



GENERAL COATINGS, INC.

HMIS SYSTEM
HEALTH 3
FLAMMABILITY 1
REACTIVITY 1
PROTECTION B

MATERIAL SAFETY DATA SHEET

(PREPARED IN ACCORDANCE WITH 29 CFR 1910, 1200)

SECTION I -- PRODUCT AND COMPANY IDENTIFICATION

DIVISION ADDRESS:

GENERAL COATINGS, INC.
P.O. BOX 1352
CLOVIS, CA 93613

24-HR EMERGENCY NO:

CHEMTREC: (800) 424-9300

CUSTOMER INFORMATION: (559) 495-4004

TRADE NAME: **ULTRA-THANE 230**
"COMPONENT A"

CHEMICAL NAME: POLYMERIC MDI

CHEMICAL FAMILY: AROMATIC ISOCYANATE

FORMULA: COMPLEX MIXTURE

SECTION II -- HAZARDOUS INGREDIENTS

<u>COMPONENT</u>	<u>AMOUNT</u>	<u>CAS NUMBER</u>	<u>HAZARD DATA</u>
POLYMERIC MDI	45-55%	9016-87-9	ACGIH: NOT ESTABLISHED OSHA: NOT ESTABLISHED
4,4'-DIPHENYLMETHANE DIISOCYANATE (4,4' MDI)	45%	101-68-8	ACGIH: .005 PPM TWA OSHA: .02 PPM CEILING
MDI MIXED ISOMERS	1-10%	26447-40-5	ACGIH: NOT ESTABLISHED OSHA: NOT ESTABLISHED

SECTION III -- PHYSICAL DATA

APPEARANCE: DARK BROWN LIQUID

ODOR: SLIGHTLY MUSTY

FLASH POINT: 425°F (218°C)

VAPOR PRESSURE (MM HG @ 20°C): APPROX. 4×10^{-6}

VOLATILE ORGANIC COMPOUND (VOC) : 0 GRAMS/LITER

VAPOR DENSITY (AIR=1): 8.5 APPROX.

SOLUBILITY (WATER): (REACTS WITH WATER)

SOLUBILITY (OTHER): SOLUBLE IN MOST ORGANIC
SOLVENTS.

SPECIFIC GRAVITY: 1.24 APPROX. (AT 25°C)

EVAPORATION RATE: NOT AVAILABLE

SECTION IV--FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 425°F (218°C)

EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, FOAM, WATER SPRAY FOR LARGE FIRES.

FIRE FIGHTING PROTECTIVE EQUIPMENT: USE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING.

SPECIAL FIRE FIGHTING PROCEDURES: AT TEMPERATURES GREATER THAN 400°F (204°C), POLYMERIC MDI CAN POLYMERIZE AND DECOMPOSE WHICH CAN CAUSE PRESSURE BUILD-UP IN CLOSED CONTAINERS. EXPLOSIVE RUPTURE IS POSSIBLE. THEREFORE, USE COLD WATER TO COOL FIRE-EXPOSED CONTAINERS.

SECTION V--HEALTH HAZARD DATA

INHALATION: THIS PRODUCT IS A RESPIRATORY IRRITANT AND POTENTIAL RESPIRATORY SENSITIZER. SYMPTOMS MAY INCLUDE IRRITATION TO THE EYES, NOSE, THROAT AND LUNGS, POSSIBLY COMBINED WITH DRYNESS OF THE THROAT, TIGHTNESS OF CHEST AND DIFFICULTY IN BREATHING AND/OR FLU-LIKE SYMPTOMS.

SKIN CONTACT: MODERATE IRRITANT. REPEATED AND/OR PROLONGED CONTACT MAY CAUSE SKIN SENSITIZATION. THERE IS LIMITED EVIDENCE FROM ANIMAL STUDIES THAT SKIN CONTACT MAY PLAY A ROLE IN RESPIRATORY SENSITIZATION.

EYE CONTACT: THE AEROSOL, VAPOR OR LIQUID WILL IRRITATE HUMAN EYES FOLLOWING CONTACT.

INGESTION: INGESTION MAY CAUSE IRRITATION OF THE GASTROINTESTINAL TRACT. BASED ON THE ACUTE ORAL LD50, THIS PRODUCT IS CONSIDERED PRACTICALLY NON-TOXIC BY INGESTION.

CARCINOGENICITY: THE INGREDIENTS OF THIS PRODUCT ARE NOT CLASSIFIED AS CARCINOGENIC BY ACGIH OR IARC, NOT REGULATED AS CARCINOGENS BY OSHA, AND NOT LISTED AS CARCINOGENS BY NTP.

MUTAGENICITY: THERE IS NO SUBSTANTIAL EVIDENCE OF MUTAGENIC POTENTIAL.

REPRODUCTIVE EFFECTS: NO ADVERSE REPRODUCTIVE EFFECTS ARE ANTICIPATED.

SECTION VI--FIRST AID MEASURES

INHALATION: MOVE TO AN AREA FREE FROM RISK OF FURTHER EXPOSURE. OBTAIN MEDICAL ATTENTION.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING. WASH AFFECTED SKIN THOROUGHLY WITH SOAP AND WATER. WASH CONTAMINATED CLOTHING THOROUGHLY BEFORE REUSE. FOR SEVERE EXPOSURES, GET UNDER SAFETY SHOWER AFTER REMOVING CLOTHING, THEN GET MEDICAL ATTENTION. FOR LESSER EXPOSURES, SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS AFTER THE AREA IS WASHED.

EYE CONTACT: IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR A MINIMUM OF 15 MINUTES. IF IRRITATION PERSISTS, REPEAT FLUSHING. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

INGESTION: DO NOT INDUCE VOMITING. PROVIDED THE PATIENT IS CONSCIOUS, WASH OUT MOUTH WITH WATER THEN GIVE 1 OR 2 GLASSES OF WATER TO DRINK. REFER PERSON TO MEDICAL PERSONNEL FOR IMMEDIATE ATTENTION.

NOTE TO PHYSICIANS: SYMPTOMATIC AND SUPPORTIVE THERAPY AS NEEDED. FOLLOWING SEVERE EXPOSURE MEDICAL FOLLOW-UP SHOULD BE MONITORED FOR AT LEAST 48 HOURS.

SECTION VII--REACTIVITY DATA

STABILITY: THIS IS A STABLE MATERIAL

HAZARDOUS POLYMERIZATION: POLYMERIZATION MAY OCCUR AT ELEVATED TEMPERATURES IN THE PRESENCE OF ALKALIES, TERTIARY AMINES AND METAL COMPOUNDS.

INCOMPATIBILITY: THIS PRODUCT WILL REACT WITH ANY MATERIALS CONTAINING ACTIVE HYDROGENS SUCH AS WATER, ALCOHOL, AMINES, BASES AND ACIDS. THE REACTION WITH WATER IS VERY SLOW UNDER 122°F (50°C) BUT IS ACCELERATED AT HIGHER TEMPERATURES.

CONDITIONS TO AVOID: AVOID FREEZING. AVOID HIGH TEMPERATURES.

HAZARDOUS DECOMPOSITION PRODUCTS: HIGHLY UNLIKELY UNDER NORMAL INDUSTRIAL USE. UNDER EXTREME HEAT AND FIRE, CARBON MONOXIDE, OXIDES OF NITROGEN, TRACES OF HCN, MDI VAPORS OR AEROSOLS.

SECTION VIII--SPILL OR LEAK PROCEDURES

SPILLS, LEAKS, OR RELEASES: CONTAIN AND ABSORB LARGE SPILLAGES ONTO AN INERT, NON-FLAMMABLE ADSORBENT CARRIER (SUCH AS EARTH OR SAND). SHOVEL INTO OPEN-TOP DRUMS OR PLASTIC BAGS FOR FURTHER DECONTAMINATION, IF NECESSARY. WASH THE SPILLAGE AREA CLEAN WITH LIQUID DECONTAMINATE. REMOVE AND PROPERLY DISPOSE OF RESIDUES. NOTIFY APPLICABLE GOVERNMENT AUTHORITIES IF RELEASE IS REPORTABLE. THE CERCLA RQ FOR MDI IS 5000 LBS.

DISPOSAL METHOD: DISPOSE OF WASTE MATERIAL IN AN APPROVED FACILITY IN ACCORDANCE WITH CURRENT FEDERAL, STATE AND LOCAL REQUIREMENTS.

SECTION IX--PERSONAL PROTECTION

EYE PROTECTION: CHEMICAL SAFETY GOGGLES. IF THERE IS A POTENTIAL FOR SPLASHING, USE A FULL FACE SHIELD.

SKIN PROTECTION: PERMEATION RESISTANT GLOVES (BUTYL RUBBER, NEOPRENE, NITRILE RUBBER,) SHOULD BE USED. THIN LATEX DISPOSABLE GLOVES SHOULD BE AVOIDED FOR REPEATED OR LONG TERM USE. COVER AS MUCH EXPOSED SKIN AREA AS POSSIBLE WITH APPROPRIATE CLOTHING.

RESPIRATORY PROTECTION: AIR PURIFYING RESPIRATORS EQUIPPED WITH ORGANIC VAPOR CARTRIDGES MAY BE USED. WHEN THE PRODUCT IS SPRAYED OR HEATED WITHOUT ADEQUATE VENTILATION, AN APPROVED MSHA/NIOSH POSITIVE-PRESSURE, SUPPLIED-AIR RESPIRATOR MAY BE REQUIRED.

SECTION X--STORAGE AND HANDLING

STORAGE TEMPERATURE: IDEAL STORAGE TEMPERATURE IS 60-100°F (16-38°C).

HANDLING: AVOID PERSONAL CONTACT. SEE SECTION X FOR PROPER PERSONAL PROTECTION. AVOID BREATHING AEROSOLS, MISTS AND VAPORS.

STORAGE: KEEP CONTAINERS PROPERLY SEALED. KEEP CONTENTS AWAY FROM MOISTURE. DUE TO REACTION WITH WATER, PRODUCING CO₂ GAS, A HAZARDOUS BUILD-UP OF PRESSURE COULD RESULT IF CONTAMINATED CONTAINERS ARE RESEALED. DO NOT RESEAL CONTAMINATED CONTAINERS. UNCONTAMINATED CONTAINERS, FREE OF MOISTURE, MAY BE RESEALED ONLY AFTER PLACING UNDER A NITROGEN BLANKET. DO NOT STORE IN CONTAINERS MADE OF COPPER, COPPER ALLOYS, OR GALVANIZED SURFACES.

SECTION XI--REGULATORY INFORMATION

US DOT REGULATIONS: SINGLE CONTAINERS LESS THAN 5,000 LBS. ARE NOT REGULATED. SINGLE CONTAINERS WITH 5,000 LBS. OR MORE OF 4,4'-MDI ARE REGULATED AS: OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (METHYLENE DIPHENYL DIISOCYANATE), 9, NA3082, PGIII, RQ.

OSHA CLASSIFICATION: THIS PRODUCT IS CLASSIFIED AS A HAZARDOUS MATERIAL UNDER THE CRITERIA OUTLINED IN THE OSHA HAZARD COMMUNICATION STANDARD (HCS) (29 CFR 1910.1200).

TSCA (TOXIC SUBSTANCES CONTROL ACT): ALL INGREDIENTS ARE ON THE TSCA CHEMICAL SUBSTANCE INVENTORY.

SARA TITLE III SECTION 302: NONE

SARA TITLE III SECTION 311/312: IMMEDIATE HEALTH HAZARD; DELAYED HEALTH HAZARD.

SARA TITLE III SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBJECT TO REPORTING REQUIREMENTS: 100% DIISOCYANATE COMPOUNDS (CATEGORY CODE N120).

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT): 4,4-METHYLENE DIPHENYL DIISOCYANATE (CAS 101-68-8) HAS A 5,000 LB. RQ (REPORTABLE QUANTITY). ANY SPILL OR RELEASE ABOVE THE RQ MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (800-424-8802). THE % OF 4,4'-MDI IN THIS PRODUCT IS LISTED IN SECTION II OF THIS MSDS.

CALIFORNIA PROPOSITION 65: THIS PRODUCT CONTAINS NO LEVELS OF LISTED SUBSTANCES, WHICH THE STATE OF CALIFORNIA HAS FOUND TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM, WHICH WOULD REQUIRE A WARNING UNDER THE STATUTE.

DISCLAIMER:

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of General Coatings, Inc., knowledge, or obtained from sources believed by General Coatings, Inc., to be accurate, and General Coatings, Inc. does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product, read its label.

DATE PREPARED: 5/15/89

DATE REVISED: 12/15/04



MATERIAL SAFETY DATA SHEET

(PREPARED IN ACCORDANCE WITH 29 CFR 1910, 1200)

HMS SYSTEM
HEALTH 1
FLAMMABILITY 1
REACTIVITY 0
PROTECTION B

SECTION I--PRODUCT AND COMPANY IDENTIFICATION

DIVISION ADDRESS:
GENERAL COATINGS, INC.
P.O. BOX 1352
CLOVIS, CA 93613

24-HR EMERGENCY NO:

CHEMTREC: (800) 424-9300

CUSTOMER INFORMATION: (559) 495-4004

TRADE NAME: **ULTRA-THANE 230**
"COMPONENT B"
CHEMICAL NAME: HYDROXY TERMINATED
POLYOL BLEND
CHEMICAL FAMILY: POLYOL SYSTEM
FORMULA: COMPLEX MIXTURE

SECTION II--COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS NUMBER</u>	<u>HAZARD DATA</u>
AROMATIC POLYESTER POLYOL	MIXTURE	NONE ESTABLISHED
1,1,1,3,3-PENTAFLUOROPROPANE	460-73-1	NONE ESTABLISHED
OXIRANE POLYETHER POLYOL	MIXTURE	NONE ESTABLISHED
ALIPHATIC AMINE BASE POLYOL	MIXTURE	NONE ESTABLISHED
DIMETHYLAMINOETHANOL	108-01-0	TWA, EXPOSURE LIMIT=5.0 PPM STEL, EXPOSURE LIMIT=25.0 PPM
DIMETHYLCYCLOHEXYLAMINE	98-94-2	NONE ESTABLISHED
OTHER COMPONENTS	TRADE SECRET	NONE ESTABLISHED

SECTION III--PHYSICAL DATA

APPEARANCE: LIGHT BROWN LIQUID

ODOR: SLIGHT ETHEREAL

FLASH POINT (METHOD): 300°F (PMCC ASTM D93)

VAPOR PRESSURE (AT 70°F): 10 PSI

VAPOR PRESSURE (AT 100°F): 20 PSI

VOLATILE ORGANIC COMPOUND (VOC): 0 GRAMS/LITER

VAPOR DENSITY (AIR=1): 4.0

SOLUBILITY (WATER): SOLUBLE

SPECIFIC GRAVITY: 1.16 APPROX. (AT 25°C)

EVAPORATION RATE: NOT AVAILABLE

SECTION IV--FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 300°F (149°C)

EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, FOAM, WATER SPRAY FOR LARGE FIRES.

FIRE FIGHTING PROTECTIVE EQUIPMENT: USE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING.

SPECIAL FIRE FIGHTING PROCEDURES: HEATED CONTAINERS MAY BUILD UP PRESSURE AND RUPTURE VIOLENTLY. THEREFORE, USE COLD WATER TO COOL FIRE-EXPOSED CONTAINERS.

SECTION V--HEALTH HAZARD DATA

INHALATION: MAY CAUSE LIGHTHEADEDNESS, GIDDINESS.

SKIN CONTACT: MODERATE IRRITANT. NO IMMEDIATE HAZARD.

EYE CONTACT: MODERATE IRRITANT. NO IMMEDIATE HAZARD.

CARCINOGENICITY: THE INGREDIENTS OF THIS PRODUCT ARE NOT CLASSIFIED AS CARCINOGENIC.

ALSO SEE HEALTH HAZARD DATA FOR COMPONENT "A" WHEN USE IN CONJUNCTION.

SECTION VI--FIRST AID MEASURES

INHALATION: MOVE TO AN AREA FREE FROM RISK OF FURTHER EXPOSURE.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING. WASH AFFECTED SKIN THOROUGHLY WITH SOAP AND WATER. WASH CONTAMINATED CLOTHING THOROUGHLY BEFORE REUSE. FOR SEVERE EXPOSURES, GET UNDER SAFETY SHOWER AFTER REMOVING CLOTHING. FOR LESSER EXPOSURES, SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS AFTER THE AREA IS WASHED.

EYE CONTACT: IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR A MINIMUM OF 15 MINUTES. IF IRRITATION PERSISTS, REPEAT FLUSHING AND OBTAIN MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. PROVIDED THE PATIENT IS CONSCIOUS, WASH OUT MOUTH WITH WATER THEN GIVE 1 OR 2 GLASSES OF MILK OR WATER TO DRINK. REFER PERSON TO MEDICAL PERSONNEL FOR IMMEDIATE ATTENTION.

ALSO SEE FIRST AID MEASURES FOR COMPONENT "A" WHEN USE IN CONJUNCTION.

SECTION VII--REACTIVITY DATA

STABILITY: THIS IS A STABLE MATERIAL

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

INCOMPATIBILITY: STRONG OXIDIZERS, STRONG ACIDS, ISOCYANATES.

CONDITIONS TO AVOID: AVOID HIGH TEMPERATURES. HEATED MATERIAL WILL BUILD PRESSURE AND MAY RUPTURE THE CONTAINER VIOLENTLY.

HAZARDOUS DECOMPOSITION PRODUCTS: HIGHLY UNLIKELY UNDER NORMAL INDUSTRIAL USE. UNDER EXTREME HEAT AND FIRE, CARBON MONOXIDE, CARBON DIOXIDE.

SECTION VIII--SPILL OR LEAK PROCEDURES

SPILLS, LEAKS, OR RELEASES: CONTAIN AND ABSORB LARGE SPILLAGES ONTO AN INERT, NON-FLAMMABLE ADSORBENT CARRIER (SUCH AS EARTH OR SAND). SHOVEL INTO OPEN-TOP DRUMS OR PLASTIC BAGS. WASH THE SPILLAGE AREA CLEAN WITH DETERGENT AND WATER.

DISPOSAL METHOD: DISPOSE OF WASTE MATERIAL IN AN APPROVED FACILITY IN ACCORDANCE WITH CURRENT FEDERAL, STATE AND LOCAL REQUIREMENTS.

SECTION IX--PERSONAL PROTECTION

EYE PROTECTION: CHEMICAL SAFETY GOGGLES. IF THERE IS A POTENTIAL FOR SPLASHING, USE A FULL FACE SHIELD.

SKIN PROTECTION: CHEMICAL RESISTANT GLOVES SHOULD BE USED. COVER AS MUCH EXPOSED SKIN AREA AS POSSIBLE WITH APPROPRIATE CLOTHING.

RESPIRATORY PROTECTION: AIR PURIFYING RESPIRATORS EQUIPPED WITH ORGANIC VAPOR CARTRIDGES MAY BE USED.

SEE PERSONAL PROTECTION FOR COMPONENT "A" WHEN USE IN CONJUNCTION.

SECTION X--STORAGE AND HANDLING

STORAGE TEMPERATURE: IDEAL STORAGE TEMPERATURE IS 50-75°F (10-24°C).

HANDLING: AVOID PERSONAL CONTACT. SEE SECTION X FOR PROPER PERSONAL PROTECTION. AVOID BREATHING AEROSOLS, MISTS AND VAPORS.

STORAGE: KEEP CONTAINERS PROPERLY SEALED. KEEP CONTENTS AWAY FROM MOISTURE. WATER WILL ALTER THE PRODUCE'S PERFORMANCE. STORE CONTAINERS OUT OF DIRECT SUNLIGHT AND BELOW 75°F. THIS PRODUCT MAY BUILD PRESSURE IF STORED AT TEMPERATURES ABOVE 75°F. ELEVATED TEMPERATURES MAY RUPTURE THE CONTAINER VIOLENTLY, DUE TO EXCESS PRESSURE.

OPENING CONTAINERS: USE CAUTION WHEN OPENING CONTAINERS. CONTENTS MAY BE UNDER PRESSURE. OPEN SEAL SLOWLY, TO RELEASE ANY EXCESS PRESSURE.

SECTION XI--REGULATORY INFORMATION

US DOT REGULATIONS: NOT REGULATED

OSHA CLASSIFICATION: NONE OF THE INGREDIENTS IN THIS PRODUCT ARE CLASSIFIED AS A HAZARDOUS MATERIAL UNDER THE CRITERIA OUTLINED IN THE OSHA HAZARD COMMUNICATION STANDARD (HCS) (29 CFR 1910.1200).

TSCA (TOXIC SUBSTANCES CONTROL ACT): ALL INGREDIENTS ARE ON THE TSCA CHEMICAL SUBSTANCE INVENTORY.

SARA TITLE III SECTION 302: NONE KNOWN.

SARA TITLE III SECTION 311/312: SOME INGREDIENTS HAVE THE FOLLOWING HAZARDS:
IMMEDIATE (ACUTE), DELAYED (CHRONIC).

SARA TITLE III SECTION 313: NONE KNOWN.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT):
NO INGREDIENTS LISTED.

CALIFORNIA PROPOSITION 65: THIS PRODUCT CONTAINS NO LEVELS OF LISTED SUBSTANCES, WHICH THE STATE OF CALIFORNIA HAS FOUND TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM, WHICH WOULD REQUIRE A WARNING UNDER THE STATUTE.

DISCLAIMER:

THIS PRODUCT HAS NOT BEEN TESTED AS A WHOLE. THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET IS BASED ON THE MSDS' OF THE INDIVIDUAL INGREDIENTS.

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of General Coatings, Inc., knowledge, or obtained from sources believed by General Coatings, Inc., to be accurate, and General Coatings, Inc. does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product, read its label.

DATE PREPARED: 5/15/89

DATE REVISED: 12/15/05