

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: H/S BLUE POLYURETHANE TOPCOAT
PRODUCT CODE: PG-6-B45

HMIS CODES: H F R P
 2 3 1 G

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

MANUFACTURER'S NAME: Axon Products, Inc.
ADDRESS: 307 ECHELON RD., GREENVILLE, SC 29605
EMERGENCY PHONE: 1-800-424-9300 **INFORMATION PHONE:** 1-864-299-1331
DATE REVISED : August 5, 2004 **NAME OF PREPARER :** TYE DEAS

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

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE		WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER	mm Hg @	TEMP	
METHYL NORMAL AMYL KETONE	110-43-0	100	50 PPM		2.1	68F	25
PHTHALOCYANINE BLUE PIGMENT	147-14-8				N/A		5
BARIUM SULFATE	7727-43-7	15 mg/m3	10 mg/m3		N/A		20
ETHYL ACETATE	141-76-6	400 PPM	400 PPM		76.0	68F	< 5.0%
*XYLENE	1330-20-7	100	100		2.4	68F	4

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

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

BOILING RANGE: 168 to 300 Deg F **SPECIFIC GRAVITY (H2O=1):** 1.2
VAPOR DENSITY: HEAVIER THAN AIR **EVAPORATION RATE:** SLOWER THAN ETHER
COATING V.O.C. : 3.41 LB/GL (409 G/L)
MATERIAL V.O.C.: 3.38 LB/GL (406 G/L)
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: OPAQUE WITH ODOR OF SOLVENT

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

FLASH POINT: 26 Deg F **METHOD USED:** TCC
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0% **UPPER:** 7.9%

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES

Water spray may be ineffective. If water is used, fog nozzles are preferred. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flames. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. Self-contained breathing apparatus should be worn by firefighters.

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SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate non-essential personnel. Remove all sources of ignition. Ventilate the area. Equip clean-up crew with self-contained breathing apparatus. Dike spill. Cover with sawdust, vermiculite or Fuller's earth. Collect in open containers.

WASTE DISPOSAL METHOD

Conform to Federal, State and Local regulations. Empty containers must be handled carefully due to product residue and flammable solvent vapor.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store above 100 degrees F. Store in large quantities only in buildings designed to comply with OSHA 1910.106. Keep containers closed and upright to prevent leakage. Do not store or use near heat, sparks or flames.

OTHER PRECAUTIONS

Avoid prolonged or repeated contact with vapor or spray mist during application or curing.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION

In outdoor or open areas, use NIOSH approved mechanical filter respirator. In restricted ventilation areas, use NIOSH approved chemical/mechanical filters to remove vapors and particulates. In confined areas, use NIOSH approved air line type respirators or hoods.

VENTILATION

Must be sufficient in volume and pattern to keep contaminant concentration below TLV (NIOSH) or PEL (OSHA). Exhaust air may need to be cleaned by scrubber or filters to reduce environmental contamination.

PROTECTIVE GLOVES

Required. Chemical resistant gloves. Cover as much as exposed skin area as possible with appropriate clothing.

EYE PROTECTION

Required. Use goggles, face shields or safety eyewear with side shields. Contact lenses should not be worn.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

If protective creams are used keep the area protected only by the cream to a minimum.

WORK/HYGIENIC PRACTICES

Wash hands before eating or using bathroom. Remove and wash contaminated clothing before reuse. Wear chem-resistant boots.

SECTION IX - DISCLAIMER

DISCLAIMER

The information contained herein is based on data considered accurate, but no warranty is expressed or implied. Users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combinations. Although hazard materials are listed, we cannot guarantee these are the only ones that exist.

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SECTION V - REACTIVITY DATA**STABILITY: STABLE
CONDITIONS TO AVOID**

Temperatures above maximum storage temperature. Avoid exposure to heat, sparks, or open flames.

INCOMPATIBILITY (MATERIALS TO AVOID)

Water, amines, strong bases, alcohols, metal compounds and surface active materials.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

By fire - CO, CO₂, nitrogen oxides.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR**SECTION VI - HEALTH HAZARD DATA****INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

Persons with asthmatic type conditions, chronic bronchitis or other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with this product.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Can cause irritation to skin, eyes and respiratory tract. Symptoms may be watering of eyes, dryness of throat, coughing, headache, tightness in chest or burning sensation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Allergic reactions may occur in some individuals. Headache, dizziness or nausea may be experienced by some as a result of exposure to solvents.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Drink water to dilute. Do not induce vomiting. Consult a physician.

HEALTH HAZARDS (ACUTE AND CHRONIC)

During emergency conditions, overexposure to decomposition products may cause a health hazard. Acute and chronic inhalation may occur if exposed to limits above TLV. Symptoms of irritation include redness, burning, itching eyes, dryness of throat and tightness of chest. Acute and chronic skin contact will occur if exposed above TLV. Symptoms of irritation include redness, swelling, rash, scaling or blistering. Symptoms may not be immediately apparent. Consult physician.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Asthmatic type conditions, chronic bronchitis, other chronic respiratory disease or recurrent skin eczema/sensitization.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. Consult a physician.

Skin Contact: Wash affected area with soap and water. Remove contaminated clothing. Consult a physician.

Inhalation: Remove to fresh air. Consult a physician.

Ingestion: Drink water to dilute. Do not induce vomiting. Consult a physician.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: POLYUETHANE CURING SOLUTION
PRODUCT CODE: PH-34

HMIS CODES: H F R P
 2 3 1 G

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INFORMATION PHONE: 1-864-299-1331

DATE REVISED: August 5, 2004

NAME OF PREPARER: TYE DEAS

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

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
*TOLUENE	108-88-3	100 PPM	50 PPM		22.0 68F	2
ACETAL ACETONE	123-54-6		20 PPM		6.9 20F	< 5.0%
METHYL NORMAL AMYL KETONE	110-43-0	100	50 PPM		2.1 68F	< 5.0%
CYCLOHEXANONE/CYCLOHEXYL KETONE	108-94-1	50 PPM	25 PPM		2.0 68F	< 5.0%
*N-BUTYL ACETATE	123-86-4	150 PPM	150 PPM		13.0 68F	5
*METHYL ISOBUTYL KETONE	108-10-1	50 PPM	50 PPM		16.0 68F	2
*METHYL ETHYL KETONE	78-93-3	200 PPM	200 PPM		70.0 68F	26
HOMOPOLYMER OF HDI	28182-81-2				N/A	55

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title XIX and of 40 CFR 372.

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

BOILING RANGE: 140 to 446 Deg F **SPECIFIC GRAVITY (H2O=1):** 1.0
VAPOR DENSITY: HEAVIER THAN AIR **EVAPORATION RATE:** SLOWER THAN ETHER
COATING V.O.C.: 3.65 LB/GL (438 G/L)
MATERIAL V.O.C.: 3.63 LB/GL (435 G/L)
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: CLEAR WITH ODOR OF SOLVENT

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

FLASH POINT: 23 Deg F **METHOD USED:** TCC
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.1% UPPER: 11.5%

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES

Water spray may be ineffective. If water is used, fog nozzles are preferred. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flames. Closed containers may explode when exposed to extreme heat or burst when contaminated with water (CO2 evolved). Application to hot surfaces requires special precautions. Self-contained breathing apparatus should be worn by firefighters.

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

**STABILITY: STABLE
CONDITIONS TO AVOID**

Temperatures above maximum storage temperature. Avoid exposure to heat, sparks, or open flames.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

By fire - CO, CO2, nitrogen oxides and traces of HCN, TDI and HDI.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

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

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Persons with asthmatic type conditions, chronic bronchitis or other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with this product.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Can cause irritation to skin, eyes and respiratory tract. Symptoms may be watering of eyes, dryness of throat, coughing, headache, tightness in chest or burning sensation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Allergic reactions may occur in some individuals. Headache, dizziness or nausea may be experienced by some as a result of exposure to solvents.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Drink water to dilute. Do not induce vomiting. Consult a physician.

HEALTH HAZARDS (ACUTE AND CHRONIC)

During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? YES

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Asthmatic type conditions, chronic bronchitis, other chronic respiratory disease or recurrent skin eczema/sensitization.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. Consult a physician.

Skin Contact: Wash affected area with soap and water. Remove contaminated clothing. Consult a physician.

Inhalation: Remove to fresh air. Consult a physician.

Ingestion: Drink water to dilute. Do not induce vomiting. Consult a physician.

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OTHER PRECAUTIONS

Avoid prolonged or repeated contact with vapor or spray mist during application or curing.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION

In outdoor or open areas, use NIOSH approved mechanical filter respirator. In restricted ventilation areas, use NIOSH approved chemical/mechanical filters to remove vapors and particulates. In confined areas, use NIOSH approved air line type respirators or hoods.

VENTILATION

Must be sufficient in volume and pattern to keep contaminant concentration below TLV (NIOSH) or PEL (OSHA).

PROTECTIVE GLOVES

Required, butyl rubber recommended.

EYE PROTECTION

Required. Use goggles, face shields or safety eyewear with side shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Protective creams where skin contact is likely.

WORK/HYGIENIC PRACTICES

Wash hands before eating or using bathroom. Remove and wash contaminated clothing before reuse. Wear chem-resistant boots.

SECTION IX - DISCLAIMER

DISCLAIMER

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