



# SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS, OSHA 29CFR 1910.1200

## Section 1: Chemical Product and Company Identification

### MANUFACTURER'S NAME

Isola USA Corporation  
San Tan Corporate Center  
3100 West Ray Road  
Chandler, Arizona 85226  
Safety Data Sheet Competent Person:

### EMERGENCY TELEPHONE

INFOTRAC U.S.-Canada: 800-535-5053

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DATE PREPARED: November 13, 2013

**REVISION DATE: Original Version**

### PRODUCT NAME:

**TerraGreen PREPREG**

### FORMULA:

Preparation/Mixture

### PRODUCT USE:

Resin impregnated woven fiberglass used in the manufacture or copper-clad laminate for printed circuit boards.

## Section 2: Hazards Identification

Regulation (EC) No 1272/2008

### GHS Hazard Class

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Signal word:

Hazard Statement:

Precautionary Statements:   Prevention           No Precautionary statement  
  Response                No Precautionary statement  
  Storage                 No Precautionary statement  
  Disposal                No Precautionary statement

HAZARD CLASSIFICATION:

Not classified as hazardous based on IATA, IMO and DOT.

FIRE AND EXPLOSION:

Not considered flammable or combustible, but this product will burn if involved in a fire. Product emits toxic fumes when burned.

POTENTIAL HEALTH EFFECTS:

<90 % of mixture consists of ingredients of unknown acute toxicity

INGESTION:

Possible routes of entry include skin & eye contact and process vapor or dust inhalation. May be harmful if swallowed.

INHALATION:

May be harmful if inhaled. Causes respiratory tract irritation.

SKIN CONTACT:

May cause skin irritation.

EYE CONTACT:

Eye irritation may result.

OTHER: Improper handling by heating over 150°C or contact with strong acids and basic compounds can result in the formation of toxic compounds.

Temperatures above 500°C on air can cause chemical decomposition resulting in the formation of toxic compounds - compounds see chapter 16.1. Strong acids or bases may cause the formation of soluble toxic compounds. Grinding debris and other waste of glass must be disposed consistent with applicable regulations. Processing of glass, damage or breakage can result in sharp edges. This may cause cuts. Processing of glass can result in glass dust. Acute effects: Respiratory irritation. Chronic effects: Possible pneumoconiosis effects.

CHRONIC EFFECTS OF OVEREXPOSURE:

None

APPEARANCE:

tan to brown solid

NFPA Rating:

Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
TerraGreen PREPREG	1	1	0	--



### Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPRX %	ACGIH TLV	OSHA PEL	NIOSH REL	CAS NO.	EINECS/ELINCS/REACH	DANGER SYMBOL	RISK PHRASE	DSL CANADA
Woven Continuous Filament Glass Fiber (E-glass)	30-60	10 mg/mg3Total 3 mg/m3 Respirable **	15 mg/mg3Total 5 mg/m3 Respirable**	-----	65997-17-3	266-046-0	-----	-----	Y
Proprietary Cross-Linker	3-12	-----	-----	-----	TS	Y	-----	-----	Y
Proprietary Flame Retardant	6-10	-----	-----	-----	TS	Y	-----	-----	Conditional*
Proprietary Resin	30-50	-----	-----	-----	TS	Y	-----	-----	N

Trade Secret (TS) Some items on this MSDS may be designated as trade secrets. Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13. The full text for all R-Phrases is shown in Section 16.

Conditional\* Condition - The Minister of the Environment has imposed a Ministerial Condition pertaining to this substance (refer to section 9.5.3.1 of the Guidelines1). [www.gazette.gc.ca/rp-pr/p1/2011/2011-05-14/pdf/g1-14520.pdf#page=15](http://www.gazette.gc.ca/rp-pr/p1/2011/2011-05-14/pdf/g1-14520.pdf#page=15)

\*\*OSHA and ACGIH recommended exposure level is 1 fiber/cc and NIOSH recommended exposure level is 3 fibers/cc. This material is slag wool. Other generic terms that are used or have been used to classify this material include mineral wool, stone wool, man-made mineral fiber (MMMMF), and man-made vitreous fiber (MMVF). A more recent generic term that has appeared in the literature to describe these glass-like materials is synthetic vitreous fiber (SVF).

### Section 4: First Aid Measures

**INHALATION:** Remove to fresh air. If not breathing, provide CPR (cardio pulmonary resuscitation). Get immediate medical attention.

**SKIN CONTACT:** Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing.

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention if irritation persists.

**INGESTION:** If swallowed do not induce vomiting, give large quantities of water to drink. Never give anything to an unconscious person. Get immediate medical attention.

### Section 5: Fire-fighting Measures

**FLASH POINT:** Not applicable

**FLAMMABLE LIMITS IN AIR (% by vol):** Not applicable

**EXTINGUISHING MEDIA:** Foam, Dry Chemical Powder, or Carbon Dioxide

**SPECIAL FIREFIGHTING PROCEDURES:** None

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Emits toxic fumes under fire conditions.

### Section 6: Accidental Release Measures

**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Wear proper protective equipment as specified in Section 8: Exposure Controls/Personal Protection  
If material is released or spilled, sweep, or vacuum material and place in closed containers for subsequent reuse or disposal.

**DISPOSAL METHOD:** disposal should be made in accordance with federal, state and local regulations.

### Section 7: Handling and Storage

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Store in a cool dry place.  
Avoid excessive heat and ignition sources.

**INFORMATION ON EMPTIED CONTAINER:** Not applicable

**SPECIFIC USES:** Resin impregnated woven fiberglass used in the manufacture or copper-clad laminate for printed circuit boards.



## Section 8: Exposure Controls/Personal Protection

**VENTILATION:** Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients (see Section 2) and to control dusting conditions. If cutting or trimming with power equipment, dust collectors and local ventilation should be used. Avoid unnecessary exposure to dust and handle with care. Keep work area clean of dust and fibers by using an industrial vacuum cleaner with high efficiency filter or wetting down area with water. Never use compressed air and avoid dry sweeping.

**EYE PROTECTION:** Wear safety glasses with side shields Always provide good general, mechanical room ventilation where this chemical/material is used.

**RESPIRATORY PROTECTION:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or the CEN European Standards (EU). Use a NIOSH/MSHA or European Standard (EN) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**PROTECTIVE GLOVES:** Recommend use of gloves.

**EYE PROTECTION:** Recommend eye protection using safety glasses or goggles.

**SKIN PROTECTION:** Suitable protective clothing to prevent skin contact

**WORK/HYGIENE PRACTICES:** Provide good personal hygiene after handling. Avoid contact with eyes. Wash hands after handling.

**EXPOSURE LIMITS** Reference Section 2

**OTHER EQUIPMENT:** Make safety shower, eyewash stations, and hand washing equipment available in the work area.

## Section 9: Physical and Chemical Properties

**APPEARANCE - COLOR:** tan to brown  
**PHYSICAL STATE:** Solid  
**ODOR:** Mild characteristic odor

### PRODUCT CRITERIA

	PRODUCT CRITERIA
ODOR THRESHOLD	Not Available for product
PH	Not Available for product
FLASH POINT:	Not Available for product
LOWER EXPLOSIVE LIMIT; UPPER EXPLOSIVE LIMIT	Not Available for product
FLAMMABILITY (Solid, gas)	Not Available for product
EXPLOSIVE PROPERTIES	Not Available for product
OXIDIZING PROPERTIES	Not Available for product
SPECIFIC GRAVITY (@25 °C):	1.5-1.8
EVAPORATION RATE:	Not Available for product
% VOLATILE by VOLUME	Not Available for product
PARTITION COEFFICIENT	Not Available for product
AUTO IGNITION TEMPERATURE	Not Available for product
DECOMPOSITION TEMPERATURE	Not Available for product
BOILING POINT:	Not Available for product
MELTING POINT:	Not Available for product
VAPOR PRESSURE	Not Available for product
VAPOR DENSITY (AIR = 1)	Not Available for product
SOLUBILITY IN WATER:	Insoluble
WATER SOLUBILITY IN THE SOLVENT	Not Available for product
FREEZING POINT:	Not Available for product
VISCOSITY	Not Available for product
VOC CONTENT	Not Available for product

## Section 10: Stability and Reactivity

**STABILITY:** Stable  
**CONDITIONS TO AVOID:** Do not exceed melt temperature recommendations in product literature. In order to avoid autoignition/hazardous decomposition of thick masses of plastic purging's should be collected in small, flat, shapes or this strands to allow for rapid cooling. Quench in water.

**INCOMPATIBILITY (MATERIALS TO AVOID):** None



HAZARDOUS DECOMPOSITION PRODUCTS: None  
 HAZARDOUS POLYMERIZATION: Will not occur

## Section 11: Toxicological Information

There is no toxicological information available for the product mixture.

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
Acute Toxicity	LD50 Oral/Rat	>15 g/kg		Proprietary Resin
Skin Corrosion/Irritation		No information is available.		
Serious Eye Damage / Eye Irritation		No information is available.		
Respiratory or Skin Sensitization		No information is available.		
Germ Cell Mutagenicity		No information is available.		
Carcinogenicity		Not listed	NTP	
		Not listed	IARC	
		Not listed	OSHA	
		No information is available.		
Reproductive Toxicity		No information is available.		
STOST -- Single Exposure		No information is available.		
STOST – Repeated Exposure		No information is available.		
Aspiration Hazard		No information is available.		

STOST = Specific Target Organ Systemic Toxicity

Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

## Section 12: Ecological Information

	Chemical
BIODEGRADATION:	No information is available.
BIOACCUMULATION:	No information is available.
ECO TOXICITY:	No information is available.
MOBILITY:	No information is available.

Note: No environmental hazards were identified based on a review of available data for the ingredients in this product. Not all of the ingredients have been tested for Ecotoxicity.

## Section 13: Disposal Considerations

WASTE FROM RESIDUES / UNUSED PRODUCTS:  
 Follow the waste disposal requirements of your country, state, or local authorities.

CONTAMINATED PACKAGING:  
 Recommend contaminated packaging material should be disposed of as stated above for residues and unused product.

RINSATE: Do not dispose of rinse water containing product in a sanitary sewer system or storm water drainage system.

## Section 14: Transport Information

**DOT TRANSPORT:** Not Regulated

**ADR = International Carriage of Dangerous Goods by Road** Not Regulated

**RAIL TRANSPORT:** Not Regulated

**SEA TRANSPORT:** IMDG Not Regulated

**AIR TRANSPORT:** IATA/ICAO Not Regulated

## Section 15: Regulatory Information

Directive 1999/45/EC Not applicable  
 LABEL FOR SUPPLY: None



RISK PHRASES: None

**TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:**

**This product is in compliance with rules, regulations, and orders of TSCA. All components are listed on the TSCA Inventory.**

**SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:**

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all MSDS's that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: Toluene

**CALIFORNIA PROPOSITION 65:**

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: Toluene

**STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:**

Florida Toxic Substance(s):	Not listed
Massachusetts's hazardous substance(s):	Not listed
Pennsylvania hazardous substance code(s):	Not listed
New Jersey	Not listed
Illinois	Not listed
Michigan	Not listed

**CANADA:**

This MSDS/SDS will be non-compliant 3 years after the issue date. This MSDS contains all of the information required by the Controlled Products Regulations (CPR).

**WHMIS-INFORMATION:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR), SOR/88-66, Current to February 20, 2012. The classes of controlled products listed in the CPR, Section 32, Part IV, have been reviewed and based on Professional Judgment this product has been determined to not be WHMIS controlled.

**EUROPEAN UNION:**

This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Directive 1999/45/EC, Regulation (EC) No 1272/2008 on classification, labeling and packaging (CLP) of substances and mixtures.

WGK: 0 (German Federal Water Management Act) (Water Hazard Class)

## Section 16: Other Information

**European Community Hazards Identification:**

R: None  
S: None  
Danger Symbol(s): None

Revision Comments: Initial version August 5, 2013  
Revision Number: 0  
Information Sources: RTECS, REACH, OSHA 29CFR 1910.1200

**FOR INDUSTRIAL USE ONLY**

**DISCLAIMER:** The information contained in this MSDS relates specifically to the product as a whole and may not be valid if used in combination with other materials or in any specified process. The information on TerraGreen Prepreg is accurate to the best of our knowledge but does not purport to be all inclusive and should only be used as a general guide. It is the user's responsibility to ensure that the product will be suitable for particular usage. The user assumes all responsibility for compliance with applicable Federal, State and Local Regulations. We do not accept liability for damage or loss that may occur from the use of this information.