



**MATERION**

Product name: C-Foil

# CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

Issue date: 10-30-2018  
Revision date: 10-30-2018  
Version #: 02  
SDS No: G08

## SECTION 1 Chemical product and company identification

Chinese name of chemical	<b>NEEDED - CHINESE NAME OR TRADE NAME WITH CHINESE USER DESCRIPTOR.</b>	
English name of chemical	<b>C-Foil</b>	
Synonyms	Carbon Foil, Graphite Foil	
Manufacturer/Supplier	Materion Advanced Materials	
Address	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States	
Contact person	Theodore Knudson	
Telephone	EH&S	1.216.383.4019
e-mail	ehs@materion.com	
Emergency telephone number	See Section 16.	
Issue date	10-30-2018	
Revision date	10-30-2018	
SDS No	G08	

## SECTION 2 Hazards identification

Emergency overview	The products are classified as articles and, as such, do not present a physical or health hazard in the present form. If the products are processed or handled in ways that generate particles (dust, fume, particles or powder) and/or chemical compounds, a potential health hazard could exist and risk management measures must be taken to minimize risk.
GHS hazard categories	Not classified.
Label elements	
Pictograms	None.
Signal word	None.
Hazard statement	The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Physical and chemical hazards	The product is stable and non-reactive under normal conditions of use, storage and transport.
Health hazards	Not classified.
Environmental hazards	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Supplemental information	For further information, please contact the Product Stewardship Department at +1.216.383.4019.

## SECTION 3 Composition/information on ingredients

Substance/mixture	Substance
-------------------	-----------

The components are not hazardous or are below required disclosure limits.

**SECTION 4 First aid measures**

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms and health effects</b>	Under normal conditions of intended use, this material does not pose a risk to health.
<b>Personal protection for first-aid responders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Treat symptomatically.

**SECTION 5 Fire-fighting measures**

<b>Extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Extinguishing media to avoid</b>	Do not use water as an extinguisher.
<b>Specific hazards</b>	This product is not flammable.
<b>Special fire fighting procedures</b>	Use water spray to cool unopened containers.
<b>Protection of fire-fighters</b>	Wear suitable protective equipment.
<b>General fire hazards</b>	Not relevant, due to the form of the product.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

**SECTION 6 Accidental release measures**

<b>Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Wear appropriate protective equipment and clothing during clean-up. Keep unnecessary personnel away.
<b>For emergency responders</b>	As supplied, this product poses no special release issues.
<b>Environmental precautions</b>	Not relevant, due to the form of the product.
<b>Clean-up methods and materials and containment measures</b>	Stop the flow of material, if this is without risk.
<b>Prevention of secondary hazards</b>	Not applicable.

**SECTION 7 Handling and storage**

<b>Handling</b>	Minimize dust generation and accumulation. Observe good industrial hygiene practices.
<b>Storage</b>	Store in a closed container away from incompatible materials.

**SECTION 8 Exposure controls/personal protection**

<b>Exposure limits</b>	
	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Monitoring methods</b>	Follow standard monitoring procedures.
<b>Engineering measures</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Personal protective equipment</b>	
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Hand protection</b>	Wear protective gloves.
<b>Eye protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Hygiene measures</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

## SECTION 9 Physical and chemical properties

### Appearance

Physical state	Solid.
Form	Solid.
Color	Dark grey.
Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	6332 °F (3500 °C) estimated
Boiling point, initial boiling point, and boiling range	Not applicable.
Flash point	Not applicable.
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - lower (%) temperature	Not applicable.
Explosive limit - upper (%)	Not applicable.
Explosive limit - upper (%) temperature	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	None known.
Other data	
Explosive limit	Not applicable.
Explosive properties	Not explosive.
Molecular formula	C
Molecular weight	12.01 g/mol
Oxidizing properties	Not oxidizing.
Viscosity	Not applicable.

## SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

## SECTION 11 Toxicological information

**Acute toxicity** Not known.

Product	Species	Test Results
C-Foil		
<u>Acute</u>		
Oral		
LD50	Rat	> 10000 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Routes of exposure** None known.

**Symptoms** None known.

**Skin corrosion/irritation** Not likely, due to the form of the product.

**Serious eye damage/eye irritation** Not likely, due to the form of the product.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitizer** Not a skin sensitizer.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**Toxic to reproduction** Not classified.

**Specific target organ toxicity following single exposure** Not classified.

**Specific target organ toxicity following repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** None known.

## SECTION 12 Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability**

**Bioaccumulation** No data available.

**Mobility in soil** No data available for this product.

**Other hazardous effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## SECTION 13 Disposal considerations

**Residual waste** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Local disposal regulations** Consult authorities before disposal. Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 14 Transport information

**CNDG**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**SECTION 15 Regulatory information****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Not regulated.

**Regulations on the Control over Safety of Dangerous Chemicals**

Not regulated.

**Provision on the Environmental Administration of New Chemical Substances****China Inventory of Existing Chemical Substances**

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**Other regulations**

This safety data sheet conforms to the following laws, regulations and standards:  
 Regulations on the Control over Safety of Dangerous Chemicals  
 Regulations on Labor Protection in Workplaces Where Toxic Products Are Used  
 Measures for the Safe Use of Chemicals in Workplaces  
 Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)  
 General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009 )  
 Packing Symbol of Dangerous Goods(GB190-2009)  
 Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**SECTION 16 Other information****References**

EPA: AQUIRE database  
 GB6944-2012: Classification and Code of Dangerous Goods.  
 GB12268-2012: List of Dangerous Goods.  
 NLM: Hazardous Substances Data Base  
 US. IARC Monographs on Occupational Exposures to Chemical Agents

**Further information**

Transportation Emergency  
 Call Chemtrec at:  
 International: 703.741.5970  
 Spain: 900.868.538  
 Switzerland: 0800.564.402

**Disclaimer**

This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.

**Other information**

Revised information in Section 16.