

ThyssenKrupp Materials NA, Inc.  
**MATERIAL SAFETY DATA SHEET**

**SECTION I. MATERIAL IDENTIFICATION**

<b>COMPANY</b> ThyssenKrupp Materials NA, Inc. 22355 West Eleven Mile Road Southfield, Michigan 48033	<b>RE-ISSUE DATE</b> 5-Dec-08	<b>IDENTIFICATION NUMBER</b> N/A
<b>TRADE NAME</b> Micarta	<b>EMERGENCY PHONE NUMBER</b> (248) 233-5681	<b>PREPARED BY:</b> J. VanValkenburg
<b>CHEMICAL NAME</b> N/A	<b>FORMULA DOT</b> Glass cloth, paper, silicon, phenolic & melamine epoxy composite	<b>DOT IDENTIFICATION NO.</b> N/A

**SECTION II HAZARDOUS INGREDIENTS**

MATERIAL OR COMPONENT	% COMPOSITION		OSHA-PEL	ACGIH TLV
	CAS NUMBER	BY WEIGHT (1)	8-HR TWA	8-HR TWA
PHENOL	108-95-2	<8-12	5.0 ppm 5.0 ppm	5.0 ppm 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 designated a carcinogen on the following lists: NTP/IARC/OSHA  
 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 Alloying Material Varies with Grade of Material. Other trace elements of <1% May be in Present.

**SECTION III. PHYSICAL DATA**

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

**SECTION IV. FIRE AND EXPLOSIVE**

<b>SPECIAL FIRE FIGHTING PROCEDURES:</b> Same as for wood fire - do not breathe fumes from burning laminate.
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**SECTION V. REACTIVITY DATA**

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

**SECTION VI. Environmental**

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

## SECTION VII. HEALTH HAZARD DATA

<b>NOTE:</b>	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
<b>EFFECTS OF OVEREXPOSURE:</b>	
<b>Acute</b>	Dust or fume may cause irritation to the eyes, nose, or throat. Inhalation of Formaldehyde dust or fume may cause cancer.
<b>Chronic</b>	A very small number of exposed people may develop an allergic reaction after prolonged or repeated exposure.
<b>Phenol</b>	Exposure may cause skin irritation and liver and kidney damage.
<b>Formaldehyde</b>	Exposure may cause irritation to the eyes, skin and respiratory system. Formaldehyde is designated a carcinogen on the NTP/IARC/OSHA.
<b>Methanol</b>	Methanol has tested positive for carcinogenicity in rodents.
<b>Molybdenum</b>	Exposure may cause skin and respiratory irritation, and liver and kidney damage.
<b>Disulfide</b>	
<b>Silica</b>	Exposure may cause skin and respiratory Irritation. Silica crystalline as a respiratory dust has caused lung cancer in animals.
<b>Silicon</b>	An accumulation of Silicon in the lungs may result in benign pneumokoniosis.
<b>Cresylic Acid</b>	Exposure may cause skin and respiratory irritation, and liver and kidney damage.

## SECTION VIII. EMERGENCY AND FIRST AID PROCEDURES

<b>Inhalation</b>	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.
<b>Skin:</b>	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.
<b>Eyes:</b>	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.
<b>Medical Conditions Aggravated by Exposure:</b>	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

<b>Note:</b>	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 welding type activities may produce hazardous substances such as carbon monoxide, ozone, phosgene in the presence of certain chemicals, or produce Inert suffocating atmospheres in addition to the production of ultraviolet radiation and/or noise.
<b>Ventilation:</b>	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.
<b>Personal</b>	To avoid contact use appropriate protective gloves or clothing to protect against 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
<b>Protection:</b>	
<b>Precautions to be taken in handling and storage:</b>	Be alert to sharp edges and unsecured lifts.

## SECTION X. OTHER INFORMATION

<b>SARA Section 313 Toxic Chemical List, de minimis Concentrations</b>	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.
<b>NFPA Ratings (NFPA No. 704)</b>	
	HEALTH 2
	FLAMMABILITY 1
	REACTIVITY 0
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