COMPETITIVE GREEN TECHNOLOGIES
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World-leading biomaterials technology

Safety Data Sheet

REVISION: 01
DATE: 18.12.2018

Product Identifier

SECTION 1. IDENTIFICATION

Product Identifier:	**CGTECH-BCR-HMS-TFF-M**
Company:	**Competitive Green Technologies**
Address:	**731 Mersea Rd. 7, Leamington Ontario, Canada**
Emergency	**+1 519 329 2525**
Telephone Number:	**+1 519 588 9395**
	+1 519 796 9323
	+1 519 890 9165
Recommended Use:	**Thermoformed or film applictions**
Home Page:	**http://www.competitivegreentechnologies.com**

SECTION 2. HAZARD IDENTIFICATION

Most important hazards:	Not classified as hazardous
Product effects	
Adverse effects to the human health:	In case of dust, Competitive Green Technologies suggests it to be treated as annoying dust or particulate, by international recommendations. Dust may cause respiratory irritation if inhaled.
Environmental effects:	This resin meets biodegradation, eco-toxicity, and disintegration criteria per ASTM D-6400 Standard
Physical and Chemical hazards	Not classified as physical hazards
Classification of the substance or mixture:	Not classified as hazardous
Label elements according to regulation 1272:2008 (GHS)	
Symbol:	Not Applicable
Signal Word:	Not Applicable
Hazard Statement:	Not Applicable
Precaution	Not Applicable
Statement:	Not Applicable
Precaution	

Statement:

Label elements according to Directive 67/548/EEC Not applicable
Not classified
Symbol: Not applicable
Risk Phrases:
Safety Phrases

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Ingredients or impurities that contribute to the hazard
Inorganic Filler	14807-96-6	Up to 25%	Doesn't have ingredients or impurities that contribute to the hazard classification
Biodegradable polymer matrix including succinates	25777-14-4	Up to 80%	

SECTION 4. FIRST-AID MEASURES

Inhalation: No risks concerning inhalation at room temperature. In case of inhalation of dusts or vapors at high temperatures, remove victim to fresh air and keep in rest. Seek medical attention. Take this SDS.

Skin Contact: No health risks concerning skin contact at room temperature. In case of contact with the hot product and if irritation happens, wash with plenty of water. Remove clothing impregnated with the product. Seek medical attention. Take this SDS.

Eye Contact: Wash with running water for at least 15 minutes, keeping the eyelids open. Remove contact lenses if in use. Seek medical attention. Take this SDS.

Ingestion: Rinse the victim's mouth with plenty of water. DO NOT INDUCE VOMITING. Seek medical attention. Take this SDS

Most Important Symptoms and Effects, Acute and Delayed: In case of dust formation and inhalation, may cause coughing and sneezing.

Immediate Medical Attention and Special Treatment: Avoid contact with this product while helping the victim. Keep the victim in rest and warm. Do not provide anything to an unconscious person. The symptomatic treatment should include, above all, measured of support as correction of hydro electrolytic and metabolic disturbances and respiratory care.

SECTION 5. FIRE-FIGHTING MEASURES

Fire Extinguishing Media:	CO2, dry chemical, foam or water fog
Special hazards arising from the substance or mixture:	When in a fire, may produce irritating and toxic gases like carbon monoxide and dioxide
Advice for firefighters:	Cool closed containers with pulverized water. Firefight at safe distance. Evacuate the safe area. Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Control of dust:	Not applicable. The product doesn't generate dust.
Removal of ignition sources:	Product isn't flammable. Eliminate preventatively all the ignition sources around the area. Do not smoke in the area.
Provision of sufficient ventilation:	Use in a well-ventilated area.
Prevention of inhalation and skin, mucous membranes and eye contact:	Avoid contact with eyes. Use appropriate personal protective equipment.
Environmental precautions:	Do not let this chemical enter the environment (soil, waterways and groundwater). Do not dispose directly on the environment or the sewer.
Methods and material for containment and cleaning up:	Use a method that does not generate dust. Collect the material in proper container and remove them to safe place.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:	Handle in a well-ventilated area or with a general system of local ventilation/exhaustion. Avoid contact with eyes and clothing. Remove ignition sources and heat. Do not smoke. Use exposure control measures and personal protective equipment.
Conditions for Safe Storage:	Keep the product in its original packaging and in a cool, dry, safe from direct sunlight and fireproof place. Keep the container tightly sealed and closed. Keep away from food. Keep away from children.

	Incompatibilities: fluorine, strong acids, strong oxidizers, chlorated solvents and aromatic compounds.
Hygiene advice:	Do not eat, drink, or smoke when using this product. Wash hands before.
Packaging Materials:	The resin should be packaged in aluminum bags to prevent moisture absorption and degradation.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate Engineering Controls:	Provide mechanical ventilation or direct exhaustion to the external media. It is recommended safety shower and eye bath available near work site. The engineering controls measures are the most effective to reduce exposure to the product.
Individual Protection Measures	
Eye/Face Protection:	Safety goggles with lateral protection. Avoid using contact lenses while handling this product.
Skin and Hand protection:	Suitable protective suit.
Respiratory protection:	Does not require specific respiratory equipment.
Thermal hazard:	Complete air-ventilated suit, with air supply, or any thermo-resistant clothing available.
Environmental exposure controls:	Do not discharge directly in to the environment or in to the sewer system. The dilution water from firefighting can cause pollution.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-White colour, solid, round or oval in shape.
Odour:	When in molten state, a popcorn smell may be present.
Odour Threshold:	Not applicable.
pH:	Not applicable.
Melting Point and Freezing Point:	Not applicable.
Initial Boiling Point and Boiling Range:	Not applicable.
Flash Point:	Not applicable.
Evaporation Rate:	Not applicable.
Flammability (solid, gas):	Not applicable.
Upper and Lower Flammability or Explosive Limit:	Not applicable.
Vapour Pressure:	Not applicable.

Vapour Density (air = 1):	Not applicable.
Relative Density (water = 1):	1.26 g/cm^3
Solubility:	Insoluble in water. Soluble in xylene.
Partition Coefficient, n-Octanol / Water:	Not available.
Auto-ignition Temperature:	>350°C
Decomposition Temperature:	>300°C
Viscosity	Not available.
Explosive properties:	Not available.
Oxidizing properties:	Not available.
Other information:	Maximum time of storage is 24 months after production.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of handling and storage. Does not undergo depolymerization.
Possibility of Hazardous Reactions:	Reacts to violently with fluorine.
Conditions to Avoid:	High temperatures. Incompatible materials.
Incompatible Materials:	Fluorine, strong acids, strong oxidizers, chlorated solvents and aromatic compounds.
Hazardous Decomposition Products:	Monoxide and carbon dioxide and other irritant chemical substances

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Acute Toxicity LD50 (oral):	Non-toxic product.
Skin Corrosion / Irritation:	Not irritating.
Serious Eye Damage / Irritation:	Not irritating.
STOT (Specific Target Organ Toxicity) - Single Exposure:	At powder or dust form, may cause respiratory irritation with coughing and sneezing.
Aspiration Hazard	There are not any known aspiration effects.

STOT (Specific Target Organ Toxicity) - Repeated Exposure:	There are not any known repeated exposure effects.
Respiratory and/or Skin Sensitization:	Epidemiological studies showed a very low skin sensitization potential.
Carcinogenicity:	There are not any known carcinogenicity toxicity effects.
Germ Cell Mutagenicity:	There are not any known germ cell mutagenicity effects.
Reproductive Toxicity:	There are not any known reproductive toxicity effects.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity:	There are not any known ecological toxicity values. Wildlife, especially small fish may digest pellets. Pellets are not toxic,but may block the digestive tract and cause starvation or death.
Persistence and Degradability:	High persistence is expected. Meets degradability of ASTM D-6400 Standard.
Bioaccumulative Potential:	It is expected moderate to high bio-accumulative potential
Mobility in Soil:	Not available.
Results of PBT and vPvB assessment:	Not available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods:	Should be disposed as hazardous waste according to local legislations. The treatment and disposal should be evaluated specifically to federal and state/provincial laws.

SECTION 14. TRANSPORT INFORMATION

Land (Road/Rail):	UN – "United Nations" Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations
Waterways (Sea/Inland):	IMO – International Maritime Organization International Maritime Dangerous Goods Code (IMDG Code)
Air:	IATA – International Air Transport Association Dangerous Goods Regulation (DGR)

Environmental Hazards:	Not Hazardous.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:	Consult regulations: - International Maritime Organization. MARPOL: Articles, protocols, annexes, unified interpretations of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, consolidated edition. IMO, London, 2007. - International Maritime Organization. IBC code: International code for the construction and equipment of shipping carrying dangerous chemicals in bulk; With Standards and guidelines relevant to the code. IMO, London, 2007.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

- Labour Organization C170 Chemicals Convention, from June 25th, 1990: Occupational Safety and Health – Toxic Substances and Agents.

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the council on the registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

REACH – EGISTRATION, EVALUATION, AUTHORIZATION, AND RESTRICTION OF CHEMICALS. Commission Regulation (EC) No 1272/2008 of 16 December 2008, amending and repealing Directives 67/548/EEC and 1999/45/EC.

ECB – EUROPEAN CHEMICALS BUREAU. Directive 67/548/EEC (substances); Directive 1999/45/EC (preparations).

UN Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations, 17th Edition, 2011.

TSCA – TOXIC SUBSTANCES CONTROL ACT of 1976. All components of this product are listed or exempted from the United States Environmental Protection Agency Toxic Substances Control Act inventory.

SARA 302/304 – No products were found.

SARA 311/312 – Fire Hazard

SARA 313 – This product contains no exceedance of chemical concentration that are subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CALIFORNIA PROPOSITION 65 – This product complies with California Proposition 65.

CANADA – All components of this product are listed or exempted from DSL (Domestic Substances List).

EUROPE – Not known to contain substances of very high concern (SVHC). ROHS compliant

Restrictions: No Restrictions were found.

SECTION 16. OTHER INFORMATION

Competitive Green Technologies warns that the handling of any chemical substance requires the previous knowledge of its hazards for the user. It is the responsibility of the user enterprise to promote the training of its employees and contractors about the possible risks arising from the product.

Food Contact Declaration:

Generally Recognized as Safe (GRAS) - substance is GRAS under the conditions of its intended use.

Date of Latest Revision	December 18, 2018