M A T E R I A L S A F E T Y D A T A S H E E T

PRODUCT NAME: AH-1 ACRYLIC URETHANE HARDENER **HMIS CODES: H F R P**
PRODUCT CODE: 98-C1 **2 3 1 H**

========== SECTION I - MANUFACTURER IDENTIFICATION ==========

MANUFACTURER'S NAME: R. J. McGLENNON CO. INC.
ADDRESS : 198 UTAH ST.
SAN FRANCISCO, CA 94103

EMERGENCY PHONE : (800)424-9300 **DATE REVISED : 03/10/08**
INFORMATION PHONE : (415)552-0311 **NAME OF PREPARER : J. Davis**
DATE PRINTED : 3/18/2008

========== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION ==========

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE MM HG	@ TEMP	WEIGHT PERCENT
Aliphatic Isocyanate (Homopolymer of HDI)	28182-81-2	N/A	N/A	60.36
OSHA Not Established				
Manufacturer recommends: 0.5 mg/m3 TWA 8 hours & 1.0 mg/m3 STEL				
NORMAL BUTYL ACETATE	123-86-4	10.0	68 Deg F	29.5
OSHA PEL EXPOSURE LIMIT: 150 ppm				
ACGIH TLV EXPOSURE LIMIT: 150 ppm				
OTHER EXPOSURE LIMIT: N/A				
* XYLENE	1330-20-7	5.1	68 Deg F	9.50
OSHA PEL EXPOSURE LIIMT: 100 ppm TWA				
ACGITH TLV EXPOSURE LIMIT: 100 ppm TWA				
OSHA STEL: 150 ppm				
* Isocyanate Monomer (HDI Monomer)	822-06-0	N/A	N/A	.41
OSHA Not Established				
ACGIH: .005 ppm TWA & .034 mg/m3				

* Indicates this product contains EPCRA section 313 chemical(s) subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).
This information must be included in all MSDS's that are copied and distributed for this material. WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects, or other reproductive harm.
Special Note for urethane hardener formulas: The HDI monomer (CAS 822-06-0) is present as a byproduct at a low level in the basic formula. When properly admixed (with the base component) for spray application the average level of the monomer component falls below normal reportable limits. However; upon aging it may rise to a reportable level (admixed). Always follow the protection guidelines presented in this document.

WARNING: This product contains flammable solvent(s).

========== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS ==========

BOILING RANGE: 175 - 300 Deg F. **SPECIFIC GRAVITY (H2O=1): 1.02**
VAPOR DENSITY: HEAVIER THAN AIR **EVAPORATION RATE: SLOWER THAN ETHER**
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: OPAQUE LIQUID WITH ORGANIC SOLVENTS ODOR.

========== SECTION IV - FIRE AND EXPLOSION HAZARD DATA ==========

FLASH POINT: 25 Deg.F. **METHOD USED: SETAFLASH**
FLAMMABLE LIMITS IN AIR BY % OF VOLUME- LOWER: 1.0% UPPER: 10.4%

EXTINGUISHING MEDIA: FOAM, CO2, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES
WEAR A SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WITH APPROPRIATE TURN-OUT GEAR AND CHEMICAL RESISTANT PERSONAL PROTECTIVE EQUIPMENT.

UNUSUAL FIRE AND EXPLOSION HAZARDS
NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN EXPLODE. DURING TRANSFER OPERATIONS, ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS (TANK CARS AND TANK TRUCKS) SHOULD BE GROUNDED TO DISSSIPATE STATIC CHARGES. VAPORS ARE HEAVIER THAN AIR, AND CAN TRAVEL ALONG THE GROUND TO IGNITION SOURCES.

========== SECTION V - REACTIVITY DATA ==========

STABILITY
STABLE UNDER NORMAL CONDITIONS

CONDITIONS TO AVOID
ALL SOURCES OF IGNITION: HEAT, SPARKS, STATIC ELECTRICITY, OPEN FLAMES

INCOMPATIBILITY (MATERIALS TO AVOID)
STRONG ACIDS AND STRONG BASES, AMINES, ALCOHOLS AND WATER

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
COMBUSTION PRODUCTS MAY INCLUDE VERY TOXIC AND IRRITATING ISOCYANATE VAPORS. MAY ALSO FORM CARBON DIOXIDE, CARBON MONOXIDE, AND OXIDES OF NITROGEN.

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR

========== SECTION VI - HEALTH HAZARD DATA ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
NASAL AND RESPIRATORY IRRITATION, POSSIBLE DIZZINESS OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
EYES: PRIMARY IRRITATION, TEARING AND REDNESS. SKIN: POSSIBLE IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MODERATE IRRITATION, REDNESS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SINGLE DOSE ORAL TOXICITY OF PRODUCT IS LOW.

HEALTH HAZARDS (ACUTE AND CHRONIC)
NONE KNOWN ON PRODUCT AS SUPPLIED
HOWEVER, OVER EXPOSURE TO SECTION II COMPONENTS CAN CAUSE DIZZINESS, NAUSEA OR HEADACHE. EXCESSIVE SKIN CONTACT CAN CAUSE DERMATITUS. EYE CONTACT CAN CAUSE IRRITATION.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No
See California warnings in Section II.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
OVER EXPOSURE TO SECTION II COMPONENTS CAN AGGRAVATE PRE-EXISTING DISORDERS OF KIDNEYS, LIVER AND RESPIRATORY SYSTEM.

EMERGENCY AND FIRST AID PROCEDURES
EYES: FLUSH GENTLY WITH WATER FOR 15 MINUTES, IF ANY IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.
SKIN: WASH AFFECTED AREA WITH SOAP AND WATER, IF ANY IRRITATION DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.
INHALATION: REMOVE TO FRESH AIR, IF DIZZINESS OR NAUSEA PERSISTS, SEEK MEDICAL ATENTION.

========== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
SOAK UP WITH INERT ABSORBENT. DO NOT ALLOW MATERIAL TO ENTER DRAINS, SEWER SYSTEM. VENTILATE AREA.

WASTE DISPOSAL METHOD
HAZARDOUS WASTE REGULATIONS ARE NOT CONSISTENT THROUGHOUT THE COUNTRY (SOME WASTES ARE NOT HAZARDOUS WASTE UNDER FEDERAL RULES, BUT THE SAME WASTE MAY BE DEFINED AS HAZARDOUS WASTE UNDER STATE RULES).
ANY SPILLS SHOULD BE SOAKED UP WITH INERT ABSORBANT AND COLLECTED IN CONTAINERS. PAINT BOOTH FILTERS MAY BE CONSIDERED HAZARDOUS.
CONTACT YOUR LOCAL HAZARDOUS WASTE AGENCY (WITH INFORMATION FROM THIS MSDS) FOR PROPER DISPOSAL INSTRUCTIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
USE ONLY WITH VENTILATION THAT KEEPS SECTION II COMPONENTS BELOW PERMISSABLE EXPOSURE LIMITS. KEEP CONTAINERS UPRIGHT AND SEALED. AVOID STORAGE ABOVE 120 Deg.F. KEEP FROM FREEZING.

OTHER PRECAUTIONS
AVOID SKIN AND EYE CONTACT. DO NOT BREATHE VAPORS. DO NOT TAKE INTERNALLY. USE ONLY WITH ADEQUATE VENTILATION. DUST FROM SANDING THE DRIED MATERIAL SHOULD BE TREATED AS NUISANCE DUST - THE USE OF A PARTICULATE DUST MASK IS RECOMMENDED. ALL PERSONS WHO USE THIS MATERIAL SHOULD READ AND UNDERSTAND ALL MANUFACTURERS' INSTRUCTIONS AND PRECAUTIONS PRIOR TO USE. THIS MATERIAL IS INTENDED FOR USE IN AN INDUSTRIAL ENVIRONMENT BY TRAINED PERSONNEL ONLY.

========== SECTION VIII - CONTROL MEASURES ==========

RESPIRATORY PROTECTION
Respirator Guidelines for spray application of two component acrylic urethane finishes:
Good industrial hygiene practice dictates that when isocyanate containing coatings are spray applied, some form of respiratory protection should be worn. During the spray application of coatings containing this product, the use of a supplied-air (either positive pressure or continuous flow type) respirator is mandatory when one or more of the following conditions exists:
• The airborne isocyanate concentrations are not known; or
• The airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or
• The airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or
• Operations are performed in a confined space (see OSHA Confined Space Standard, 29 CFR 1910.146).
A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when all of the following conditions are met:
• The airborne isocyanate monomer concentrations are known to be below 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); and
• The airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); and
• A NIOSH-certified (National Institute of Occupational Safety and Health) End of Service Life Indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup

VENTILATION
SUFFICIENT TO KEEP SECTION II COMPONENTS BELOW THEIR EXPOSURE LIMITS

PROTECTIVE GLOVES
IMPERVIOUS GLOVES ARE RECOMMENDED (CONSULT INDUSTRIAL HYGIENIST).

EYE PROTECTION
SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED TO PREVENT CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
EYE WASH STATION. TO PREVENT REPEATED OR PROLONGED CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES
WASH HANDS BEFORE EATING.

========== SECTION IX - DISCLAIMER ==========

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