

SAFETY DATA SHEET

SDS NA-MC108

Section 1 – Product and Supplier Identification

Product identifier used on the label:	Mechanical products; grades that contain Carbon/Graphite and PTFE
Other means of identification:	The hazard communication label on the product states which SDS is associated with the product; or contact your customer service representative.
Uses (and restrictions):	Customer applications of carbon products
Supplier and contact information:	
Morgan Advanced Materials 441 Hall Avenue St Marys, PA 15857 USA	+1(814) 781-1573 www.morgansealsandbearings.com
Emergency phone number:	+1(814) 781-1573 08:00-17:00 local time M-F

Section 2 – Hazard Identification

Morgan Advanced Materials may sell this product in two ways:

- **Most products are finished parts that have been machined to a size and shape suitable to the customer's use.** Finished mechanical parts are meant to be used without further machining by others and are not expected to release substances that present a health or safety hazard. Finished parts are “articles”, are not regulated by OSHA as a hazardous chemical, and a Safety Data Sheet and hazard communication labelling are not required. This Safety Data Sheet provides information about the materials in the article.
- **Morgan may also sell material blanks that are machined by the customer, releasing dust.** Refer to this Safety Data Sheet for information about dust released from this product by cutting and machining or otherwise released through shipping, handling or use.

Classification:

This material is not classified as hazardous under the Globally Harmonized System of Classification and Labelling and the US OSHA Hazard Communication Standard.

Signal word, symbols, hazard and precautionary statements: Not applicable (because not classified as hazardous)

Other information about health hazards:

Dust from this material may cause minor irritation of skin and eyes, primarily through mechanical abrasion. Repeated or prolonged exposure to elevated concentrations of any airborne dust can irritate or harm the respiratory system, especially as an aggravation to a pre-existing condition. Avoid creating and breathing airborne dust.

This material contains polytetrafluoroethylene (PTFE). Toxic and irritating fumes may be emitted if PTFE is exposed to temperatures greater than 300° C (which is not expected from normal use of the finished part or normal methods of machining material blanks). If cigarettes become contaminated with dust from this product the burning cigarette can cause PTFE to produce toxic fumes. Fumes from thermal decomposition of PTFE can cause “polymer-fume fever” with flu-like symptoms (chills, headache, fever, respiratory system irritation and cough).

Other information about physical hazards:

Carbon/graphite dust is electrically conductive and dust accumulations on electrical equipment can cause short circuits resulting in electrical shock, fire or damage to equipment. Dust from this product may create slippery conditions. Carbon/graphite dust may present a combustible dust hazard. Maintain good housekeeping.

Section 3 – Composition

Component	CAS Registry Number	Concentration % by weight
Graphite	7782-42-5	Up to 90%
Carbon	7440-44-0	Up to 90%
Polytetrafluoroethylene (PTFE)	9002-84-0	Up to 90%

Section 4 – First Aid Measures

Inhalation:	Remove affected personnel to an exposure-free environment.
Skin and eye contact:	Flush eyes with water. Wash skin with soap and water.
Ingestion:	Not applicable, not expected
Indication of need for immediate medical attention and special treatment:	Not expected under normal conditions of use (when not exposed to high temperatures)

Section 5 – Fire Fighting Measures

This product is not very combustible but may burn if exposed to high temperatures.

Suitable extinguishing media:

Use an extinguisher that is suitable for the surrounding fire.

Combustion hazards:

When burned, carbon/graphite releases carbon dioxide (and possibly carbon monoxide if there is not enough oxygen for complete combustion). When exposed to high temperatures, PTFE releases toxic and irritating fumes (the chemical composition of the fumes depends on the temperature and combustion conditions).

Special fire-fighting procedures:

Use protective clothing and breathing equipment appropriate to the surrounding fire and the possibility that toxic and irritating fumes may be released if PTFE is exposed to high temperatures.

Unusual fire and explosion hazards:

As is the case with any combustible dust, concentrations of airborne carbon/graphite dust can present a dust explosion hazard. Practice good housekeeping to prevent dust accumulations and prevent situations where substantial amounts of dust can become airborne. Do not blow combustible dust toward an ignition source.

Flash point: Not applicable

Flammable limits: Not applicable

Section 6 – Accidental Release Measures

Sweep or vacuum spilled material and place into sealable containers. Avoid creating and breathing airborne dust. Dispose in accordance with applicable waste disposal regulations.

Section 7 – Handling and Storage

Use appropriate dust collection and controls if this product is cut or machined. Practice good housekeeping to avoid the accumulation of dust in the workplace. Avoid creating and breathing airborne dust. Practice good personal hygiene. As a good practice, wash hands before eating, drinking or smoking and do not store food, or eat or drink, in areas where chemicals are handled. Do not expose the material, or dust from the material, to high temperatures. Take care not to contaminate cigarettes with PTFE (from dust in the air, dust on surfaces or residues on the smoker's fingers).

Section 8 – Exposure Controls and Personal Protection

Exposure limits and guidelines:

Material	OSHA PEL 8-Hr TWA	ACGIH TLV 8-Hr TWA
Graphite*	15 mg/m ³ (total) 5 mg/m ³ (respirable)	2.0 mg/m ³ (respirable)
Carbon	15 mg/m ³ (total) 5 mg/m ³ (respirable)	10 mg/m ³ (total) 3 mg/m ³ (respirable)
Polytetrafluoroethylene (PTFE)	15 mg/m ³ (total) 5 mg/m ³ (respirable)	10 mg/m ³ (total) 3 mg/m ³ (respirable)

* The OSHA PEL indicated here is for inert or nuisance dust. This product may contain natural graphite or synthetic graphite. Natural graphite can contain a small percentage of quartz sand (quartz is a form of crystalline silica). Testing of machining operations at our facilities has not shown hazardous levels of respirable crystalline silica.

Other jurisdictions may have different exposure limits and control guidelines. Users are advised to consult and comply with local regulations.

Engineering controls:

Use appropriate dust collection and controls if this product is cut or machined.
 Avoid exposing the material or dust from the material to temperatures >300° C.
 Practice good housekeeping.

Personal protective equipment:

Use NIOSH-approved respiratory protective equipment (for example, an N-95 dust mask) if exposures exceed established limits.

General hygiene considerations:

As a good practice, wash hands before eating, drinking or smoking and do not store food, or eat or drink, in areas where chemicals are handled. Do not expose the material, or dust from the material, to high temperatures. Take care not to contaminate cigarettes with PTFE (from dust in the air, dust on surfaces or residues on the smoker’s fingers).

Section 9 – Physical and Chemical Properties

Appearance:	Solid (typically black)	Odor:	No odor
Odor threshold:	Not applicable	pH:	Not applicable
Melting point:	Not applicable	Boiling point:	Not applicable
Flash point:	Not applicable	Evaporation rate:	Not applicable
Flammability:	Not applicable	LEL/UEL:	Not applicable
Vapor pressure:	Not applicable	Vapor density:	Not applicable
Relative density:	Not applicable	Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not applicable	Autoignition temperature	Not applicable
Decomposition temperature:	Not applicable	Viscosity:	Not applicable

Section 10 – Stability and Reactivity

This material is stable and non-reactive.

Section 11 – Toxicological Information

None of the materials in this product are listed as a carcinogen by the International Agency for Research on Cancer (IARC), US OSHA or the US Department of Health and Human Services National Toxicology Program (NTP).

Additional information is available through the U.S. National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS). See website: www.cdc.gov/niosh/ipcsneng/nengrtec.html.

Graphite RTECS # MD9659600

Carbon RTECS # FF5250100

PTFE RTCES # KX4025000

Section 12 – Ecological Information

Carbon/graphite would be expected to have negligible consequence in the environment. PTFE is relatively inert.

Section 13 – Disposal Considerations

This product does not contain substances that could cause it to be hazardous waste, if disposed. Dispose in accordance with applicable waste disposal regulations.

Section 14 – Transport Information

This product is not regulated as a hazardous material for transportation purposes by any known authority, including transportation by truck, sea or air.

Section 15 – Regulatory Information

All materials in this product are listed on the US EPA Toxic Substances Control Act (TSCA) inventory.

Section 16 – Other Information

HMIS Ratings

(for dust produced by cutting and machining)

Health	1*
Flammability	1
Physical Hazard	0

*** indicates possible chronic health effects from continuing exposures**

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