GARLAND INDUSTRIES

Material Safety Data Sheet (MSDS)

Revised 02/03/11

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THE GARLAND COMPANY, INC.
3800 EAST 91ST. STREET
CLEVELAND, OHIO 44105-2197
PH: (216) 641-7500
FAX: (216) 641-0633

GARLAND CANADA, INC.
1296 MARTIN GROVE ROAD
TORONTO, ONTARIO, M9W 4X3
PH: (416)747-7995
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Garland Company UK Ltd.
Unit 5, Glevum Works, Upton Street
Gloucester, UK GL14LA
Ph: 01452 330 646
Fax: 01452 330 657 (only in UK)
Ph: 011 44 1452 330 646
Fax: 011 44 1452 330 657 (outside UK)

VOC Compliant
Contact Adhesive
CHEMICAL FAMILY: Aromatic Polyurethane
Product Name: Dura Walk PS System Part A
Product Code: 2513-10
TRANSPORTATION EMERGENCY ASSISTANCE / CALL CHEMTREC / 1-800-762-8225

HMIS HAZARD RATINGS
H:2 F:3 R:0 PP:I
DEGREE OF HAZARD: 4=EXTREME 3=HIGH 2= MODERATE 1=SLIGHT 0=INSIGNIFICANT

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SECTION II – HAZARDOUS SUBSTANCES

	CAS #	% BY WT	OHSA PEL	ACGIH TLV
Methyl Ethyl Ketone[1]	78-93-3	2.6	200ppm	200ppm
Xylene[1]	1330-20-7	11.8	100ppm	100ppm
Toluene[1][2]	108-88-3	0.7	100ppm(skin)	100ppm(skin)

(1) These chemicals are subject to SARA Title III, Section 3131 reporting.
(2) California Proposition 65 listed chemical-See Section V.

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SECTION III - PHYSICAL DATA

BOILING RANGE: 172-288° F
VAPOR DENSITY(air=1): Heavier
% VOLATILE BY VOLUME: 17.6 %
WEIGHT PER GALLON: 8.45 lbs
EVAPORATION RATE (ether=1): Slower

VAPOR PRESSURE: (mm Hg @ 20°C/68°F)
Methyl Ethyl Ketone: 70
Xylene: 6
Toluene: 22
VOC: 219 grams/L (Parts A & B comb.)

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SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT: 20° F (TCC)

EXTINGUISHING MEDIA: Foam, CO2, dry chemical or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Cool containers with water fog to prevent rupture. Boilover may occur when temperature or material approaches boiling point of solvent. Do not extinguish flame at leak because possibility of uncontrolled explosive reignition exists. Cut of fuel and/allow fire to burn out. Extinguish residual fires with chemical powder or foam.

UNUSUAL FIRE & EXPLOSION HAZARD: Spills or vapor leaks readily form flammable mixtures at or above the flash point. Contamination of this product with water will generate carbon dioxide gas with possible build-up of pressure in confined spaces. It is unlikely that this product will explode due to mechanical impact but fire or explosion may occur from static accumulation and discharge.

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SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Inhalation of high concentrations can produce central nervous system depression. Skin contact can cause severe irritation, possible burns, defatting and dermatitis. Eye contact causes severe irritation, redness, tearing and blurred vision.

WARNING!: This product contains toluene, a chemical known to the state of California to cause cancer, birth defects and other reproductive harm.

EMERGENCY & FIRST AID: If overcome by vapors, remove to fresh air and if breathing has stopped, give artificial respiration.
Eye contact: Flush immediately with water and call a physician as soon as possible.
Skin contact: Remove excess material before washing with rubbing alcohol, soap and water. Remove contaminated clothing. Ingestion: See a physician as soon as possible.

PRIMARY ROUTES OF ENTRY: Dermal or inhalation most likely.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Repeated exposure can cause allergic reaction with development of occupational asthma. Long term exposure to low vapor concentrations may cause chronically progressive pulmonary disease. Repeated skin contact can result in sensitization.

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SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Heat, sparks, open flame.

INCOMPATIBILITY: Avoid contact with strong oxidizing materials like liquid chlorine and

concentrated oxygen.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning may produce carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur.

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SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Keep people away. Avoid breathing vapors. Recover free liquid and add absorbent to remainder of spill before collecting with non-sparking tools.

WASTE DISPOSAL METHOD: Dispose in accordance with local, state, and federal regulations.

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SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Contains Isocyanates when mixed with Part B. Use self-contained or supplied air breathing apparatus in areas were the isocyanate concentrations are above the PEL or when the material is being heated, spray applied or applied in poorly ventilated areas. An air-purifying respirator may be appropriate under specified conditions.

VENTILATION (Local/Mechanical): Explosion proof mechanical equipment capable of keeping vapor concentration below the PEL.

PROTECTIVE GLOVES: Chemical resistant gloves. Nitrile recommended.

EYE PROTECTION: Safety goggles.

OTHER PROTECTIVE EQUIPMENT: Eye bath & safety shower should be available.

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SECTION IX - SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers closed and store in a cool dry place with adequate explosion proof ventilation. Keep away from heat, sparks, open flame. Ground equipment to prevent accumulation of static charge.

TOXICOLOGICAL PROPERTIES: Solvent contained may be harmful or fatal if swallowed. Vapor harmful. May cause skin or eye irritation.

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SECTION X – TRANSPORT INFORMATION

SHIPPING NAME: PAINT, 3, UN1263, PGII

AIR (CARGO ONLY): PAINT, 3, UN1263, PGII

AIR (PASSENGER & CARGO): PAINT, 3, UN1263, PGII

AIR (UPS): PAINT, 3, UN1263, PGII

OCEAN: PAINT, 3, UN1263, PGII 5.

MISC: ERG# 128
NMFC: 149980.2

REQUIRED LABELS & MARKINGS (AIR, OCEAN AND STANDARD GROUND)

Preparation Date 20-Jul-2009
Revision Date 03-Feb-2011

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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VOC Compliant
Contact Adhesive
CHEMICAL FAMILY: Aromatic Polyurethane
Product Name: Dura Walk PS System Part B
Product Code: 2513-10
TRANSPORTATION EMERGENCY ASSISTANCE / CALL CHEMTREC / 1-800-762-8225

HMIS HAZARD RATINGS
H:2 F:3 R:1 PP:I
DEGREE OF HAZARD: 4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT

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SECTION II – HAZARDOUS SUBSTANCES

	CAS #	% BY WT	OHSA PEL	ACGIH TLV
Toluene diisocyante(TDI)[1][2]	26471-62-5	<0.5	200ppm	200ppm
Xylene[1]	1330-20-7	8.2	100ppm	100ppm
Toluene[1][2]	108-88-3	9.3	100ppm(skin)	100ppm(skin)

(1) These chemicals are subject to SARA Title III, Section 3131 reporting.
(2) California Proposition 65 listed chemical-See Section V.

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SECTION III - PHYSICAL DATA

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BOILING RANGE: 230-233 ° F
VAPOR DENSITY(air=1): Heavier
% VOLATILE BY VOLUME: 17.6 %
WEIGHT PER GALLON: 8.45 lbs
EVAPORATION RATE (ether=1): Slower

VAPOR PRESSURE: (mm Hg @ 20° C/68° F)
Toluene: 22
Toluene diisocyanate: <0.01
Xylene: 6
VOC: 221 grams/L (Parts A & B comb.)

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SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT: 42 ° F (TCC)

EXTINGUISHING MEDIA: Foam, CO2, dry chemical or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must wear self contained breathing apparatus and full protective clothing. Cool containers with water fog. Do not spray pool fires directly; a solid stream of water directed into hot burning liquid can cause frothing. Boilover may occur when temperature of material approaches boiling point of solvent.

UNUSUAL FIRE & EXPLOSION HAZARD: Spills or vapor leaks readily form flammable mixtures at or above the flash point. Contamination of this product with water will generate carbon dioxide gas with possible build-up of pressure in confined spaces. It is unlikely that this product will explode due to mechanical impact but fire or explosion may occur from static accumulation and discharge.

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SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Inhalation of high concentrations can produce central nervous system depression.
Skin contact: Can cause severe irritation, possible burns, defatting and dermatitis.
Eye contact: Causes severe irritation, redness, tearing and blurred vision.

WARNING!: This product contains toluene and TDI, chemicals known to the state of California to cause cancer, birth defects and other reproductive harm..

EMERGENCY & FIRST AID: If overcome by vapors, remove to fresh air and if breathing has stopped, give artificial respiration.
Eye contact: Flush immediately with water and call a physician as soon as possible.
Skin contact: Remove excess material before washing with rubbing alcohol, soap and water. Remove contaminated clothing. Ingestion: See a physician as soon as possible.

PRIMARY ROUTES OF ENTRY: Dermal or inhalation most likely.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Repeated exposure can cause allergic reaction with development of occupational asthma. Long term exposure to low vapor concentrations may cause chronically progressive pulmonary disease. Repeated skin contact can result in sensitization.

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SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Heat, sparks, open flame and water contamination.

INCOMPATIBILITY: Water, alcohols, liquid chlorine, concentrated oxygen, NaOH, amines, alkaline materials and organometallic compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning may produce nitrogen oxides, hydrogen cyanide, carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Reacts slowly with water to produce CO2 gas.

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SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. In enclosed areas, cleanup personnel should wear self contained breathing apparatus. Cover spills with sawdust, vermiculite, or other absorbent material. Add an equal volume of a 6% ammonia solution in water and allow to react for 10 minutes. Collect into open containers and add more solution. Cover loosely to vent carbon dioxide gas generated.

WASTE DISPOSAL METHOD: Dispose in accordance with local, state, and federal regulations.

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SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use self-contained or supplied air breathing apparatus in areas were the isocyanate concentrations are above the PEL or when the material is being heated, spray applied or applied in poorly ventilated areas. An air-purifying respirator may be appropriate under specified conditions.

VENTILATION (Local/Mechanical): Explosion proof mechanical equipment capable of keeping vapor concentration below the PEL.

PROTECTIVE GLOVES: Chemical resistant gloves. Nitrile recommended.

EYE PROTECTION: Safety goggles or face shield.

OTHER PROTECTIVE EQUIPMENT: Eye bath & safety shower should be available.

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SECTION IX - SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers closed and store in a cool dry place with adequate explosion proof ventilation. Keep away from heat,

sparks, open flame and moisture. Open containers should be blanketed with dry nitrogen before resealing if there is no moisture contamination. If water contamination is suspected, do not reseal. Ground equipment to prevent accumulation of static charge.

TOXICOLOGICAL PROPERTIES: This product may contain trace amounts of Toluene diisocyanate monomer (TDI). The National Toxicological Program reported that when TDI monomer was introduced into a rat's stomach there was an increase in tumors over non-exposed rats. Inhalation studies conducted by Hazelton Labs did not show TDI to be carcinogenic to rats and mice.

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SECTION X – TRANSPORT INFORMATION

SHIPPING NAME: PAINT, 3, UN1263, PGII

AIR (CARGO ONLY): PAINT, 3, UN1263, PGII

AIR (PASSENGER & CARGO): PAINT, 3, UN1263, PGII

AIR (UPS): PAINT, 3, UN1263, PGII

OCEAN: PAINT, 3, UN1263, PGII 5.

MISC: ERG# 128
NMFC: 149980.2

REQUIRED LABELS & MARKINGS (AIR, OCEAN AND STANDARD GROUND)

Preparation Date 24-Feb-2009
Revision Date 03-Feb-2011