



CHEMICAL PRODUCT SAFETY DATA SHEET

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

MATERION

Product name: C-Foil

Issue date: 10-30-2018

Version #: 01

SDS No: G08

1. Chemical product and company identification

Product name	C-Foil
Synonyms	Carbon Foil, Graphite Foil
Manufacturer/Supplier	Materion Advanced Materials Germany GmbH
Address	Borsigstrasse 10 Alzenau, 63755 Germany
Contact person	Hermann Schmiing
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Emergency telephone number	49.60.23.91.82.0
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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 and/or powder), a potential health hazard could exist and risk management measures must be taken to minimize risk.

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.

3. Composition/information on ingredients

Substance/mixture

Substance

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

4. First aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms and health effects	Under normal conditions of intended use, this material does not pose a risk to health.
Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Notes to physician	Treat symptomatically.
5. Fire-fighting measures	
Extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Extinguishing media to avoid	Do not use water as an extinguisher.
Specific hazards	This product is not flammable.
Special fire fighting procedures	Use water spray to cool unopened containers.
Protection of fire-fighters	Wear suitable protective equipment.
General fire hazards	Not relevant, due to the form of the product.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Wear appropriate protective equipment and clothing during clean-up. Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
For emergency responders	As supplied, this product poses no special release issues. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Not relevant, due to the form of the product.
Clean-up methods and materials and containment measures	Stop the flow of material, if this is without risk.
Prevention of secondary hazards	Not applicable.
7. Handling and storage	
Handling	Minimize dust generation and accumulation. Observe good industrial hygiene practices.
Storage	Store in a closed container away from incompatible materials.
8. Exposure controls/personal protection	
Exposure limits	
No exposure limits noted for ingredient(s).	
Biological limit values	No biological exposure limits noted for the ingredient(s).
Monitoring methods	Follow standard monitoring procedures.
Engineering measures	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.
Personal protective equipment	
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	Wear protective gloves.
Eye protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.
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.

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.

11. Toxicological information

Acute toxicity	Not known.
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.

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.

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.

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.

15. Regulatory information

Inventory of Existing Chemical Substances in China

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).

Applicable 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)
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Occupational exposure limits for hazardous agents in the workplace (GBZ 2.1-2007)

Not listed.

Restricted Import/Export Toxic Chemical List (MEP and GCA Announcement No. 2008-66, Dec. 1, 2008, amended through MEP and Customs Notice No. 2013-85, December 30, 2013)

Not regulated.

Classification and code of dangerous goods (GB 6944-2012)

Not regulated.

UN Recommendations on the Transport of Dangerous Goods (UN RTDG)

Not regulated.

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

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