



MATERIAL SAFETY DATA SHEET

Form WI04-11A Rev. 1

Part Number(s):
16-206

Product Name: TRANS STICK TIE

Release Date: March 21, 2005

1. Product and Company Identification

Trade Name & Synonyms Trans Stick Tie	MSDS Code Number Refer to part number
Chemical Name Thermoplastic Polyurethane Elastomer	Manufacture / Distributor GAC International Inc.
C.A.S. Number 037383-28-1	Address 355 Knickerbocker Ave. Bohemia, NY USA 11716
Grades or Minor Variant Identities NA	Information Telephone Number 1-631-419-1700
Product Use (for Canada) NA	Emergency Telephone Number 1-631-419-1700

2. Composition of Ingredients

Hazardous Components	C.A.S. Number	Exposure Limits	%
Polyurethane from methylenediphenyldiisocyanate, 1,4-butanediol, and polytetramethylene glycol	037383-28-1		>98
Additives			<2

3. Hazard Identification

Emergency Overview					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation.				Processing fumes may cause eye irritation upon repeated exposure.
Skin	Essentially nonirritating to skin. Mechanical injury only. Molten material may burn skin.	-	-	-	-
Inhalation	Dust may cause irritation to upper respiratory tract. At room temperature, exposures to vapors are unlikely due to physical properties. Normal processing temperatures may generate vapors, which cause irritation if ventilation is inadequate.	-	-	-	Processing fumes may cause respiratory irritation upon repeated exposure.
Ingestion	Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.	-	-	-	-
Other	NA	-	-	-	-
Medical Conditions Aggravated by Exposure NA					
Carcinogenicity (IARC, NTP) NA					
Potential Environmental Effects NA					



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4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Flush with plenty of water.		
Skin	Wash off in flowing water or shower.		
Inhalation	Remove to fresh air if effects occur.	Consult a physician.	
Ingestion	No adverse effects anticipated by this route of exposure incidental to proper industrial handling.		
Other			

Note to Physicians (Treatment, Testing, and Monitoring)

If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgement of the physician response to reactions of the patient.

5. Fire and Explosion Data

Flashpoint & Method: °C / °F NA	Flammable (Explosive) Limits in Air LEL: NA UEL: NA	Autoignition Temperature NA	Other
Flame Propagation or Burning Dense smoke is emitted when burned without sufficient oxygen. Mechanical handling can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate.	Properties Contributing to Fire Intensity Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to carbon monoxide and carbon dioxide and trace amounts of aromatic hydrocarbons and hydrogen cyanide.	Flammability Classification Health- , Flammability- , Reactivity-	
Extinguishing Media Water, Carbon dioxide or dry chemical.	Extinguishing Media to Avoid		
Protection and Procedures for Firefighters Keep people away. Isolate fire area and deny unnecessary entry. Cool surroundings with water to localize fire zone. Hand held carbon dioxide or dry chemical extinguishers may be used for small fires. Soak thoroughly with water to cool and prevent reignition. Wear positive-pressure self-contained breathing apparatus and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.			
Unusual Fire and Explosion Hazards			



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6. Accidental Release Measures

Containment Techniques
Spill/Leak Clean-Up Procedures and Equipment Spills should be collected to prevent contamination of waterways. Sweep up.
Evacuation Procedures
Special Instructions Protect People: Pellets or beads may present a slipping hazard.
Reporting Requirements

7. Handling and Storage

Handling Practices and Warnings Good housekeeping and controlling of dusts are necessary for safe handling of product.
Storage Practices and Warnings (°C / °F). Store in a dry place.

8. Exposure Control/Personal Protection

Ventilation	Other Engineering Controls Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.	
Routes of Entry:	Personal Protective Equipment (PPE) for Normal Use:	PPE for Emergencies:
Eye/Face	Use safety glasses. If there is a potential for exposure to particles, which could cause mechanical injury to the eye, wear chemical goggles. If vapor pressure causes eye discomfort, use a full-face respirator.	
Skin	No precautions other than clean body-covering clothing should be needed. Use gloves with insulation for thermal protection, when needed.	
Inhalation	In dusty atmospheres, use an approved dust respirator. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.	
General Hygiene Considerations and Work Practices		
Protective Measures During Repair and Maintenance of Contaminated Equipment		
Other Protective Measures and Equipment		



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9. Physical and Chemical Characteristics

Appearance Clear colorless to pale yellow or pigmented pellets.		Odor Odorless.
Normal Physical State: <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Solid <input type="checkbox"/> _____ (Other)		Boiling Point °C / °F N/A Melting Point °C / °F NA Freezing Point °C / °F NA
Specific Gravity or Density (H₂O=1) 1.1-1.2	Solubility in Water Insoluble	pH NA
Vapor Pressure (mm Hg @ 20°C) N/A	Vapor Density (AIR= 1) N/A	Evaporation Rate (Butyl Acetate = 1) NA
Other		

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid) None known	
Hazardous Products Produced During Decomposition Hazardous decomposition products depend on temperature, air supply and the presence of other materials.	
Hazardous Polymerization? <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid °C / °F NA
Stability <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Conditions to Avoid 260°C / 500 °F

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic or Reproductive Effects, or Structure Activity Data For detailed toxicological data, call the non-emergency number 800-258-2436.
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12. Ecological Information

Toxicity, Environmental Fate, Physical/Chemical Data, or Other Data Supporting Environmental Hazard Statements No bioconcentration is expected because of high molecular weight(MW>1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment. Degradation & Persistence: This water insoluble polymeric solid is expected to be essentially unreactive in the environment over a period of many years. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected. Ecotoxicity: Not expected to be acutely toxic, but pellets, if ingested by waterfowl or aquatic life, may mechanically cause adverse effects.
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13. Disposal Considerations

Regulations Do not dump into any sewers, on the ground, or into any body of water. All disposable methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.
Properties (Physical/Chemical) Affecting Disposal For unused & contaminated product, the preferred options include sending to a licensed permitted: recycler, reclaimer, incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's customer information center at 800-258-2436 or 517-832-1556 for further details.



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14. Transport Information

Regulated for shipping? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Proper Shipping Name	Packing Group
Do changes in quantity, packaging, or shipment method change product classification? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hazard Class	Identification Number
Other			

15. Regulatory Information

<p>Federal Regulations</p> <p>SARA 313 Information: To the best of our knowledge, this product contains no chemical subject to SARA Title III section 313 supplier notification requirements.</p> <p>SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard categories" promulgated under sections 311 and 312 of the superfund amendment and reauthorization act of 1986(SARA Title III) and is considered ,under applicable definitions, to meet the following categories. Not to have met any hazard category.</p> <p>Toxic substances Control act (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.</p> <p>State right to know: This product is not known to contain any substances subject to the disclosure requirements of New Jersey and Pennsylvania.</p> <p>OSHA hazard communication standard: This product is not a "hazardous chemical" as defined by the OSHA Hazard Communication Standard,29 CFR 1910.1200.</p> <p>Comprehensive environmental response compensation and liability act (CERCLA,or SUPERFUND): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.</p> <p>International Regulations</p> <p>Canadian Regulations:</p> <p>WHMIS Information: The Canadian workplace hazardous materials information system(WHMIS) classification for this product is: This product is not a "controlled product" under WHMIS.All substances in this product are listed on the Canadian Domestic substances List(DSL) or are not required to be listed. CAS#9018-04-6 is used in Canada in place of CAS# 37383-28-1.</p> <p>Other</p>
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16. Other Information

<p>Supplier Number: 205 / 16 Supplier Release: 27th November 2000</p> <p>N/A = not applicable. NA = not available, N/E = not established. N/D = not determined.</p>
