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EMERGENCY TELEPHONE NUMBER: (920) 458-2127

For effective hazard communication, this MSDS must be made available to those who handle or use the product and to those who control conditions of handling or use. Please send this MSDS to all appropriate individuals in your organization, especially those responsible for health and safety.

PRODUCT INFORMATION

PRODUCT NAME : PLENCO 08235

CAS NO. : N/A

CHEMICAL FAMILY: BULK MOLDING COMPOUND

CHEMICAL NAME : UNSATURATED POLYESTER MOLDING COMPOUND

REVISION DATE : 04/10/02 REVISION NUMBER : 0

NOTE: UNLESS SPECIFICALLY INDICATED OTHERWISE, THE FOLLOWING INFORMATION APPLIES TO THE COMPOUND IN THE FORM SOLD, NOT TO ARTICLES, PARTS, ETC. MOLDED FROM THE COMPOUND; IN NORMAL MOLDING, THE MATERIAL SUBSTANTIALLY COMPLETES ITS PROGRESSION TO A CROSS-LINKED INSOLUBLE, INFUSIBLE SOLID.

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S E C T I O N 1 HEALTH HAZARD DATA

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BULK MOLDING COMPOUND IS A SOLID SYSTEM THAT CONTAINS VOLATILE MONOMERS STYRENE AND/OR VINYL TOLUENE.

AS SOLD:

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THE PRODUCT IS A POLYESTER MOLDING COMPOUND: IT IS A FIBROUS DOUGH WITH A STYRENE AND/OR VINYL TOLUENE ODOR; A POLYESTER RESIN SOLUTION INTIMATELY MIXED WITH ONE OR MORE OF A VARIETY OF INORGANIC FILLING MATERIALS, INCLUDING FIBROUS GLASS. WHEN FULLY COMPOUNDED, THE PLASTIC RESIN BINDS THE WELL-DISPERSED, EMBEDDED FILLING MATERIALS WITHIN THE COMPOUND, WHICH THUS DO NOT CONSTITUTE AN INHALATION HAZARD. STYRENE AND VINYL TOLUENE ARE IRRITANTS TO SKIN, EYES, AND RESPIRATORY TRACT. EXCESSIVE EXPOSURE MAY CAUSE STOMACH OR INTESTINAL UPSET, DIZZINESS, DROWSINESS, FATIGUE OR HEADACHE. FIBROUS GLASS IS A MECHANICAL IRRITANT TO SKIN, EYES AND NOSE. THE IARC CLASSIFIED STYRENE IN GROUP 2B (POSSIBLY CARCINOGENIC TO HUMANS). THE IARC CONCLUDED THAT THERE WAS NO CONVINCING EVIDENCE FOR CARCINOGENIC ACTION OF STYRENE IN ANIMALS BASED ON THE ANIMAL STUDIES WHICH EXISTED AT THE TIME RATHER, THE IARC 2B LISTING WAS BASED ON DATA FOR STYRENE OXIDE, A METABOLITE OF STYRENE.

AS USED:

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DURING POLYMERIZATION (E.G., CURING OF THE PRODUCT DURING NORMAL PROCESSING) SOME STYRENE AND/OR VINYL TOLUENE VAPORS ARE EXPECTED TO BE RELEASED. DURING DECOMPOSITION (E.G., OVERHEATING OR BURNING OF THE PRODUCT) NORMAL PRODUCTS OF COMBUSTION WOULD BE EXPECTED. GRINDING OR MACHINING OF CURED MOLDED MATERIAL MAY CREATE A DUST THAT POSES A RESPIRATORY HAZARD IF INHALED AND THAT MAY BE AN IRRITANT TO SKIN.

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## ADDITIONAL ACUTE OR CHRONIC HEALTH HAZARD INFORMATION

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ORDINARY USE OF THIS PRODUCT IS UNLIKELY TO PRODUCE SIGNIFICANT EXPOSURE TO HAZARDOUS CHEMICALS. PELS FOR THESE CHEMICALS ARE SET AT LEVELS DESIGNED TO AVOID ANY SIGNIFICANT HEALTH RISK AND ARE ACHIEVABLE WITH PROPER MATERIAL HANDLING PROCEDURES, VENTILATION AND HOUSEKEEPING. NEVERTHELESS, PER OSHA REQUIREMENT, WE LIST THE FOLLOWING POSSIBLE HEALTH HAZARDS IF ONE WERE EXPOSED TO THE FOLLOWING CHEMICALS AT LEVELS MUCH HIGHER, OR IN A DIFFERENT FORM, THAN EXPECTED FROM ORDINARY USE OF THIS PRODUCT:

GROUND CALCIUM CARBONATE - IRRITANT TO SKIN AND EYES.

KAOLIN - IRRITANT TO SKIN, EYES, AND RESPIRATORY TRACT.

CARBON BLACK - IRRITANT TO EYES AND RESPIRATORY TRACT. EXPOSURE AT HIGH LEVELS IS ASSOCIATED WITH DECLINES IN PULMONARY FUNCTION AND CARDIOVASCULAR STRESS.

ZINC STEARATE - IRRITANT TO SKIN AND EYES.

FIBROUS GLASS - CAN CAUSE IRRITATION AND INFLAMMATION OF THE NASOPHARYNGEAL REGION AND UPPER RESPIRATORY TRACT. MECHANICAL SKIN IRRITANT.

STYRENE OXIDE - CALIFORNIA LAW, PROPOSITION 65, REQUIRES THE FOLLOWING STATEMENT: STYRENE, IN THE PRESENCE OF AIR AND HIGH TEMPERATURE OR PROLONGED EXPOSURE TO STYRENE/AIR MIXTURE TO SUNLIGHT, CAN REACT TO FORM STYRENE OXIDE. STYRENE OXIDE IS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER. ACCORDING TO THE U.S. DEPT OF HEALTH AND HUMAN SERVICES, STYRENE OXIDE IS LISTED IN THE REPORT ON CARCINOGENS AS "REASONABLY ANTICIPATED TO BE A HUMAN CARCINOGEN."

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## S E C T I O N 2 FIRST AID

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EYES : IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

SKIN : WASH THOROUGHLY WITH SOAP AND WATER.

INHALATION : USE WITH ADEQUATE VENTILATION. IF BREATHING IS AFFECTED, REMOVE TO FRESH AIR. IF BREATHING STOPS, APPLY MOUTH TO MOUTH RESUSCITATION. GET MEDICAL ATTENTION.

INGESTION : DO NOT INDUCE VOMITING. IF INGESTED SEEK MEDICAL ATTENTION.

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## S E C T I O N 3 FIRE AND EXPLOSION DATA

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FLASH POINT: NOT APPLICABLE

FLAMMABLE LIMITS - LEL 1.1% STYRENE UEL: 6.1% STYRENE  
1.1% VINYL TOLUENE 5.2% VINYL TOLUENE

EXTINGUISHING MEDIA: WATER SPRAY, FOAM, DRY CHEMICAL, CARBON DIOXIDE

SPECIAL FIRE FIGHTING PROCEDURES: MSHA/NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS RECOMMENDED. AVOID INHALATION OF GASES.

UNUSUAL FIRE AND EXPLOSION HAZARDS: STYRENE AND VINYL TOLUENE VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

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 S E C T I O N 4 CONTROL MEASURES  
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WORK/HYGIENIC PRACTICES: EYE WASH AND SHOWER FACILITY SHOULD BE AVAILABLE. PRACTICE GOOD HYGIENE AND MAINTAIN A CLEAN WORK ENVIRONMENT.

VENTILATION: POINT SOURCE EXHAUST RECOMMENDED TO REMOVE VAPORS EVOLVED DURING USE. USE EXPLOSION PROOF MOTORS.

RESPIRATORY PROTECTION: NIOSH APPROVED RESPIRATORS RECOMMENDED IF TLVS ARE EXCEEDED.

PROTECTIVE CLOTHING: GLOVES RECOMMENDED.

EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS.

STORAGE: STORE IN A COOL, DRY PLACE. KEEP CONTAINERS CLOSED AND SEALED TO AVOID CONTAMINATION AND LOSS OF MONOMER. AVOID EXCESSIVE HEAT AND SOURCES OF IGNITION. OBSERVE GOOD HOUSEKEEPING PRACTICES.

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 S E C T I O N 5 PHYSICAL DATA  
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BOILING POINT: N/A SPECIFIC GRAVITY: 1.6 - 2.3  
 (H2O = 1)

VAPOR PRESSURE: STYRENE 4.5MM Hg PERCENT VOLATILE: 5-15%  
 (MM HG 20 DEG C) VINYL TOLUENE 1.0MM HG (BY WEIGHT)

VAPOR DENSITY: STYRENE 3.59 EVAPORATION RATE: N/A  
 (AIR = 1) VINYL TOLUENE 4.08 (BUTYL ACETATE = 1)

HEAT OF VAPORIZATION: N/A SOLUBILITY IN WATER: NEGLIGIBLE  
 (DELTA HV) (% BY WEIGHT)

APPEARANCE AND ODOR: FIBROUS DOUGH WITH A STYRENE AND/OR VINYL TOLUENE ODOR

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 S E C T I O N 6 HAZARDOUS INGREDIENTS/SARA TITLE III  
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CHEMICALS MARKED WITH AN ASTERISK (\*) ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

	CAS#	PERCENT	TLV/PEL	
*STYRENE	100-42-5	0-12	ACGIH-TWA	20 PPM
			OSHA-TWA	50 PPM
VINYL TOLUENE	25013-15-4	0-12	ACGIH-TWA	50 PPM
			OSHA-TWA	100 PPM
CALCIUM CARBONATE	1317-65-3	0-75	ACGIH-TWA	10 MG/M3
			OSHA-TWA/TOTAL	15 MG/M3
			OSHA-TWA/RESP	5 MG/M3
FIBROUS GLASS	N/A	0-45	ACGIH-TWA/INHAL	5 MG/M3
			OSHA-TWA/TOTAL	15 MG/M3
			OSHA-TWA/RESP	5 MG/M3

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	CAS#	PERCENT	TLV/PEL	
CARBON BLACK	1333-86-4	0-5	ACGIH-TWA	3.5 MG/M3
			OSHA-TWA	3.5 MG/M3
KAOLIN	1332-58-7	0-15	ACGIH-TWA	2 MG/M3
			OSHA-TWA/INHAL	15 MG/M3
			OSHA-TWA/RESPIR	5 MG/M3
*ZINC STEARATE	557-05-1	0-5	OSHA-TWA/INHAL	15 MG/M3
			OSHA-TWA/RESPIR	5 MG/M3
PARTICULATES NOT OTHERWISE CLASSIFIED (PNOC)		0-75	ACGIH-TWA/INHAL	10 MG/M3
			ACGIH-TWA/RESPIR	3 MG/M3
			OSHA-TWA/INHAL	15 MG/M3
			OSHA-TWA/RESPIR	5 MG/M3

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S E C T I O N 7 REACTIVITY DATA

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STABILITY: STABLE. AVOID CONTAMINATION AND EXPOSURE TO FLAME OR HEAT. FOR NORMAL SHELF LIFE AVOID STORAGE AT TEMPERATURES IN EXCESS OF 70 DEGREES F.

INCOMPATIBILITY: THIS PRODUCT IS SENSITIVE TO STRONG OXIDIZERS, STRONG MINERAL ACIDS, AND STRONG ALKALIES.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, AND VARIOUS HYDROCARBONS.

HAZARDOUS POLYMERIZATION: SHOULD NOT OCCUR.

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S E C T I O N 8 SPILL, LEAK, AND DISPOSAL

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SPILL OR LEAK PROCEDURE: SWEEP UP MATERIAL AND PLACE IN ORIGINAL PACKAGING.

WASTE DISPOSAL: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

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S E C T I O N 9 TRANSPORTATION INFORMATION

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SHIPPING CLASSIFICATION

D.O.T. HAZARD CLASS

PLASTIC MATERIALS VIZ:  
SOLID MASS NMFC ITEM #156200

NON-HAZARDOUS

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S E C T I O N 10      ADDITIONAL INFORMATION  
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N/A = NOT APPLICABLE

TOTAL = TOTAL DUST

RESPIR. = RESPIRABLE DUST

FOR ADDITIONAL INFORMATION CALL: (920) 458-2127

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