



TMX is a Division of Thyssen Inc., N.A.
MATERIAL SAFETY DATA SHEET

SECTION I. MATERIAL IDENTIFICATION

COMPANY Thyssen Inc. N.A./TMX Division 400 Renaissance Center, Suite 1800 Detroit, Michigan 48243	RE-ISSUE DATE 1-May-99	IDENTIFICATION NUMBER N/A
TRADE NAME Micarta	EMERGENCY PHONE NUMBER (313) 567-5282	PREPARED BY: L. J. Switaj
CHEMICAL NAME N/A	FORMULA Glass cloth, paper, silicon, phenolic & melamine epoxy composite	DOT IDENTIFICATION NO. N/A

SECTION II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NUMBER	% COMPOSITION BY WEIGHT	OSHA-PEL 8-HR TWA	ACGIH TLV 8-HR TWA
PHENOL	108-95-2	<8-12	19 mg/m3 5.0 ppm	19 mg/m3 5.0 ppm
FORMALDEHYDE	50-00-0	<2	.75 ppm	.30 ppm
METHANOL	67-56-1	<10-11	200 ppm	200 ppm
MOLYBDENUM/ DISULFIDE	1317-33-5		10 mg/m3	10 mg/m3
SILICA	60676-86-0		0.1 mg/m3	0.1 mg/m3
SILICON	7440-21-3		5.0 mg/m3	10.0 mg/m3
CRESYLIC ACID	N/A	<4	5 ppm	22.0 mg/m3

This product is a thermostatic composite consisting of a cured phenol-formaldehyde on a cellulose substrate. OSHA PEL and ACGIH TLV have not been established for this material. Formaldehyde has been determined to be a "POTENTIAL CANCER HAZARD" by OSHA per the standard promulgated 12-4-87 (29 CFR SEC. 1910.1049 FR. VOL 52 NO. 233). Precautions must be taken when formaldehyde is present in the air at concentrations greater than 0.1 ppm as described in the standard.

Micarta products may be comprised of all or variations of the ingredients shown here.

PEL=Permissible Exposure Limit (1) % of the Products Material Varies with Grade of Material. Other trace elements of <1% May be in Present.

SECTION III. PHYSICAL DATA

MATERIAL (At Normal Conditions) SOLID	APPEARANCE AND ODOR Flat or shapes - natural in color - slight phenolic odor
MELTING POINT N/A	SPECIFIC GRAVITY 1.3 -1.4

SECTION IV. FIRE AND EXPLOSIVE

SPECIAL FIRE FIGHTING PROCEDURES Same as for wood fire - do not breathe fumes from burning laminate

SECTION V. REACTIVITY DATA

STABILITY Stable	CONDITIONS TO AVOID Strong Oxidizing agents
HAZARDOUS DECOMPOSITION OR BYPRODUCTS : Carbon dioxide, carbon monoxide, phenols, methane, formaldehyde & hydrocarbons Dust Or Fumes May Be Produced During Burning, Grinding And Possibly Machining. Refer To ANSI Z49.1	

SECTION VI. Environmental

SPILL OR LEAK PROCEDURES	N/A
WASTE DISPOSAL METHODS	Disposal must comply with applicable Federal, State and Local disposal and discharge laws.

PRODUCT
Micarta

SECTION VII. HEALTH HAZARD DATA

NOTE: MICARTA PRODUCTS IN THEIR NATURAL STATE DO NOT PRESENT AN INHALATION OR CONTACT HAZARD, HOWEVER OPERATIONS SUCH AS BURNING, WELDING, SAWING, BRAZING AND GRINDING MAY RELEASE FUMES AND/OR DUST WHICH MAY PRESENT HEALTH HAZARDS.

EFFECTS OF OVEREXPOSURE:

Acute - Dust or fume may cause irritation to the eyes, nose, or throat. Inhalation of Formaldehyde dust or fume may cause cancer.

Chronic - A very small number of exposed people may develop an allergic reaction after prolonged or repeated exposure.

Phenol Exposure may cause skin irritation and liver and kidney damage.

Formaldehyde Exposure may cause irritation to the eyes, skin and respiratory system. Formaldehyde is listed as a suspected human carcinogen by ACIGH and as an animal carcinogen by IARC. OSHA describes formaldehyde in concentrations greater than .75 ppm in the air as a health hazard.

Methanol Methanol has tested positive for carcinogenicity in rodents.

Molybdenum/ Disulfide Exposure may cause skin and respiratory irritation, and liver and kidney damage.

Silica Exposure may cause skin and respiratory irritation. Silica crystalline as a respiratory dust has caused lung cancer in animals.

Silicon An accumulation of Silicon in the lungs may result in benign pneumoconiosis.

Cresylic Acid Exposure may cause skin and respiratory irritation, and liver and kidney damage.

SECTION VIII. EMERGENCY AND FIRST AID PROCEDURES

Inhalation In the event of excessive exposure to dust or fume, remove the employee to fresh air. If breathing is difficult administer artificial respiration or oxygen. Obtain immediate medical assistance.

Skin: Abrasions and cuts should be washed and closed by a clean compress and be immediately medically treated. Should skin irritation occur, wash affected area with mild soap and rinse with clean warm water.

Eyes: Depending on the type and nature of exposure, relief may be obtained by fresh air or rinsing the eyes with clean water. Obtain medical assistance.

Medical Conditions Aggravated by Exposure:
Persons with a predisposition to respiratory disorders may be adversely affected by particulates or respiratory irritants generated during the mfg. process.

SECTION IX. SPECIAL PROTECTION INFORMATION & CONTROL MEASURES

Note: Consult your regional codes or Code of Federal Regulations, Title 29, Part 1910, Subpart G-Occupational Health and Environmental Control, Subpart I Personal Protective Equipment, Subpart P-Welding, Cutting, and Brazing, and Subpart Z-Toxic and Hazardous Substances. Certain machining activities may produce hazardous substances such as carbon monoxide, carbon dioxide, phenols, methane, formaldehyde & hydrocarbons or produce inert suffocating atmospheres.

Ventilation: Local exhaust or ventilation systems sufficient to maintain exposure levels to contaminants below prescribed limits may be required. When inhalation controls are not sufficient to reduce the exposure below the applicable exposure limit then use OSHA/NIOSH approved respiratory protection within the use limitations of the respirator.

Personal Protection: To avoid contact use appropriate protective gloves or clothing to protect against dust & cutting edges. Appropriate heat shielding garments should be used for activities using or generating heat. Eyes should be protected by using safetyglasses, goggles, helmet, face shield as appropriate to the operation.

Precautions to be taken in handling and storage:
Be alert to sharp edges. Do not eat, drink or smoke in a dusty atmosphere.

SECTION X. OTHER INFORMATION

SARA Section 313 Toxic Chemical List, de minimis Concentrations

This product does not contain toxic chemicals subject to the reporting requirements of Section 312 and 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

NFPA Ratings (NFPA No. 704)

HEALTH:	2
FLAMMABILITY:	1
REACTIVITY:	0

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