

MATERIAL SAFETY DATA SHEET

TCR MSDS-013

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Issue 5

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<p>TCR COMPOSITES 219 North 530 West Ogden, UT 84404</p>	<p>Emergency Phone No. (801) 622-3800 Product Information (800) 827-3746</p>
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Section 1.

CHEMICAL PRODUCT IDENTIFICATION

NAME: TCR™ Prepregs containing the following experimental epoxy resins:

TEX-008	TEX-014	TEX-026	TEX-037	DEV-039G
TEX-009	TEX-020	TEX-027	TEX-038	
TEX-011	TEX-022	TEX-030	TEX-039	
TEX-013	TEX-023	TEX-032	DEV-039D	

Section 2.

COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients	CAS #	Percent	PEL (TWA)	STEL	TLV
Epoxy resin ¹	*	*	NE	NE	NE
Prepreg material ²	*	*	NE	NE	NE
NE: Not established. * CAS #s and percentage are Proprietary/trade secret. ¹ The chemical identities of this composition are being withheld as trade secrets in accordance with 29 CFR 1910.1200(i) and 29 CFR 1910.1200 Appendix D. The chemical identities will be disclosed to health professionals in a medical emergency in accordance with 29 CFR 1910.1200(i)(2). Non-emergency requests will be considered in accordance with 29 CFR 1910.1200 paragraph (i). ² Prepreg material can be in the following forms: Tow, Roving, 0-90 Degree Woven Cloth, and Unidirectional Cloth, and other broadgoods.					

Section 3.

HAZARDS IDENTIFICATION

Exposure Limits: A Threshold Limit Value (TLV) or Permissible Exposure Limit (PEL) is not established for this formulation.

Effects of Exposure: The prepreg material is a low exposure risk under normal operating conditions. Exposed persons (from **inhalation**) may become sensitized, inducing an allergic reaction. Causes mild irritation to the **eyes**. Causes **skin** irritation. May sensitize individuals, causing allergic symptoms. **Ingestion** has no known effects.

Existing conditions that may be aggravated: See above.

Section 4.

FIRST AID MEASURES

Inhalation: If any adverse symptoms appear move person to fresh air. If necessary administer artificial respiration or oxygen and contact a physician.

Eyes: Flush eyes immediately with water for at least 15 minutes. Contact a physician.

Skin: Wash skin with soap and water. Contact a physician if symptoms develop/persist.

Ingestion: If ingested, contact a physician.

Section 5.

FIREFIGHTING MEASURES

SPECIAL FIRE FIGHTING PROCEDURES: Protective clothing and (**self-contained breathing apparatus**) should always be used when fighting chemical fires. **Caution:** Open incineration may release highly conductive carbon fibers which present electrical short circuit hazards.

EXTINGUISHING MEDIA: Halogenated agents, foam, steam, or water fog.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS: Phosphine, CO, CO₂, NO_x, and other toxic products may be released during fire.

Section 6.

ACCIDENTAL RELEASE MEASURES

Precautions if Container is Damaged: Rolls of prepreg material should be handled with impervious gloves if packaging is damaged.

Section 7.

HANDLING AND STORAGE

Store at warehouse ambient temperature in sealed plastic wrap.

Section 8.

EXPOSURE CONTROLS - PERSONAL PROTECTION

Ventilation: Provide sufficient mechanical (general and/or local exhaust) ventilation to limit vapor inhalation.

Respiratory Protection: An organic vapor respirator may be necessary in the absence of adequate ventilation. Engineering controls should be implemented to reduce exposure.

Protective Gloves: Impervious gloves are recommended for handling the product.

Eye Protection: Safety glasses should be worn for all industrial operations.

Personal Protective Clothing: Personal protective clothing (i.e., smocks, coveralls, etc.) should be worn. **NOTE:** Protective clothing should be laundered separately from street clothes.

Section 9. **PHYSICAL AND CHEMICAL PROPERTIES**

SPECIFIC GRAVITY (H₂O = 1): 1.3 - 2.2

SOLUBILITY IN WATER: Slight

VAPOR PRESSURE: N/A

EVAPORATION RATE: N/A

MELTING POINT: N/A

BOILING POINT: N/A

APPEARANCE AND COLOR: The material is slightly tacky with an appearance dominated by a reinforcement fiber. For example, each type of reinforcement fiber may have one of the following color characteristics: (1) Graphite fiber prepreg is a black color, (2) Glass fiber prepreg is a cream color, and (3) Aramid fiber prepreg is a yellow color. Traces of methyl cyclopentadiene dimer CAS# 26472-00-4 and dicyclopentadiene CAS# 77-73-6 have been detected.

DETECTION METHODS: None

pH: Not applicable.

FLASHPOINT: >200°F.

Section 10. **STABILITY AND REACTIVITY**

STABILITY: Stable at room temperature, thermosets at elevated temperatures.

INCOMPATIBILITY (MATERIALS TO AVOID): Incompatible with bases, strong oxidizers, acids, amines, and excessive heat.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete burning can produce phosphine, carbon monoxide, carbon dioxide, oxides of nitrogen, and other harmful products.

HAZARDOUS POLYMERIZATION: Will not occur.

OTHER HAZARDS: Not known.

Section 11. **TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS: Causes skin and eye irritation. May cause respiratory tract sensitization.

CHRONIC EFFECTS: May induce asthmatic or allergic reaction from prior exposure sensitization.

TARGET ORGAN(S): Unknown.

Section 12. **ECOLOGICAL INFORMATION**

Data not yet available.

Section 13. **DISPOSAL CONSIDERATIONS**

Waste material may generally be disposed of in a designated landfill unless directed otherwise by local or national regulations. TCR Prepreg does not come under the classification as a hazardous waste in accordance with US Resource Conservation and Recovery Act (RCRA) per 40 CFR 261. If under local or national regulations TCR Prepregs are defined as hazardous waste, they may be disposed of by incineration in an enclosed controlled facility to prevent generation of airborne fibers.

Section 14. **TRANSPORTATION INFORMATION**

TCR™ Prepregs do not meet any of the DOT definitions of Classes 1-9, ORM-D and elevated temperature materials. Therefore, this material is not regulated by the Hazardous Materials regulations of the United States Department of Transportation.

Section 15. **REGULATORY INFORMATION**

TOXIC SUBSTANCES CONTROL ACT (TSCA) All original components of this Prepreg are registered on the Toxic Substances Control Act Inventory. Any new chemicals that may form during the manufacture of this Prepreg are exempt from Inventory reporting under 40 CFR 720.30(h) as they are incorporated into an article.

Section 16. **OTHER INFORMATION**

For industrial use only. To the best of our knowledge the information contained herein is correct. All chemicals may present unknown health hazards and must be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Final determination of the suitability of the chemical is the sole responsibility of the user. Users of any chemical should satisfy themselves that the conditions and methods of use assure that the chemical is used safely.

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