

**Material Safety Data Sheet (MSDS)
 Carbon Cloth with MPL, W1S1005**

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Section 1: Product And Company Identification	
Product Name:	Carbon Cloth with MPL, W1S1005 Gas Diffusion Layer
Manufacturer:	CeTech Co., Ltd
Division:	R&D
Address:	CeTech Co., Ltd No.48, Xuetian Rd., Wuri, Taichung 41456, Taiwan
Phone Number:	+886-4-23373348
Issue Date:	08/22/2013
Application:	Electrochemical Component

Section 2: Hazards Identification	
General Physical Form:	Solid
Immediate Health, Physical, and Environmental Hazards:	This product, when used under reasonable conditions and in accordance with the FuelCellsEtc directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.
Main Hazards:	The material may cause fires on contact with hydrogen, organic liquids, and vapors.
Adverse Human Health Effects:	May cause irritation to the eyes and skin. It may also cause gastro-intestinal irritation if ingested.
Adverse Environmental Effects:	N/E

Section 3: Composition	
Components:	Woven carbon fibers, Carbon Black, Activated Carbon
Catalyst:	N/A

Section 4: First Aid Measures	
Inhalation:	N/A
Skin:	Wash contact area with soap and water thoroughly. Launder contaminated clothing before re-use. Obtain medical assistance if irritation or discomfort develops.
Eyes:	Flush through with water for at least 15 minutes immediately. Seek medical advice.
Ingestion:	Get immediate medical attention

Section 5: Fire Fighting Measures	
Exposure Hazard:	Not readily combustible. Produces toxic gasses (e.g. HF, F ₂) under fire conditions.
Extinguishing Media:	Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).
Personal Protective Equipment for Fighting Personnel:	Wear full protective clothing and self-contained breathing apparatus.

Section 6: Accidental Spillage or Release	
Personal Precautions:	Wear appropriate protective clothing.
Methods for Cleaning Up:	No specified measures required.
Environmental Precautions:	No specified measures required.

Section 7: Handling and Storage	
Handling:	This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.
Storage:	Store in closed, clearly marked containers in a cool, well-ventilated area, away from incompatible materials.
Specific Use(s):	Electrochemical component

Section 8: Exposure Controls / Personal Protection	
Eye/Face Protection:	Suitable eye protection.
Skin Protection:	Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Respiratory Protection:	Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.
Prevention of Swallowing:	Not applicable.

Section 9: Physical and Chemical Properties	
Odor, Color, Form:	None, Black, Solid
Auto ignition Temperature:	Not applicable.
Flash Point:	Not applicable.
Flammable Limits - LEL:	Not applicable.
Flammable Limits - UEL:	Not applicable.
Boiling point:	Not applicable.
Vapor Density:	Not applicable.
Vapor Pressure:	Not applicable.
Specific Gravity:	Not applicable.
pH:	Not applicable.
Melting Point:	Not applicable.
Solubility In Water:	Not applicable.
Evaporation Rate:	Not applicable.
Volatile Organic Compounds:	Not applicable.
Percent Volatile:	Not applicable.
VOC Less H2O & Exempt Solvents:	Not applicable.
Viscosity:	Not applicable.

Section 10: Stability and Reactivity

Stability:	Stable under normal conditions.
Conditions to Avoid:	Incompatible materials
Materials to Avoid:	Incompatible or can react with strong oxidizers, hydrogen and organic liquids and vapors. Contact with incompatibles may cause fire, explosion.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Hazardous Decomposition or By-Products:	Carbon monoxide and carbon dioxide. Hydrogen fluoride, fluorine and other fluorinated compounds.

Section 11: Toxicological Information

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

Section 12: Ecological Information

No specific information is available, but this product is not thought to present a significant hazard.

Section 13: Disposal Considerations

Dispose of through a licensed waste disposal contractor in accordance with local and national regulations.

Section 14: Transport Information

Not classified as dangerous for air, sea, road, or rail transport.

Section 15: Regulatory Information	
Contains:	No components are classified as hazardous under CHIP.
311/312 Hazard Categories:	Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No
US Federal and State Regulations:	Contact FuelCellsEtc for more information.
Chemical Inventories:	The components of this product are in compliance with the chemical notification requirements of TSCA. This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements. Contact FuelCellsEtc for more information.
International Regulations:	Contact FuelCellsEtc for more information. WHMIS - Hazardous This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section 16: Other Information	
NFPA Hazard Classification:	Health: 3 Flammability: 1 Reactivity: 0 Special Hazards: None
National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.	

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