

**MATERIAL SAFETY DATA SHEET**

**MOLDED FRICTION MATERIAL "11"**

Section 1 NAME AND PRODUCT	
TEK-MOTIVE, INC. 167 Commerce Street East Haven, CT 06512	Date Issued: 6/11/93
Contact: Richard Moalli	Emergency Tel. No. 203-468-2224
Material Number: 511	Non-Asbestos Organic Friction Material

Section 2 HAZARDOUS INGREDIENTS				
Hazardous Component	CAS Number	% Range	OSHA P.E.L.	ACGIH T.L.V.
Barium Sulfate	7727-43-7	10 - 30	15mg/M <sup>3</sup>	10mg/M <sup>3</sup>
Phenolic Resin	9003-35-4	10 - 30	5.0mg/M <sup>3</sup>	5.0mg/M <sup>3</sup>
Carbon	1333-86-4 64743-05-1	2 - 15	3.5mg/M <sup>3</sup>	3.5mg/M <sup>3</sup>
Fiber Glass	65997-17-3	10 - 30	15mg/M <sup>3</sup>	10mg/M <sup>3</sup>
Graphite	7782-42-5	2 - 15		10mg/M <sup>3</sup>
Cashew Nut Liquid Particle	NA	2 - 15	NA	NA
Brass (Cu)	7440-50-8	1 - 10	1mg/M <sup>3</sup>	1mg/M <sup>3</sup>
(Zn)	7440-66-6		NA	5mg/M <sup>3</sup>
Rubber (SBR)	NA	2 - 15	NA	NA

Section 3 PHYSICAL AND CHEMICAL DATA	
BOILING POINT (°F)	NOT APPLICABLE
VAPOR PRESSURE (mmHg)	NOT APPLICABLE
VAPOR DENSITY	NOT APPLICABLE
SOLUBILITY IN WATER	INSOLUBLE
SPECIFIC GRAVITY	1.95
PERCENT VOLATILE (wt/wt)	negligible
EVAPORATION RATE	0
APPEARANCE & ODOR	GRAY/BLACK MATRIX WITH VISIBLE FIBERS

Section 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NON-FLAMMABLE
FLAMMABLE LIMITS	LEL - NON-FLAMMABLE UEL - NON-FLAMMABLE
EXTINGUISHING MEDIA	WATER/WATER MIST/FOAM/CO <sub>2</sub>
SPECIAL FIRE FIGHTING PROCEDURES	NONE
UNUSUAL FIRE AND EXPLOSION RISKS	NONE

Section 5 HEALTH HAZARD DATA  
FIRST AID AND MEDICAL

Primary Route(s) of Entry: Inhalation of Dust

Health Hazards (Acute and Chronic): Permissible Exposure Limits (PEL) and Threshold Limit Values (TLV) have not been established for this mixture. Dust created during handling of finished parts should be treated as a hazard. If OSHA nuisance dust allowance is exceeded, appropriate control and protection measures are necessary (see Section 8).

Skin Contact: May cause irritation (see Section 8).

Eye Contact: May cause irritation (see Section 8).

Ingestion: If excessive, seek medical assistance.

Carcinogenicity: See endnotes.

Signs and Symptoms of Overexposure: Watery eyes, skin irritation, heavy breathing or nausea may be symptoms of overexposure.

First Aid: Move victim to fresh air. Flush affected area with clear water.

Section 6 REACTIVITY DATA

STABILITY	Stable
POLYMERIZATION	Fully polymerized
INCOMPATIBILITY	None
DECOMPOSITION PRODUCTS	Carbon monoxide and ammonia may be released at high temperatures.
CONDITIONS TO BE AVOIDED	Avoid creation of dust; use fine filter vacuum or dust collector.



Section 7 STORAGE HANDLING AND USE PROCEDURES

NORMAL STORAGE AND HANDLING	Avoid creation of dust.
NORMAL USE	Avoid creation of dust without adequate dust collection system.
IN CASE OF SPILLS	Use routine clean up procedures to remove dust.
DISPOSAL	Use normal disposal methods.

Section 8 PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	Wear appropriate dust mask (NIOSH approved), especially when nuisance dust levels are exceeded.
VENTILATION	Local exhaust or dust collection should be used when handling parts.
HAND PROTECTION	Protective gloves and/or barrier creams should be used to minimize possible irritation.
EYE PROTECTION	Goggles are recommended.
OTHER EQUIPMENT	Normal work clothes and good hygiene.

Section 9 Section 313 Supplier Notification

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

CAS #	Chemical Name	Percent by Weight
NA	Barium Compounds	10 - 30%
7740-50-8	Copper (in Brass)	1 - 5%

This information should be included in all MSDSs that are copied and distributed for this material.

SPECIAL LABELS: NONE REQUIRED

Part of this information was collected from raw material MSDSs which we believe to be reliable. However, this information is provided without representation or warranty, expressed or implied regarding its accuracy. TEK-MOTIVE, INC. does not assume the responsibility or the liability for loss, damage, or expense arising from the use of this information relative to its handling, storage use or disposal of the product.

Endnotes:

1. A number of epidemiological studies, done over many years, of workers employed for up to 40 years in the manufacture of fiber glass have shown no evidence of increases of either malignant or non-malignant respiratory disease attributable to exposure to fiber glass. However, recent studies have shown slight increases in lung cancer among workers employed in the manufacture of glass wool and mineral wool insulation products. These same studies showed no evidence of a similar effect among continuous filament fiber glass workers. This product uses a continuous filament fiber glass product. Continuous filament fiber glass has been designated by IARC as a Group 3 "not classifiable as to human carcinogenicity," meaning that evidence is insufficient to link that fiber to cancer.