

SAFETY DATA SHEET

PRODUCT CODE: 5830

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CM 5830 PART A
PRODUCT CODES: 5830 A

MANUFACTURER: QuestMark Flooring, Div. Of Centimark Corporation
STREET ADDRESS: 12 Grandview Circle
CITY, STATE, ZIP: Canonsburg, PA 15317

INFORMATION PHONE: 724-743-7777
EMERGENCY PHONE: Chemtrec 800-424-9300

PREPARED BY: Thomas McElwaine

DATE REVISED: 7/20/2014

Chemical Name or Class: Caprolactum mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Acute oral toxicity category 4, Acute dermal toxicity category 4, Skin corrosion category 2, skin sensitizer category 1B, Serious eye irritation category 2A, Acute toxicity inhalation category 4, Carcinogenicity category 1, Chronic hazards to aquatic environment category 3

GHS Label Elements and Precautionary Statements:

Label Elements: Health hazard, Exclamation Mark

Hazard Statements:

Warning: Harmful if swallowed
Warning: Harmful in contact with skin
Warning: Causes skin irritation
Warning: May cause an allergic skin reaction
Warning: Causes serious eye irritation
Warning: Harmful if inhaled
Danger: May cause cancer
Harmful to aquatic life with long lasting effects

Risk Phrases:

R20 Harmful by inhalation
R21/22 Harmful in contact with skin and if swallowed
R36/37/38 Irritating to eyes, respiratory system and skin
R42/43 May cause sensitization by inhalation and skin contact
R45 May cause cancer
R52 Harmful to aquatic organisms
R66 Repeated exposure may cause skin dryness or cracking

Precautionary statements:

P102 Keep out of reach of children.
P103 Read label before use
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 Keep container tightly closed.
P234 Keep only in original container.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P284 Wear respiratory protection.

HMIS HAZARD CLASSIFICATION

HEALTH: 2 **FLAMMABILITY:** 1 **REACTIVITY:** 0 **PERSONAL PROTECTIVE EQUIPMENT:** G

POTENTIAL HEALTH EFFECTS

EYES:

HIGH VAPOR CONCENTRATION CAN CAUSE SEVERE IRRITATION TO THE EYES, NOSE OR THROAT.

SKIN:

CAN CAUSE IRRITATION TO SKIN.

INGESTION:

LIQUID CAN CAUSE IRRITATION TO THE MUCOUS MEMBRANES IF SWALLOWED.

INHALATION:

HIGH VAPOR CONCENTRATION CAN CAUSE SEVERE IRRITATION TO THE RESPIRATORY TRACT.

HEALTH HAZARDS (ACUTE AND CHRONIC):

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

SAFETY DATA SHEET

PRODUCT CODE: 5830

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: yes

ADDITIONAL CARCINOGENICITY INFORMATION:

Some colors may contain carbon black - Explanation Of Carcinogenicity: IARC MONOGRAPHS ON EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN, VOL 65, PG 149, 1996: GROUP 2B. Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (group 2B).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
CASTOR OIL	8001-79-4	NONE		NONE	
2-OXEPANONE, POLYMER WITH 2,2'-OXYBIS [ETHANOL]	36890-68-3	NONE	NONE	NONE	
2-OXYPANONE, 2-ETHYL-2-(HYDROXYMETHYL)-1,3-PROPANE	37625-56-2	NONE	NONE	NONE	
Precipitated Silica	112926-00-8	NONE	80mg/m3	NONE	
Aluminum Oxide Non-fibrous)	1344-28-1	10MG/M3		NONE	
Sodium oxide	1313-59-3	NONE		NONE	
Magnesium Oxide	1309-48-4	10mg/m3		NONE	
Siloxanes and silicones, di-me reactions products with silica (non-hazardous)	67762-90-7	none	none	none	
siloxanes and silicones, di-methyl (non-hazardous)	63148-62-9	none	none	none	
Alkyl Quaternary Ammonium Clay	Proprietary	NONE	NONE	NONE	
Methyl N-Amyl Ketone	110-43-0	100 ppm	50 ppm	none	
Dibutyltin Dilurate	77-58-7	0.1mg / m3	0.1mg / m3	0.1mg / m3	
Colors may contain:					
Titanium Dioxide	13463-67-7	10mg/m3	10mg/m3	5mg/m3	
*CARBON	1333-86-4	3.4PPM		NONE	<1.0

SECTION 3 NOTES: "*" Indicates TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372 ARE PRESENT.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST FIFTEEN MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ATTENTION.

SKIN:

FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.

INGESTION:

DO NOT INDUCE VOMITTING. DILUTE BY GIVING WATER TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:

REMOVE VICTIM TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, **UPPER:** not available
(% by volume) **LOWER:** not available

FLASH POINT: 200+F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTERS. COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SAFETY DATA SHEET

PRODUCT CODE: 5830

AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP THE REMAINDER WITH AN ABSORBENT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. OBSERVE GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.

OTHER PRECAUTIONS:

MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH APPROVED RESPIRATOR REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS. FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR A FULL FACE RESPIRATOR IS RECOMMENDED.

VENTILATION:

AVOID BREATHING VAPORS. VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

CLEAN BODY COVERING CLOTHING AS WELL AS APRON, FOOTWEAR EQUIPMENT SHOULD BE USED AS DEEMED NECESSARY TO AVOID CONTACT WITH THE MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCUPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: MEDIUM VISCOSITY CLEAR OR COLORED LIQUID – NEGLIGIBLE ODOR

BOILING POINT OR RANGE: N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.1

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID CONTACT WITH OPEN FLAMES AND ALL SOURCES OF IGNITIONS AND SPARKS.

INCOMPATIBILITY (MATERIAL TO AVOID):

AVOID CONTACT WITH STRONG OXIDIZING AGENTS OR MATERIALS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CARBON MONOXIDE, CARBON DIOXIDE AND NITROGEN COMPOUNDS.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CASTOR OIL CAS# 8001-79-4: Draize test, rabbit, eye: 500 mg Mild; Draize test, rabbit, skin: 100 mg/24H Severe;

Component 2-OXEPANONE, POLYMER WITH 2,2'-OXYBIS [ETHANOL] CAS# 36890-68-3: Oral LD50 (rat) > 2000 mg/kg.

SAFETY DATA SHEET

PRODUCT CODE: 5830

Component 2-OXYPANONE, 2-ETHYL-2-(HYDROXYMETHYL) -1,3-PROPANE CAS# 37625-56-2: Acute oral toxicity - Oral route, LD 50, > 2000 mg/kg. Acute dermal irritation/corrosion - Rabbit, Non irritant (eyes), - Rabbit, Non irritant (skin), Skin irritation -Negligible. Eye irritation Negligible

Component Titanium Dioxide: Inhalation 4 h LC50 > 6.82 mg/l; Oral LD50 > 5000 mg/kg, rat; In February 2006, IARC listed titanium dioxide as possibly carcinogenic to humans Group 2B.

Component CAS# 112926-00-8: LD50 (rat >5000 mg/kg, LD50 dermal (rat) >2000 mg/kg

Component Aluminum Oxide CAS# 1334-28-1: Special Remarks on Chronic Effects on Humans: May cause cancer (tumorigenic) according to animal data. No human data found. Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Nuisance Dust. Dust may cause mechanical eye irritation. Inhalation: Nuisance Dust. Material is irritating to mucous membranes and upper respiratory tract. May cause lung injury. Ingestion: May be harmful if swallowed. Ingestion of large amounts may cause gastrointestinal tract irritation. It is expected to be a low hazard for normal industrial handling.

Component CAS# 112926-00-8, Component Aluminum Oxide CAS# 1334-28-1, Sodium oxide CAS# 1313-59-3 and Magnesium Oxide CAS# 1309-48-4: Components Acute oral toxicity LD50 is greater than 5g/kg (rat). The components are an ocular irritant by FHSA standards. When the components were administered by stomach intubation to male rats, the animals survived single massive doses equivalent to 32.0 gram per kilogram of body weight with good weight gains. There were no significant micropathological findings on tissue taken fourteen days after dosing.

Component Carbon: IARC lists carbon as a possible human carcinogen Category 2B. LD50 - Intravenous, mouse = 440 mg/kg

Component Alkyl Quaternary Ammonium Clay CAS# Proprietary: Short term exposure to dust can cause minor irritation or shortness of breath. Eye contact may cause irritation to the eyes due to physical abrasion. Component may cause respiratory disorders or act as an allergen for persons who are strongly allergic to quaternary amines.

Component CAS# 110-43-0: Oral LD 50 (rat): 1600 mg/kg; Oral LD50 (mouse) 730 mg/kg; Inhalation LC50 (rat) 2000-4000 ppm, 4 hr. Dermal LD50 (rabbit) 10206 mg/kg; Dermal LD50 (guinea pig) >16200 mg/kg; Skin irritation (Rabbit) - slight to moderate; Eye irritation (rabbit) slight; Skin sensitization (human) none

Component Dibutyltin Dilurate CAS# 77-58-7: ACUTE ORAL TOX (LD50,RAT) 3200.00 MG/KG. ACUTE DERMAL TOX (LD50,RABBIT) >2000 MG/KG (NO DEATHS). ACUTE INHAL TOX (LC50, RAT) >8.10 MG/L/1 HR. AMES TEST: NEG (ACTIVATED & NONACTIVATED) INDUST CHEMS SUC H AS THIS MATL W/ACUTE TOX VALUES SHOWN & WHOSE VAPS/MISTS ARE NOT LIKELY TO BE ENCOUNTERED BY HUMANS WHEN USED IN ANY REASONABLY

FORESEEABLE MANNER WOULD NOT REQ TOXIC LBL ACCORD TO U.S. DOMESTIC & INTERNATIONAL TRANSPORT REQS. IRRIT EFTS DAT: SEV IRRITANT TO EYES OF RABBIT. MOD IRRITANT TO SKIN OF RABBIT.

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component 2-OXEPANONE, POLYMER WITH 2,2'-OXYBIS [ETHANOL] CAS# 36890-68-3: Fish LC50, 96 hours, 80 mg/l. fish LC50, 96 hours, 39 mg/l. Abiotic degradation: Water, Hydrolysis, +/- 50 days (calculated value, QSAR) degradation product 6-hydroxycaproic acid.

Component 2-OXYPANONE, 2-ETHYL-2-(HYDROXYMETHYL) -1,3-PROPANE CAS# 37625-56-2: Acute toxicity: Fishes, Brachydanio rerio, LC 50, 96h, 150 mg/l. Bacteria, Achromobacter sp., NOEC, 16 h, 670 mg/l. Biodegradation - test ready biodegradability/modified STURM, > 60 %, 7 day (s) Result: readily biodegradable. Remarks - Harmful for aquatic organisms. - Hazard for aquatic environment is limited due to product properties:

- . ready biodegradability.

Component Titanium Dioxide: Pimephales promelas (fathead minnow) < 1000 mg/l @ 96h LC50; Pseudokirchneriella subcapitata (green algae) 61 mg/l @ 72h EC50; Daphnia magna (water flea) > 1000 mg/l @ 48h EC50

Component CAS# 112926-00-8: Ecotoxicity: EC50 (fish) .10000 mg/l (daphnia >10000 mg/l

Component Aluminum Oxide CAS# 1334-28-1: Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Component CAS# 112926-00-8, Component Aluminum Oxide CAS# 1334-28-1, Sodium oxide CAS# 1313-59-3 and Magnesium Oxide CAS# 1309-48-4: Food Chain Concentration Potential: non expected for components.

Component CAS# 110-43-0: BOD-5: 1770 mg/kg; BOD-20: 2000 mg/kg; COD: 2420 mg/kg. Acute Aquatic Effects: 96 hr LC50 (fathead minnow) 131 mg/l and 48 hr EC50 (daphnia) >90 mg/l (highest concentration tested)

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAW.

SECTION 14: Transport Information

DOT: Not Regulated

IMO/IMDG: Not Regulated

SECTION 15: REGULATORY INFORMATION

No data for the product itself.

Component data:

Component CASTOR OIL CAS# 8001-79-4: component is on the TSCA list and Canada DSL

Component 2-OXEPANONE, POLYMER WITH 2,2'-OXYBIS [ETHANOL] CAS# 36890-68-3: Component is on the TSCA list and Canada DSL.

SAFETY DATA SHEET

PRODUCT CODE: 5830

Component 2-OXYPANONE, 2-ETHYL-2-(HYDROXYMETHYL) -1,3-PROPANE CAS# 37625-56-2: TSCA Inventory 8(b): Yes. National Regulations (Canada): Canadian NSN Registration: DSL # 11400. WHMIS Classification: Not Listed. National Regulations (Europe): National Regulations (Europe) EINECS / ELINCS #: EINECS: Not applicable

Component Titanium Dioxide: Contains Proposition 65 Chemicals, is on the PA Hazardous substance list, is on the NJ right to know Regulated chemical List.

Titanium Dioxide is on inventory or in compliance with EINECS, TSCA, AICS, DSL, ENCS (JP), KECI (KR), PICCS (PH) and INV (CN).

Component CAS# 112926-00-8: Is not classified as dangerous. National Chemical Inventory listings include – AICS, DSL, IECSC, EINECS, ENCS, KECI, NZLOC, PICCS, TSCA,

Component Aluminum Oxide CAS# 1334-28-1: Federal and State Regulations: Illinois toxic substances disclosure to employee act: Aluminum oxide Rhode Island RTK hazardous substances: Aluminum oxide Minnesota: Aluminum oxide Massachusetts RTK: Aluminum oxide New Jersey: Aluminum oxide New Jersey spill list: Aluminum oxide California Director's list of Hazardous Substances: Aluminum oxide TSCA 8(b) inventory: Aluminum oxide

SARA 313 toxic chemical notification and release reporting: Aluminum oxide Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. Other Classifications: WHMIS (Canada): Not controlled under WHMIS (Canada). DSC (EEC): R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately

Sodium oxide CAS# 1313-59-3: Component is on the TSCA.

Magnesium Oxide CAS# 1309-48-4: Component is on the TSCA list.

Component CAS# 112926-00-8, Component Aluminum Oxide CAS# 1334-28-1, Sodium oxide CAS# 1313-59-3 and Magnesium Oxide CAS# 1309-48-4: Components are not classified as a controlled product under regulations pursuant to the federal hazardous product act (e.g. WHMIS)

Component Carbon: Contains Proposition 65 Chemicals .Carbon: is listed on TSCA and DSL Canada

Component Siloxanes and silicones, di-me reactions products with silica: Included on TSCA, EINECS, MITI, ACOIN, and Canadian DSL inventory or lists.

Component siloxanes and silicones, di-methyl: Included on TSCA, EINECS, MITI, ACOIN, and Canadian DSL inventory or lists.

Component Alkyl Quaternary Ammonium Clay CAS# Proprietary: component is on the TSCA, European inventory, Canada DSL, and Australian AICS lists.

Component CAS# 110-43-0: On DSL and TSCA, EINECS, AICS, MITI and ECL lists.

Component Dibutyltin Dilurate CAS# 77-58-7: Sara Title III Information: TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL COMPONENTS ARE INCL IN EPA TOXIC SUBSTANCES CTL ACT (TSCA) CHEM SUBSTANCE INVENTORY. OSHA HAZARD COMMUNICATION STD (29CFR1910.1200) HAZARD CLASS(ES): IRRITANT.KIDNEY TOXIN. EPA SARA TITLE III SECTION 312 (40CFR370) HAZARD CLASS. IMMEDIATE HLTH HAZARD. EPA SARA TITLE III 313 (40CFR372) TOXIC CHEMICALS "DE MINIMIS" LEVEL ARE NONE. Federal Regulatory Information: CANADA DSL-INCL ON INVENTORY. HAZARD CLASSIFICATION-CLASS D DIVISION 2B.(EEC). EINECS /ELINCS MASTER INVENTORY-INCLUDED ON INVENTORY. EEC SYMBOL-HARMFUL (XN). EEC RISK (R) PHRASES-IRRITATING TO EYES & SKIN (R36/38). HARMFUL BY INHAL (R20). EEC SFTY PHRASES-IN CASE OF CONT W/EYES, RINSE IMMEDIATE W/PLENTY OF WATER & SEEK MED ADVICE (S26). AUSTRALIA-AICS-INCLUDED ON INVENTORY. State Regulatory Information: STATE REGS: PROPOSITION 65 SUBSTANCES (COMPONENT(S) KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER AND/OR REPRODUCTIVE TOXICITY & SUBJECT TO WARNING & DISCHARGE REQUIREMENTS UNDER "SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986"):NONE.

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation

SAFETY DATA SHEET

PRODUCT CODE: 5830

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CM 5830 PART B
PRODUCT CODES: 5830 B

MANUFACTURER: QuestMark Flooring, Div. Of Centimark Corporation
STREET ADDRESS: 12 Grandview Circle
CITY, STATE, ZIP: Canonsburg, PA 15317

INFORMATION PHONE: 724-743-7777
EMERGENCY PHONE: Chemtrec 800-424-9300

PREPARED BY: Thomas McElwaine

DATE REVISED: 7/20/2014

Chemical Name or Class: MDI isocyanate

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Respiratory sensitizer category 1B, Acute oral toxicity category 4, Acute dermal toxicity category 4, Skin corrosion category 2, skin sensitizer category 1B, Serious eye irritation category 2A, Acute toxicity inhalation category 4, Long term hazard to aquatic environment category 4

GHS Label Elements and Precautionary Statements:

Label Elements: Health Hazard Exclamation Mark

Hazard Statements:

Danger: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Warning: Harmful if swallowed

Warning: Harmful in contact with skin

Warning: Causes skin irritation

Warning: May cause an allergic skin reaction

Warning: Causes serious eye irritation

Warning: Harmful if inhaled

May cause long lasting harmful effects to aquatic life

Risk Phrases:

R20 Harmful by inhalation

R21/22 Harmful in contact with skin and if swallowed

R22 Harmful if swallowed

R36/37/38 Irritating to eyes, respiratory system and skin

R42/43 May cause sensitization by inhalation and skin contact

R52 Harmful to aquatic organisms

R66 Repeated exposure may cause skin dryness or cracking

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P233 Keep container tightly closed.

P234 Keep only in original container.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 Wear respiratory protection.

HMIS HAZARD CLASSIFICATION

HEALTH: 2 **FLAMMABILITY:** 1 **REACTIVITY:** 1 **PERSONAL PROTECTIVE EQUIPMENT:** G

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE IRRITATION.

SKIN:

MAY CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE. SKIN CONTACT MAY CAUSE SENSITIZATION.

INGESTION:

THIS MATERIAL HAS A PROBABLE LOW ACUTE ORAL TOXICITY.

INHALATION:

SAFETY DATA SHEET

PRODUCT CODE: 5830

EXPOSURE MAY INCLUDE IRRITATION TO THE EYES, NOSE, THROAT AND LUNGS AND RESPIRATORY SYSTEM, POSSIBLY COMBINED WITH DRYNESS OF THE THROAT OR CHEST AND DIFFICULTY IN BREATHING. SYMPTOMS MAY BE DELAYED. A REACTIVE RESPONSE TO MDI MAY DEVELOP IN SENSITIZED PERSONS. TOXIC BY INHALATION

HEALTH HAZARDS (ACUTE AND CHRONIC):

THERE ARE REPORTS THAT CHRONIC EXPOSURE MAY RESULT IN PERMANENT DECREASE IN LUNG FUNCTION. SINGLE OR REPEATED SKIN CONTACT OR INHALATION MAY CAUSE SENSITIZATION OR ALLERGIC REACTION. PERSONS WITH ASTHMATIC-TYPE CONDITIONS, CHRONIC BRONCHITIS, OTHER CHRONIC RESPIRATORY DISEASES OR RECURRENT SKIN ECZEMA OR SENSITIZATION SHOULD BE EXCLUDED FROM CONTACT TO MATERIALS OR WORKING WITH THIS PRODUCTS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:

NO LISTED INGREDIENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
*4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	20mg/m ³	0.05mg/m ³	0.20mg/m ³	35.53
Modified MDI	NOT LISTED	NONE	NONE	NONE	

SECTION 3 NOTES:

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

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES. GET IMMEDIATE MEDICAL ASSISTANCE.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER OR A POLYGLYCOL BASED SKIN CLEANSER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

DO NOT INDUCE VOMITING. WASH OUT MOUTH WITH WATER. MOVE EXPOSED PERSON TO FRESH AIR AREA. GET MEDICAL ATTENTION IMMEDIATELY IF SYMPTOMS OCCUR.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND ADMINISTER OXYGEN IF NECESSARY. OBTAIN MEDICAL ASSISTANCE. TREATMENT IS SYMPTOMATIC FOR PRIMARY IRRITATION OR BRONCHOSPASM.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES:

FOR SEVERE EXPOSURE, MEDICAL FOLLOW-UP SHOULD BE MONITORED FOR AT LEAST 48 HOURS.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR,
(% by volume)

UPPER: not available
LOWER: not available

FLASH POINT: 200+F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO₂, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES:

USE FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS. CONTAINERS MAY BURST UNDER INTENSE HEAT. IF WATER IS USED, VERY LARGE AMOUNTS ARE REQUIRED. REACTION BETWEEN WATER AND ISOCYANATE MAY BE VIGOROUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO UNUSUAL FIRE HAZARDS KNOWN OTHER THAN REACTION TO WATER CAN BE VIGOROUS.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING, SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBENT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH A LIQUID DECONTAMINANT. FOR LARGE SPILLS, EVACUATE THE AREA AND TEST ATMOSPHERE FOR MDI

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

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PRODUCT CODE: 5830

STORE IN A COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS; THEREFORE, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS. STORE MATERIAL BETWEEN 60-100 F AND KEEP DRY.

OTHER PRECAUTIONS:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CAN NOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED PRESSURE AIR-SUPPLIED RESPIRATOR AS REQUIRED TO PREVENT OVER-EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134. CARTRIDGE TYPE RESPIRATORS ARE NOT APPROVED FOR PROTECTION AGAINST DIISOCYANATES.

VENTILATION:

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS. HOWEVER, AREA SHOULD BE MONITORED TO PREVENT EXPOSURE BEYOND THE RECOMMENDED OSHA, ACGIH LIMITS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: MEDIUM VISCOSITY LIQUID

BOILING POINT OR RANGE: N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.1

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

STABLE AT ROOM TEMPERATURE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT, OPEN FLAMES. DUE TO REACTION WITH WATER, A HAZARDOUS BUILDUP OF PRESSURE COULD RESULT.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS, ALCOHOLS, BASES AND WATER.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO, CO₂, NITROGEN OXIDES, HYDROCARBONS AND HCN

HAZARDOUS POLYMERIZATION:

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

SECTION 11: TOXICOLOGICAL INFORMATION

Component(s) 4,4'-DIPHENYLMETHANE DIISOCYANATE CAS# 101-68-8 and Modified MD CAS# NOT LISTED: LD50 Rat Oral > 5000 mg/kg. LD50 Rabbit Dermal > 5000 mg/kg. This product is a respiratory irritant and potential respiratory sensitizer. Repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. 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. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized

SAFETY DATA SHEET

PRODUCT CODE: 5830

persons. Product is a moderate skin irritant. Product is a eye irritant. A study was conducted where groups of rats were exposed to 6 hours/day, 5 days/week, for a lifetime to atmospheres of respirable polymeric MDI aerosol at concentrations of 0.02, 1 or 6 mg/m³. No adverse effects were observed at 0.2 mg/m³. At the 1 mg/m³ concentration, minimal nasal and lung irritant effects were seen. Only at the top concentration (6.0 mg/m³) was there an increased incidence of a benign tumor of the lung (adenoma). One malignant pulmonary tumor (adenocarcinoma) was seen in this 6.0 mg/m³ group. MDI administration of rats in this study did not change the distribution and incidence of tumors from those seen in control animals. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur. There are reports that excessive chronic exposure to diisocyanates may result in permanent decrease in lung function.

SECTION 12: ECOLOGICAL INFORMATION

Component(s) 4,4'-DIPHENYLMETHANE DIISOCYANATE CAS# 101-68-8 and Modified MD CAS# NOT LISTED: Polymeric MDI. LC50 (zebra fish) >1000 mg/l. EC50 (daphnia magna) (24 hour) > 1000 mg/l. EC50 (E coli) >100mg/l. Persistence an degradation: immiscible with water, but will react with water to produce inert and non-biodegradable solids.

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:
DISPOSE OF MATERIAL ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14: Transport Information

DOT: Not Regulated

IMO/IMDG: Not Regulated

SECTION 15: REGULATORY INFORMATION

Component(s) 4,4'-DIPHENYLMETHANE DIISOCYANATE CAS# 101-68-8 and Modified MD CAS# NOT LISTED: This material is classified as hazardous under OSHA hazard communication standard 29 CFR 1910.1200. HCS Classification: Class – Toxic, Irritating substance, Sensitizing substance. Components are on the TSCA list. Canadian Regulations: This product has been classified in accordance with the hazrd criteria of the CPR (controlled Products Regulations) Class D-1A Material Causing immediate and serious toxic effects (very toxic). Class D-2A Material causing other toxic effects (Very Toxic). Class D-2b material causing other toxic effects (Toxic).

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation