



MATERIAL SAFETY DATA SHEET

Form WI04-11A Rev. 1

Part Number(s):
17-222-11

Product Name: TRACING PAPER TABLET

Release Date: February 13, 2006

1. Product and Company Identification

Trade Name & Synonyms Grafix acetate	MSDS Code Number Refer to part number
Chemical Name Cellulose Diacetate	Manufacture / Distributor GAC International Inc.
C.A.S. Number NA	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	%
A flexible packaging material derived largely from natural resources. Materials of this type have been widely used for many years, with no adverse reactions reported. The principle components, cellulose diacetate(CA) and diethylphthalate(DEP), have not changed over this period.	NA	NA	NA

3. Hazard Identification

Emergency Overview Similar safety hazards to paper.					
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	NA	NA	NA	NA	NA
Skin	NA	NA	NA	NA	NA
Inhalation	NA	NA	NA	NA	NA
Ingestion	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA
Medical Conditions Aggravated by Exposure NA					
Carcinogenicity (IARC, NTP) NA					
Potential Environmental Effects NA					

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	No adverse effects anticipated.	NA	NA
Skin	No adverse effects anticipated.	NA	NA
Inhalation	N/A	N/A	N/A
Ingestion	No adverse effects anticipated	NA	No adverse effects anticipated on prolonged exposure.
Other	NA	NA	NA
Note to Physicians (Treatment, Testing, and Monitoring) NA			



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5. Fire and Explosion Data

Flashpoint & Method: °C / °F NA	Flammable (Explosive) Limits in Air LEL: NA UEL: NA		Autoignition Temperature NA	Other Potential hazards: Clear, smooth flat sheets;(similar safety hazards to paper)
Flame Propagation or Burning NA	Properties Contributing to Fire Intensity NA		Flammability Classification Health-, Flammability- , Reactivity-NA	
Extinguishing Media Water, carbon dioxide, foam, dry powder, sand.			Extinguishing Media to Avoid	
Protection and Procedures for Firefighters As with any fire, use breathing apparatus in presence of smoke/ fumes.				
Unusual Fire and Explosion Hazards Supports combustion. Flame retardant formulations are available.				

6. Accidental Release Measures

Containment Techniques NA
Spill/Leak Clean-Up Procedures and Equipment Loose waste and scrap material should be swept up for safe disposal.
Evacuation Procedures NA
Special Instructions NA
Reporting Requirements NA

7. Handling and Storage

Handling Practices and Warnings When moving pallets of material, always ensure the "forks" of the forklift truck are long enough to cover the complete base of the pallet. This will ensure the even distribution of the forces throughout the packaging. Avoid damage to the edge of the roll. Never stand rolls on end, avoid placing or rolling rolls on the floor. Handle rolls using mandrels inserted into the core. Store by suspending on racks using mandrels. Do not hammer mandrels into the core.
Storage Practices and Warnings Decades of reliable performance have demonstrated that Grafix cellulose diacetate film can be used in its many applications with the confidence that the product provides a consistently high level of quality. However, cellulose diacetate, like all polymers, must be stored appropriately to preserve its performance. Avoid wide variations in temperature and humidity in the storeroom. Temperatures between 15°C - 23°C (59°F - 73°F) and a relative humidity between 40 % - 65 % are the best conditions. Avoid exposure to ketone and ester solvent vapors such as acetone or ethyl acetate. Do not store in bright sunlight. Shelf life: As a general rule, Grafix acetate should be processed promptly. We would recommend that customers process Grafix acetate within 12 months of its receipt. Particularly for hot and / or humid climates. It may be advisable to convert Grafix acetate within 6 or even 3 months of receipt. Some films will need to be processed in shorter periods to avoid problems. In particular, thicker films over 100 µ may suffer unidirectional curl ("roll set") after even a few months storage as rolls. For applications where this might be critical, thicker films should be sheeted as soon as possible after receipt. In case of problems after such periods, Grafix reserves the right not to offer compensation in respect of problems arising with film quality.



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8. Exposure Control/Personal Protection

Ventilation Fume extraction and fresh air circulation is recommended where solvents are being used during lamination or other finishing processes.		Other Engineering Controls Special requirements: None
Routes of Entry:	Personal Protective Equipment (PPE) for Normal Use:	PPE for Emergencies:
Eye/Face	NA	NA
Skin	NA	NA
Inhalation	NA	NA
General Hygiene Considerations and Work Practices NA		
Protective Measures During Repair and Maintenance of Contaminated Equipment NA NA		
Other Protective Measures and Equipment NA		

9. Physical and Chemical Characteristics

Appearance Clear smooth flat sheets or rolled film.		Odor Practically odorless.
Normal Physical State: ☐ Liquid ☐ Gas ☒ Solid ☐ ____ (Other)		Boiling Point °C / °F NA Melting Point °C / °F NA Freezing Point °C / °F NA
Specific Gravity or Density (H₂O=1) 1.31 ± 0.01.	Solubility in Water Insoluble	pH NA
Vapor Pressure (mm Hg @ 20°C) NA	Vapor Density (AIR= 1) NA	Evaporation Rate (Butyl Acetate = 1) NA
Other Flow temperature: N/A Viscosity: N/ A Equilibrium water content Circa 2 % (in air @ temp. 23 °C, RH 50 %)		

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid) Solvent resistance: Low resistance to ketones and esters. Attacked by moderate to concentrated strong acids and bases. Resistant to non-polar solvents.	
Hazardous Products Produced During Decomposition Carbon monoxide, carbon dioxide, acetic acid, water.	
Hazardous Polymerization? ☐ May Occur ☒ May Not Occur	Conditions to Avoid °C / °F NA
Stability? ☒ Stable ☐ Unstable	Conditions to Avoid Thermal stability: Decomposes circa 250°C / °F

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic or Reproductive Effects, or Structure Activity Data Material of this type has been in use for many years. There have been no chronic, short or long term effect reported. Specific toxicological tests on Grafix acetate films have not been conducted. However, practical experience and literature surveys for the key components reveal the following information: INHALATION: Not applicable. INGESTION /ORAL TOXICITY: (LD50): 8600 mg / kg (rat) for cellulose diacetate 9000 mg / kg (rat) for DEP. SKIN SENSITIVITY: No adverse effects anticipated. EYE CONTACT: Normal discomfort resulting from foreign bodies in the eye.
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12. Ecological Information

Toxicity, Environmental Fate, Physical/Chemical Data, or Other Data Supporting Environmental Hazard Statements

Raw materials and the manufacturing process. Over 80 % of Grafix film is cellulose diacetate. This is derived from natural cellulose sources, cotton linters and wood pulp, from managed forests predominately in North America. We use no hardwoods from endangered rain forests. **MOBILITY AND DEGRADABILITY:** Biodegradation studies indicate around 15 % (by wt) of grafix film is lost over 28 days. This is thought to be largely due to DEP biodegradation. The two primary constituents of grafix film (cellulose diacetate and DEP) have long since been recognized as biodegradable. **RECYCLING:** Grafix acetate is suitable for recycling in various forms.

13. Disposal Considerations

Regulations

Grafix acetate can be recycled, incinerated or land filled. There are no known dangers resulting from these methods of disposal. Incineration produces no toxic by- products.

Properties (Physical/Chemical) Affecting Disposal

NA

14. Transport Information

Regulated for shipping?

☐ Yes ☒ No

Proper Shipping Name

Tracing paper tablet

Packing Group

NA

Do changes in quantity, packaging, or shipment method change product classification?

☐ Yes ☒ No

Hazard Class

NA

Identification Number

NA

Other

The material is not regulated for transport and shipping purposes. Materials packed on pallets should not be broken down during shipment.

15. Regulatory Information

Federal Regulations NA

International Regulations NA

Other

FOOD CONTACT – Grafix acetate films comply with US FDA Regulations as set out in CFR 21, parts 170 – 199. Grafix acetate films comply with EC directives 90 /128 / EEC, 92 / 39 / EEC, 93 /9 / EEC, 95 /3 / EEC, and 96 / 11 / EEC and are classified as being suitable for food contact applications. **HEAVY METALS:** No heavy metals are used in the manufacture of Grafix acetate. The resulting film complies with U.S - CONEG legislation, and European standard EN 71-3, the packaging (Essential requirements) Regulations (1998).

16. Other Information

Supplier Number: 24 / 17

Supplier Release: May 2003

N/A = not applicable. NA = not available, N/E = not established. N/D = not determined.