

# Safety Data Sheet

## 1. IDENTIFICATION

Product Name: SPRAYMASK  
 Typical Use: Thermal Spray Coating  
 Manufacturer: Polymet Corporation  
 7397 Union Centre Blvd  
 West Chester, OH 45014  
 (513) 874-3586 from 8 a.m. – 5 p.m., EST

## 2. HAZARDS IDENTIFICATION

The article is NOT classified as dangerous according to directive 1999/45/EC.

BYPRODUCTS GENERATED DURING THE THERMAL SPRAY OR WELDING PROCESS ARE CONSIDERED HAZARDOUS.



**WARNING**



**DANGER**

### HAZARD STATEMENTS:

May form combustible dust concentrations in air

### PRECAUTIONARY STATEMENTS:

- Keep away from all ignition sources including heat, sparks, and flame
- Prevent dust accumulation to minimize explosion hazard
- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Avoid breathing dust or fume
- Wear protective gloves, protective clothing, eye, and face protection
- Contaminated work clothing should not be allowed out of the workplace
- If exposed or concerned, get medical advice/attention

See Section 11 for more detailed information on health effects and symptoms.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS No.	EC No.	Nominal wt. %	Classification
Water	7732-18-5	231-791-2	40-80	Not Classified
Graphite	7782-42-5	231-995-3	BAL	Not Classified
Carbon Black	1333-86-4	215-609-9	1-10	Carc. Cat. 2B; R40, R43, H228, H303, H304, H335, H351

(1) See section 16 for the full text of the R-phrases declared above.

## 4. FIRST-AID MEASURES

These measures apply primarily to the coating as supplied.

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Inhalation:	Move exposed person to fresh air. Keep the person warm and at rest. If not breathing or if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Obtain medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion:	Wash out mouth with water but do not drink. Remove dentures if any. Move exposed person to fresh air. Keep the person warm and at rest. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Obtain medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin Contact:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Protection of First Aiders:	No action shall be taken involving any personal risk or without suitable training.
See Section 11 for more detailed information on health effects and symptoms.	

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### 5. FIRE-FIGHTING MEASURES

This section applies primarily to the coating as supplied.

#### Extinguishing Media

Suitable:	Dry chemical extinguisher, water fog, carbon dioxide, foam, nitrogen
Not Suitable:	Avoid high fluid velocity to avoid spreading. A direct stream of water may spread fire to surrounding areas
Special Exposure Hazards:	Carbon black presents a slight hazard of dust explosivity. Minimum ignition energy greater than 10 joules
Hazardous Thermal Decomposition Products:	Carbon dioxide, Carbon Monoxide, Sulfur Dioxide
Special Protective Equipment for Fire-Fighters:	Fire-fighters should wear appropriate protective equipment and self-contained apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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### 6. ACCIDENTAL RELEASE MEASURES

These measures apply to the coating as supplied.

Personal Precautions:	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment such as dust mask, safety goggles, or face shield. Graphite is electrically conductive and any cleanup methods should avoid contacting graphite with electrical circuitry.
Environmental Precautions:	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
Methods for Cleaning Up:	Caution, spillages may be slippery. Contain spillages with sand, earth, or any suitable adsorbent material. Transfer to container for proper disposal.

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### 7. HANDLING AND STORAGE

This section applies primarily to the coating as supplied.

Handling:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.
Storage:	Keep container tightly closed. Keep container in a cool, well ventilated area. Do not allow material to freeze.

#### Packaging Materials

Recommended:	Use original container.
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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

This section contains information which applies to the coating as supplied.

Components	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Graphite	15 total dust, 5 respirable	10 inhalable, 2 respirable
Carbon Black	3.5	3 inhalable

**Monitoring Procedures:** If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### Exposure Controls

- Occupational Exposure:** Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Respiratory Protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand Protection:** Gloves should be worn to minimize contact.
- Eye Protection:** Safety glasses or goggles are recommended when handling this material. During the thermal spray process, safety goggles and dark lenses must be worn.
- Skin Protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Hygiene Measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

This section applies primarily to the coating as supplied.

### General Information

#### Appearance

- Physical State: Liquid
- Color: Grey-Black
- Odor: Odorless
- Odor Threshold: Not Available

#### Important Health, Safety and Environmental Information

- pH: 7.0-9.0
- Boiling Point: 100°C
- Freezing Point: 0°C
- Flash Point: Not Available
- Explosive Properties: Fine dust clouds may form explosive mixtures in air.
- Explosion Limits: Minimum ignition energy greater than 10 joules
- Oxidizing Properties: Not expected based on chemical composition.
- Vapor Pressure: Not Applicable
- Specific Gravity: ~1.09 g/ml

#### Other Information

- Auto-Ignition Temperature: >140°C

## 10. STABILITY AND REACTIVITY

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This section applies primarily to the coating as supplied.

Stability:	The product is stable under normal storage conditions.
Dust Explosivity:	Minimum ignition energy greater than 10 joules. When exposed to extremely high energy ignition sources very finely divided carbon powder can form explosive mixtures in the air. Avoid contact between carbon black dust clouds and high energy ignition sources. Classified as combustible, not flammable.
Conditions to Avoid:	Will begin to oxidize at temperatures above 450°C
Materials to Avoid:	Strong oxidizers
Hazardous Decomposition Products:	Not Expected

### 11. TOXICOLOGICAL INFORMATION

This information applies to the coating as supplied and the byproducts produced during the thermal spray process.

#### Potential Acute Health Effects

Inhalation:	Exposure to high concentrations may result in health complaints. Irritating to respiratory system. Exposure may result in depressed respiration, coughing, nausea and sore throat. Prolonged or repeated exposure to large amounts may cause damage to lungs (lung edema).
Ingestion:	Prolonged or repeated exposure may be irritating to mouth, throat and esophagus (sore throat, nausea).
Skin:	Exposure to high concentrations may result in health complaints. Prolonged or repeated exposure may be irritating (redness, pain).
Eyes:	Moderately irritating to eyes.

#### Acute Toxicity

Components	Test	Result	Route	Species
Carbon Black	LD50	>8000 mg/kg	Oral	Rat
	LC50	>2000 mg/kg	Oral	Rabbit

#### Potential Chronic Health Effects

Carcinogenicity:	Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
Mutagenicity:	No known significant effects or critical hazards.
Reproductive Toxicity:	No known significant effects or critical hazards.

#### Over-Exposure Signs / Symptoms

Target Organs:	Contains material which causes damage to the following organs: blood, kidneys, lungs, upper respiratory tract, skin, central nervous system (CNS), eye lens or cornea.
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### 12. ECOLOGICAL INFORMATION

This information applies to the coating as supplied.

#### Ecotoxicity Data

Components	Species	Period	Result
Carbon Black	Daphnia magna (EC50)	24 hours	>1000 mg/l
	Brachydanio Rerio (LC50)	96 hours	>5600 mg/l

Other Adverse Effects: Carbon Black and Graphite are stable and will not degrade under normal conditions.

### 13. DISPOSAL CONSIDERATIONS

This information applies to the coating as supplied.

Methods of Disposal:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Disposal of Packaging:	Contaminated packaging material should be disposed of in the same manner as the product itself. Non-contaminated or clean packaging material should be reused for the same product, treated as domestic waste or material for recycling.

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Hazardous Waste: The classification of the product and byproducts may meet the criteria for a hazardous waste.

## 14. TRANSPORT INFORMATION

This information applies to the coating as supplied.

International Transport Regulations

Regulatory Information	UN Number	Proper Shipping Name	Class	Packing Group	Label	Additional Information
ADR/RID Class	Not Regulated					
ADNR Class	Not Regulated					
IMDG Class	Not Regulated					
IATA Class	Not Regulated					

## 15. REGULATORY INFORMATION

This information applies to the coating as supplied.

SARA Section 313 Supplier Notification

The product covered by this MSDS may contain the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know act of 1986 and of 40 DFR 372: Chromium, Copper, Manganese and Nickel. Refer to Section 3 of this MSDS for percentage of each element by weight and CAS number.

### EU Regulations



Hazard Symbol:

Risk Phrases: R40 – Limited evidence of a carcinogenic effect  
R43 – May cause sensitization by skin contact

Hazard Phrases: H228- Flammable solid  
H303- May be harmful if swallowed  
H334- May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H335- May cause respiratory irritation  
H351- Possibly suspected of causing cancer

Safety Phrases: S23 – Do not breathe fumes  
S36/37 – Wear suitable protective clothing and gloves  
S38 – In case of insufficient ventilation, wear suitable respiratory equipment  
S51 – Use only in well ventilated areas

Product Use: Classification and labeling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use.

Industrial Applications: Thermal Spray Coating

## 16. OTHER INFORMATION

This information applies to the coating as supplied.

Full Text of R-phrases: R40 – Limited evidence of a carcinogenic effect  
R43 – May cause sensitization by skin contact

### History

Date of Issue: 02/15/23

Revision #: 1

Date of Revision: 11/20/2023

### Notice to Reader



*High Performance Wire for Hardfacing, Welding and Thermal Spraying*

## *Safety Data Sheet*

To the best of our knowledge, the information contained herein is accurate. However, the above named supplier does not assume liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.