MATERIAL SAFETY DATA SHEET

DATE: April 8, 2008

HELMICOL 3028A

BURKE BR-725 TWO PART POLYURETHANE TILE ADHESIVE – PART A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: HELMITIN INC.

US: 11110 AIRPORT ROAD
OLIVE BRANCH, MS 38654
CANADA: 99 SHORNCLIFFE ROAD
TORONTO, ONTARIO M8Z 5K7

EMERGENCY PHONE:

800-424-9300 (CHEMTREC) 613-996-6666 (CANUTEC)

TRADE NAME AND SYNONYMS: HELMICOL 3028A

CHEMICAL NAME AND SYNONYMS: Polyurethane Adhesive

CHEMICAL FAMILY: Polyurethane

MOLECULAR FORMULA: Blend

PRODUCT DESCRIPTION: POLYURETHANE ADHESIVE; PART A

2. COMPOSITION/INFORMATION ON INGREDIENTS MATERIAL **CAS OSHA** % BY WT. **EXPOSURE GUIDELINES** TLV-TWA PEL-STEL POLYURETHANE PREPOLYMER **PROPRIETARY** NOT APPLICABLE 18-30 C12 – C14 MONOFUNCTIONAL EPOXY DILUENT 68609-97-2 4-9 NOT ESTABLISHED DIGLYCIDYL ETHER OF BISPHENOL A 025085-99-8 8-14 NOT APPLICABLE

3. HAZARDOUS IDENTIFICATIONS

EMERGENCY OVERVIEW: Causes eye irritation. Can cause respiratory irritation. Can cause central nervous system depression. Smoking and/or consumption of alcoholic beverages may increase toxic effects of this material. Can cause dermatitis.

POTENTIAL HEALTH EFFECTS:

EYE: May cause severe irritation. May damage eyes.

SKIN: Prolonged exposure may cause skin irritation. May cause drying or flaking of skin.

<u>INGESTION</u>: Ingestion may cause severe injury to intestinal tract, liver, kidneys, stomach, throat, lungs, mouth and mucous membranes. Harmful or fatal if swallowed. Do not ingest.

<u>INHALATION</u>: Overexposure may cause respiratory tract irritation. Prolonged overexposure may cause central nervous system depression with narcotic effects (headaches, dizziness). Keep exposure below OSHA exposure limits.

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CHRONIC EFFECTS / CARCINOGENICITY (CANCER CAUSING):

IARC : Not suspected as a human carcinogenOSHA : Not suspected as a human carcinogenNTP : Not suspected as a human carcinogen

OTHER: None known

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

<u>SKIN</u>: Wash with soap and water. Get medical attention if irritation develops or persists. Immediately remove contaminated clothing.

INGESTION: If swallowed, seek medical attention immediately.

<u>INHALATION</u>: Remove to fresh air. Restore breathing if necessary. Get medical attention. This material can cause lung damage.

DO NOT LEAVE VICTIM UNATTENDED.

5. FIRE FIGHTING MEASURES AND FIRE HAZARDS

OSHA CLASS: III B

FLASH POINT: >200°F TAG CLOSED CUP

LOWER EXPLOSIVE LIMIT: N.A. % UPPER EXPLOSIVE LIMIT N.A. %

<u>GENERAL HAZARD</u>: Toxic gases will form upon combustion. Closed containers may explode when exposed to extreme heat. Vapors are heavier than air and may travel a considerable distance. When heated above 250°F, TDI is released. TDI (toluene diisocyanate) is a carcinogen.

<u>FIRE FIGHTING EQUIPMENT</u>: Respiratory and eye protection required for fire fighting personnel. Full protective equipment and a self-contained breathing apparatus (SCBA) should be used in all indoor fires and any large outdoor fires.

<u>HAZARDOUS COMBUSTION PRODUCTS</u>: Carbon monoxide, carbon dioxide, smoke and fumes, hydrocarbon fragments, phosgene, nitrogen oxides, hydrogen cyanide, toluene diisocyanate (TDI).

6. ACCIDENTAL RELEASE MEASURES (SPILLS OR LEAKS)

Keep all sources of ignition and hot metal surfaces away from spill. Isolate the danger area and keep unauthorized personnel out. Stop spill if it can be done with minimal risk. Wear appropriate protective equipment including respirator protection as conditions warrant (see section 8). Prevent additional discharge of material. Notify the appropriate authorities immediately. Contain spilled liquid with sand, earth or other non-combustible inert absorbent material. Prevent run off from entering storm sewers, ditches or waterways. Transfer absorbed waste material into properly identified drums. Treat waste material with same precautions as the adhesive.

Do not use solvent or flammable liquid to help clean up an accidental release.

Release to the environment may be reportable under environmental regulations.

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7. HANDLING AND STORAGE

<u>HANDLING</u>: Open container slowly to relieve any pressure. Do not enter confined spaces such as tanks without following proper entry procedures as described in OSHA regulations at 29 CFR 1910.146. Do not breathe vapors. The use of respiratory protection is recommended when airborne concentrations of vapor exceed exposure guidelines. Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Wear appropriate protective gloves and clothing to prevent prolonged or repeated skin contact. Avoid contact with eyes. Wash with soap and water before eating, drinking, smoking or using toilet facilities.

<u>"EMPTY"</u> containers may contain liquid and vapor residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "EMPTY" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in accordance with governmental regulations.

<u>HAZARDOUS DECOMPOSITION PRODUCTS</u>: Carbon monoxide, carbon dioxide, smoke and fumes, hydrocarbon fragments, isocyanates, hydrogen cyanide, nitrogen oxides, toluene diisocyanate (TDI).

HAZARDOUS POLYMERIZATION: Will not occur.

STORAGE: Keep containers tightly closed. Use and store this material in cool, dry, well-ventilated area away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No smoking or open flames." Store only in approved containers. Protect containers against physical damage. Indoor storage should meet OSHA standards and appropriate fire codes.

Consult NFPA and OSHA codes as applicable.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge may be used under conditions where airborne concentrations are expected to exceed exposure guidelines. Protection provided by air purifying respirators is limited. Refer to respirator manufacturer's selection guide for appropriate respirator for conditions encountered. If in doubt, seek the advice of an industrial hygienist or safety professional for appropriate air purifying respiratory equipment. Use positive pressure air supplied respirator if there is potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection. Respiratory protection does not provide safety from flammable atmospheres. Do not enter concentrations of vapors at, near or above the Lower Flammable Limit (LFL). When respiratory protection is used, a respiratory protection program meeting OSHA regulations at 29 CFR 1910.134 must be followed.

<u>SKIN PROTECTION</u>: The use of gloves impermeable to the specific material handled is advised to prevent prolonged or repeated skin contact. Where splashing is likely to occur, aprons impermeable to the specific material may be worn. Refer to the glove and protective clothing manufacturer's selection guide for appropriate material.

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<u>EYE PROTECTION</u>: Approved chemical splash goggles should be worn to safeguard against potential eye contact, irritation or injury. Where splashing is likely to occur, hard hats and face shields may be used to provide additional protection. Eye wash facilities should be available in the work area.

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation to maintain exposure below TLV(S). The use of local exhaust ventilation is recommended. Provide mechanical ventilation of confined spaces. If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure guidelines, additional ventilation or exhaust systems may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES	
ODOR AND APPEARANCE: Beige thick liquid with low odor	
SPECIFIC GRAVITY: 1.4 (75°F) 24°c) pH: N	<u>'A</u>
BOILING POINT:>400 °F FREEZE POINT: _	<32 °F
APPROXIMATE VISCOSITY: <u>paste</u> 75°F (24°C)	
SOLUBILITY IN WATER: not soluble	
% SOLIDS BY WEIGHT =%	
PERCENT VOLATILE (BY WEIGHT):<1%	
VAPOUR PRESSURE (MM OF MERCURY):<1	
VAPOUR DENSITY (AIR = 1): <u>heavier</u>	
EVAPORATION RATE (BUTYL ACETATE = 1):slower	
EVAPORATION RATE (ETHYL ETHER = 1):slower_	
10 CTADI HTW AND DEACCRIVITY	

10. STABLIITY AND REACTIVITY

<u>CHEMICAL STABILITY</u>: Keep away from flames and spark producing equipment. Not dangerously unstable. When heated above 250°F, TDI is released. TDI is a carcinogen.

<u>INCOMPATIBLE MATERIALS</u>: Strong oxidizing agents, strong reducing agents, acids, bases, or unstable chemicals, chloroform, nitric compounds, peroxides, sulfur dichloride, strong alkalies.

<u>HAZARDOUS DECOMPOSITION PRODUCTS</u>: Carbon monoxide, carbon dioxide, smoke and fumes, hydrocarbon fragments, phosgene, nitrogen oxides, hydrogen cyanide, TDI.

HAZARDOUS POLYMERIZATION: Will not occur.

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11. TOXICOLOGICAL INFORMATION
SKIN: DERMAL LD50 = Not available mg/kg
<u>INGESTION</u> : ORAL LD50 = <u>Not available mg/kg</u>
CHRONIC: Liver and kidney damage. May cause corneal opacity. may cause central nervous system depression causing headaches, nausea, and dizziness.
CHRONIC/CARCINOGENICITY (CANCER CAUSING): This product contains the following chemicals known to the state of California (Proposition 65) to cause cancer or reproductive toxicity:
NONE KNOWN
OTHER:
None known
12. ECOLOGICAL INFORMATION
No data available
13. DISPOSAL CONSIDERATIONS
Incinerate at an EPA approved facility or dispose of in accordance to all federal, state and local regulations.
Helmicol 3028A is a hazardous waste if discarded. (CFR., vol. 40, part 261, PGS. 51-114).
See section 2, page 1 of this MSDS for hazardous ingredients.
PROPER WASTE DISPOSAL IS THE RESPONSIBILITY OF THE OWNER OF THE WASTE!
Call Helmitin Inc. for further information.
14. TRANSPORTATION INFORMATION
D.O.T.: T.D.G.:
PROPER SHIPPING NAME: NOT REGULATED
HAZARD CLASSIFICATION:
UN#:
PACKING GROUP:
All packaged material must be labeled in accordance with DOT and OSHA standards.
ERG (Emergency Response Guide)

15. REGULATORY INFORMATION		
OSHA: Not hazardous		
	g substances subject to the reporting requirements of And Reauthorization Act of 1986 and CFR Part 372: _	
NONE KNOW	N	
<u>V.O.C.</u> : <0.1 LBS/GAL (SCAQMD RULE 110 <12 G/L	58)	
D: MINIMAL HAZARD 2: MODERATE II SLIGHT HAZARD 3: SERIOUS HAZERD 4: SEVERE HAZERD	ZARD	
HMIS RATINGS:		
HEALTH:1	REACTIVITY:0	
FLAMMABILITY:1	PERSONAL DEPENDS ON APPLICATION PROTECTION: <u>AND VENTILATION.</u>	
TSCA: Components of this product are listed on the	ne TSCA inventory.	
16 OTHER INCORMATION		
16. OTHER INFORMATION	_	
Revision Number: 6		
All employees or contractors, etc., who use this pro	duct must have access to this material safety data sheet.	
PREPARED BY: Helmitin Inc Lab (MW)		

17. DEFINITIONS

ASPIRATION HAZARD: The danger of drawing material into the lungs, leading to an inflammatory response that can be fatal.

CFR: Code of federal regulations. A collection of regulations established by law.

CARCINOGEN: A material that either causes cancer in humans, or is considered capable of causing cancer in humans.

COMBUSTIBLE: A term used to classify certain materials with low flash points that ignite easily. for OSHA it has a flash point >100°F but below 200°F.

D.O.T.: U.S. Dept. of Transportation

FLAMMABLE: A material that gives off vapors that readily ignite at room temperature. OSHA defines flammable as a material with a flash point <100°F.

FLASH POINT: The lowest point at which a liquid gives off sufficient vapor to form an ignitable mixture with air.

HAZARDOUS: Any substance or mixture of substances having properties capable of producing adverse effects on the health or safety of a human.

IARC: International Agency For Research On Cancer

IRRITANT: A substance capable of causing an inflammatory effect on living tissue by chemical action at the site of contact.

LD50: Lethal Dose 50. The single dose of a substance that causes death of 50% of an animal population from exposure to the substance from any route other than inhalation.

L.E.L.: Lower Explosive Limit. The lowest concentration of vapor that burns or explodes when an ignition source is present at ambient temperatures.

L.F.L.: Lower Flammable Limit. Same as L.E.L.

MSHA: Mine Safety and Health Administration

N.A.: Not applicable or not available.

N.E.: Not established

N.F.P.A.: National Fire Protection Association

N.I.O.S.H.: National Institute Of Occupational Safety And Health.

N.T.P. National Toxicology Program.

O.S.H.A.: The Occupational Safety And Health Administration

P.E.L.-S.T.E.L.: Permissible Exposure Limit, Short Term Exposure Limit.

SYSTEMIC TOXICITY: Adverse effects induced by a substance which affects the body in a general manner rather than locally.

T.L.V.-T.W.A.: Threshold Limit Value, Time Weighted Average

T.S.C.A.: Toxic Substance Control Act

TOXIC: Any chemical or material that has evidence of an acute or chronic health hazard and is listed in the NIOSH <u>REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES.</u>

V.O.C.: Volatile Organic Compound