

LIGHT BROWN / DARK RED LIQUID

ODOR

SWEET/MUSTY

WEIGHT PER GALLON

10.6 # GAL

FREE H₃PO₄

40%

2-BUTOXYETHANOL DIHYDROGEN PHOSPHATE

<15%

% DODECYLBENZENESULFONIC ACID

<15%

STORAGE LIFE

INDEFINITE

PH @ 21 °C

1.0 - 3.0

BOILING POINT

213 °F

SOLUBILITY IN H₂O

COMPLETE

% H₂O

>30%

ACUTE HEALTH HAZARD DATA

DANGER CAUSES BURNS TO EYES AND SKIN

INGESTION: IF INGESTED, FIRST AID AS FOR STRONG ACID. CALL A PHYSICIAN.

VENTILATION: PROVIDE VENTILATION TO MINIMIZE EXPOSURE. LOCAL EXHAUST FAN PREFERRED.

READ NEXT PAGE

(CP569-1)

C.P. CHEMICAL CO., INC.
25 Home Street
White Plains, NY 10606
(914) 428-2517

MATERIAL SAFETY DATA SHEET

NAME: TRIPOLYMER 105 & C.M.U. FOAMING AGENT - CATALYST CONCENTRATE
TYPE: LIQUID ACIDIC FOAMING & EMULSIFYING AGENT
APPLICATION: PROPRIETARY PRODUCT C.P. CHEMICAL CO., INC

ACUTE HEALTH HAZARD DATA -CONTINUED-

SKIN PROTECTION: WEAR APPROPRIATE IMPERVIOUS GLOVES AND PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. WEAR FACE SHIELDS AND IMPERVIOUS APRONS WHEN SPLASHING IS LIKELY. WASH CONTAMINATED SKIN PROMPTLY.

HANDLING PRECAUTIONS

INHALATION: AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.
SKIN: AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.
EYES: AVOID CONTACT WITH EYES.
HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGENE AND SAFETY PRACTICES.

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: IF SWALLOWED, WASH OUT MOUTH WITH WATER IMMEDIATELY BY GIVING PLENTY OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON. CALL A PHYSICIAN. OBTAIN MEDICAL ATTENTION URGENTLY. DO NOT INDUCE VOMITING. TREAT AS FOR STRONG ACID.
SKIN CONTACT: IN CASE OF IRRITATION, FLUSH WITH WATER.
EYE CONTACT: FLUSH THOROUGHLY WITH WATER. SEE A PHYSICIAN IMMEDIATELY.

FIRE AND EXPLOSION HAZARD DATA

WILL NOT BURN UNLESS WATER HAS EVAPORATED. IN CASE OF FIRE, USE WATER SPRAY, DRY CHEMICAL, FOAM, OR CO₂, USE WATER TO KEEP FIRE - EXPOSED CONTAINERS COOL.

REACTIVITY DATA

NORMALLY STABLE AS DEFINED IN NFPA 704-12 (4-3.1).
DECOMPOSITION PRODUCTS: SO₃, SO₂, H₂S, CO.

CONTROL MEASURES

IF AIRBORNE CONTAMINATES ARE GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, SUFFICIENT VENTILATION IN VOLUME AND AIR FLOW PATTERNS SHOULD BE PROVIDED TO KEEP AIR CONTAMINANT CONCENTRATION LEVELS BELOW ACCEPTABLE CRITERIA.

READ NEXT PAGE
(CP569-2)

25 Home Street
White Plains, NY 10606
(914) 428-2517

MATERIAL SAFETY DATA SHEET

NAME: TRIPOLYMER 105 & C.M.U. FOAMING AGENT - CATALYST CONCENTRATE
TYPE: LIQUID ACIDIC FOAMING & EMULSIFYING AGENT
APPLICATION: PROPRIETARY PRODUCT C.P. CHEMICAL CO., INC.

PERSONAL PROTECTION INFORMATION - CONTINUED -

WHERE AIR CONTAMINANTS CAN EXCEED ACCEPTABLE CRITERIA, USE NIOSH / MSHA APPROVED RESPIRATORY PROTECTION EQUIPMENT. RESPIRATORS SHOULD BE SELECTED BASED ON THE FORM AND CONCENTRATION OF CONTAMINANTS IN AIR IN ACCORDANCE WITH OSHA 29 CFR 1910.134 OR OTHER APPLICABLE STANDARDS OR GUIDELINES.

USE GOGGLES IF CONTACT IS LIKELY.

WEAR IMPERVIOUS GLOVES AS REQUIRED TO PREVENT SKIN CONTACT.

SPILL OR LEAK PROCEDURES

LARGE QUANTITIES: ENCLOSE WITH DIKING MATERIAL TO PREVENT SEEPAGE INTO NATURAL BODIES OF WATER, THEN CONSULT C.P. CHEMICAL CO., INC.

SMALL QUANTITIES: SOAK UP WITH ABSORBANT MATERIAL AND REMOVE TO A CHEMICAL DISPOSAL AREA.

WASTE DISPOSAL METHOD: RECOVER FREE LIQUID. ABSORB RESIDUE AND DISPOSE OF ACCORDING TO LOCAL, STATE, AND FEDERAL REQUIREMENTS.

STORAGE PRECAUTIONS:

NOT HARMED BY FREEZING.

STORE IN A COOL PLACE.

DOT HAZARD CLASSIFICATION

CORROSIVE MATERIAL / UN 1805

THIS IS THE LAST PAGE
(CP569-3)
MSDCFG

Last Revised: 5/30/05