



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

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DATE PREPARED: May 23, 2016

REVISION DATE: Original Version

PRODUCT NAME: **IS415HR PREPREG**

FORMULA: N/A (Product is an Article)

PRODUCT USE: Resin impregnated woven fiberglass used in the manufacture of copper-clad laminate for printed circuit boards.

Section 2: Hazards Identification

Regulation (EC) No 1907/2006

GHS Hazard Classification

Hazard Pictogram(s): None
Signal word: None
Hazard Statement: None
Precautionary Statements: None

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

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
Non Respirable Woven Continuous Filament Glass Fiber (E-glass)	35-60	-----	-----	-----	65997-17-3	266-046-0	-----	-----	Y
Proprietary Epoxy Resin Matrix	35-60	-----	-----	-----	N/A	Y	-----	-----	N/A
Inorganic Fillers	15-25	2 mg/m ³ TWA Respirable Dust	(10 mg/m ³)/(%) SiO ₂ +2) TWA, Respirable Dust, (30 mg/m ³)/(%) SiO ₂ + 2) TWA, Total Dust	0.05 mg/m ³ TWA Respirable Dust	TS	Y	-----	-----	Y

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:

Not expected to be a significant route of exposure. If ingestion occurs, 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 rimming 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, face shield 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:	
PHYSICAL STATE:	Solid
ODOR:	N/A



PRODUCT CRITERIA

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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):	Not Available for product
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:

Exposure to excessive heat, flames, sparks and other ignition sources as well as moist air and water. Avoid incompatible materials. Avoid excessive dust generation.

INCOMPATIBILITY (MATERIALS TO AVOID):

Strong acids, strong bases, strong oxidizers, some metallic salts, and moisture

HAZARDOUS DECOMPOSITION PRODUCTS:

Dense smoke, acrid vapors and fumes, aliphatic and aromatic hydrocarbons of variable composition, Carbon and Nitrogen oxides, and Hydrogen Bromide. Cristobalite at high temperatures.

HAZARDOUS POLYMERIZATION:

Will not occur

Section 11: Toxicological Information

There is no toxicological information available for the product mixture.

CONTINUOUS FILAMENT GLASS FIBERS

NIOSH RTECS No.: LK3651000

Acute Effects of Overexposure: Exposure to dust may cause irritation to the eyes, skin and respiratory system, and may cause difficulty breathing.

Chronic Effects of Overexposure: Repeated or prolonged contact with skin may cause dermatitis. Tumors have been detected in experimental animals but may not be relevant to humans.

Target Organs: Eyes, skin, respiratory system.

Carcinogenicity: ACGIH A4, IARC Group 3

Special purpose glass fibers (E-Glass): ACGIH A3, IARC Group 2B

Toxicity Data: LD₅₀ data not available in sources utilized.

Mouse-Intratracheal Lethal Dose > 20 mg/kg

PROPRIETARY EPOXY RESIN

NIOSH RTECS No.: Proprietary

Acute Effects of Overexposure: May cause eye and skin irritation. May be harmful if inhaled or ingested.

Chronic Effects of Overexposure: Repeated or prolonged exposure may lead to skin sensitization.

Target Organs: Eyes, skin.

Carcinogenicity: Not listed as a carcinogen by IARC, ACGIH, NTP, OSHA, or NIOSH.

Toxicity Data: Rat-Oral LD₅₀ = 1,140 mg/kg

Rabbit-Skin LD₅₀ > 2,000 mg/kg



Inorganic Filler

NIOSH RTECS No(s): Proprietary

Acute Effects of Overexposure: May cause eye, skin, and respiratory and digestive tract irritation.

Chronic Effects of Overexposure: May cause respiratory abnormalities and silicosis. Animal tests indicate a fibrogenic potential less than that of quartz. Long-term or repeated exposure may have effects on the lungs, including pneumoconiosis.

Target Organs: Eyes, skin, digestive system, respiratory system.

Carcinogenicity: IARC Group 3, NIOSH-Ca, ACGIH A4

Toxicity Data: No information available in sources utilized.

Section 12: Ecological Information

PROPRIETARY EPOXY RESIN

Ecotoxicity: LC₅₀(96h) 1.5-7.7 mg/l Rainbow Trout
EC₅₀(24h) 1.1-3.6 mg/l Daphnia Magna
EC₅₀(96h) 220 mg/l Green Algae

Mobility: No information available in sources utilized.

Persistence and Degradability: Slightly biodegradable.

Bioaccumulation Potential: No information available in sources utilized.

Inorganic Filler

Ecotoxicity: LC₅₀(24h) > 100 g/l Brachydanio rerio

Mobility: Insoluble in water.

Persistence and Degradability: No information available in sources utilized.

Bioaccumulation Potential: No information available in sources utilized.

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: None

CALIFORNIA PROPOSITION 65:

This regulation does not require a warning for California Proposition 65 chemical(s) under the statute.

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. 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 May 23, 2016
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 IS415HR 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.