



SAFETY DATA SHEET

North America U.S. GHS Format

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1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trademark: LUBRICOMP™
Product Code: OX97635 - BKNAT

Product Description: Polyphenylene sulfide [CASRN 26125-40-6]

Product Type: Commercial Product

Recommended use: May be used to produce molded or extruded articles or as a component of other industrial products.

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2. HAZARDS IDENTIFICATION

The additives in this product (if any) are bound in a thermoplastic resin matrix. In accordance with GHS for the classification of the product, the hazard potential may be assessed with respect to the physico-chemical form and/or bioavailability of the individual components in the thermoplastic resin.

Where GHS classifications are shown below, these are based on the individual components in the thermoplastic resin matrix. Under the typical use conditions for the resin, these hazardous components are unlikely to contribute to workplace exposure. Please read the entire safety data sheet and/or consult an EHS professional for a complete understanding.

Classification

OSHA Regulatory Status

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS-Labeling

Emergency Overview

Not classified

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance: Pellets

Physical State: Solid

Odor: Slightly

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Not applicable

Other hazards which do not result in classification:

SABIC Emergency Overview

- Pellets with slight or no odor
- Spilled material may create slipping hazard
- Can burn in a fire creating dense, toxic smoke
- Molten plastic can cause severe thermal burns
- Fumes produced during melt processing may cause eye, skin, and respiratory tract irritation. Severe over-exposure may result in nausea, headache, chills, and fever. See below for additional effects.
- Secondary operations, such as grinding, sanding, or sawing can produce dust which may present an explosion or respiratory hazard.

Other Information:

Cool skin rapidly with cold water after contact with molten material. Heating can release hazardous gases. Hazardous fumes can also occur in post-processing operations.

Processing Issues:

Processing vapors may cause irritation to the eyes, skin, and respiratory tract. In cases of severe exposure, nausea and headache can also occur. Grease-like processing vapor condensates on ventilation ductwork, molds, and other surfaces can cause irritation and injury to skin.

Aggravated Medical Conditions:

MEDICAL RESTRICTIONS: There are no known health effects aggravated by exposure to this product. However, certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing vapors.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Type Mixture

HAZARDOUS COMPONENTS:

Chemical Name	CAS Number	Weight %	GHS Classification (EC) No. 1272/2008 [CLP]:
Carbon fibers/graphite	7440-44-0	30 - 70	

For the full text of the H-statements, if mentioned in this section, see Section 16.

The non-hazardous components and exact percentage (concentration) of the composition have been withheld as a trade secret.

This product consists primarily of high molecular weight polymers which are not expected to be hazardous. The ingredients in this product are present within the polymer matrix and are not expected to be hazardous.

4. FIRST AID MEASURES

If Inhalation:	Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Processing fumes inhalation may be irritating to the respiratory tract. If symptoms are experienced remove victim from source of contamination or move victim to fresh air and obtain medical advice. If symptoms persist, call a physician.
On skin contact:	Wash material off skin with soap and water. If redness, itching or burning sensation develops consult a physician for medical treatment. For melt processing, if skin contact with molten plastic material, cool rapidly with water or ice and consult a physician for medical treatment.
On contact with eyes:	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist.
On ingestion:	Not probable due to nature of the product. If a large amount of pellet material is swallowed, consult a physician for medical treatment.
Precautions:	Cool molten product on skin with plenty of water. Do not remove solidified product. Do not peel polymer from the skin.

5. FIRE-FIGHTING MEASURES

Autoignition Temperature:	No information available
Explosive Properties:	Avoid generating and accumulating dusts; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Suitable Extinguishing Media:	Use dry chemical, CO ₂ , water spray or "alcohol" foam. Water is the best extinguishing medium. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition on larger resin fires (blobs, drools, etc.).
Unsuitable Extinguishing Media for Safety Reasons:	Do not use a solid water stream as it may scatter and spread fire.
Hazards from Combustion Products:	During a fire, irritating smoke and toxic gases and aerosols may be generated by thermal decomposition and combustion. Refer to STABILITY AND REACTIVITY SECTION, "HAZARDOUS DECOMPOSITION PRODUCTS".
Special Protective Equipment for Firefighters:	In the event of fire, wear self-contained breathing apparatus, Full protective equipment.
Specific Hazards:	Take precautionary measures against static discharges. During processing, dust may form explosive mixture in air. Thermal decomposition can lead to release of irritating gases and vapors.

6. ACCIDENTAL RELEASE MEASURES

Clean up:	Sweep up and shovel into suitable containers for disposal. Do not create a powder cloud by using a brush or compressed air.
Personal Precautions:	See section 8.
Environmental Precautions:	Do not flush into surface water or sanitary sewer system. Material should not be released into the environment.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practices. Provide for appropriate exhaust ventilation and dust collection at machinery. Avoid dust formation. All metal parts of the mixing and processing equipment must be earthed.
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat sources and sources of ignition.
Incompatible Products:	Strong acids, strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	US OSHA PEL (8 Hr)	ACGIH	Canada - Alberta (8 Hr)	Mexico OEL Data	SABIC Recommend (8 Hr)*
Carbon fibers/graphite 7440-44-0	2.5 MGM3 Respirable dust. 5 MGM3 Respirable fraction. 10 MGM3 Total dust.	2 MGM3 Respirable fraction.	2 MGM3 Respirable dust.	2 MGM3 10 MGM3	No Information

**SABIC Recommended Exposure Limits have been established for certain chemicals.*

Engineering Measures to Reduce Exposure:

Handle in accordance with good industrial hygiene and safety practices. Provide for appropriate exhaust ventilation at machinery. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, ductwork, and other surfaces using appropriate personal protection.

Hand Protection:

Protective gloves should be worn.

Eye Protection:

Safety glasses with side-shields or chemical goggles.

Respiratory Protection:

When using this product at elevated temperatures, implement engineering systems, administrative controls or a respiratory protection program (including a respirator approved for protection from organic vapors, acid, gases, and particulate matter) if processing vapors are not adequately controlled or operators experience symptoms of overexposure. If dust or powder are produced from secondary operations such as sawing or grinding, use a respirator approved for protection from dust.

Body Protection:

When handling pelletized material, avoid prolonged or repeated, contact with the skin. Wear long pants, long sleeve shirt, well, insulated gloves and faceshield for protection from thermal burns.

Hygiene Measures:

When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Pellets
Color:	Same as color code
Odor:	Slightly
Odor Threshold:	No information available
pH	No data available
Boiling point/range:	Not determined
Melting point/range:	285 °C estimated
Autoignition Temperature:	No information available
Flammability (solid, gas):	No information available
Vapor Pressure:	Negligible
Water Solubility:	Insoluble
Partition coefficient: (n-octanol/water)	No information available
Vapor Density:	Not determined
Evaporation Rate:	Negligible
Decomposition temp. (°C) :	Not determined
Specific gravity:	>1; (water = 1)
VOC content (%):	Negligible
Explosive Limits	
upper:	Not determined
lower:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under ambient conditions. Hazardous polymerization does not occur.
Conditions to Avoid:	Decomposition under influence of moisture is highly accelerated by heating. To avoid thermal decomposition, avoid elevated temperatures. Heating can result in the formation of gaseous decomposition products, some of which may be hazardous. Do not exceed melt temperature recommendations in product literature. Purgings of hot material should be collected in small, flat, thin shapes and quenched with water to allow for rapid cooling. Do not allow product to remain in barrel at elevated temperatures for extended periods of time.
Hazardous Decomposition Products:	Process vapors under recommended processing conditions may include trace levels of hydrocarbons, hydrogen fluoride, carbonyl fluoride, perfluorohydrocarbon fragments.
Incompatible Products:	Strong acids, strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

LD50/oral/rat:	>2000 mg/kg (estimated)
LD50/dermal/rabbit:	>2000 mg/kg estimated
Inhalation:	Pellet inhalation unlikely due to physical form.
Eye Contact:	Resin particles, like other inert materials, are mechanically irritating to eyes.
Skin Contact:	Not a hazard with pellets during normal industrial use.
Ingestion:	Not acutely toxic.
Chronic Toxicity:	No information available.
Subchronic Toxicity:	No information available
Primary Irritation:	Substance does not generally irritate and is only mildly irritating to the skin.
OSHA:	Not regulated
Remarks:	The toxicological data has been taken from products of similar composition.
Special Studies:	PROCESSING FUMES: The major thermal decomposition products of molded or heated polyphenylene sulfide include sulfur dioxide and carbonyl sulfide. Under certain conditions, these may cause mucous membrane irritation, nose bleeds and finally if exposure continues, respiratory paralysis and death. Thermal degradation of the fluoropolymer additives in this product may result in the release of pyrolysis products and fumes. Short term inhalation exposure may cause influenza-like symptoms such as chest pain/tightness, shortness of breath, sore throat, fever and chills, malaise and sometimes headache (also known as "polymer fume fever"). Following removal from exposure, complete resolution is expected within 12-48 hours. Prolonged and repeated exposure to high levels may lead to effects such as pulmonary edema and lung disease.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects:	Do not flush into surface water or sanitary sewer system.
Other information:	Ecological damages are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS

Contaminated Packaging:	Empty containers should be taken for local recycling, recovery or waste disposal.
Waste Disposal:	Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.

14. TRANSPORT INFORMATION

Transport Classification: Not regulated as hazardous for shipment, unless noted below, under current transportation guidelines.

DOT

ADR/RID/ADN

IMDG

ICAO

IATA-DGR

MEXICO

CANADA/TDG

15. REGULATORY INFORMATION

International Inventories:

TSCA (USA):	Listed
DSL (Canada):	Listed
EINECS/ELINCS (Europe):	Listed
ENCS (Japan):	Listed
IECSC (China):	Listed
KECL (Korea):	Listed
PICCS (Philippines):	Listed
AICS (Australia):	Listed
NZIoC (New Zealand):	Not listed

Other Inventory Information:

A "Listed" entry above means all chemical components are on the respective inventory list and/or a qualifying exemption exists for one or more components. A "Not listed" entry above indicates one or more components is restricted from import or manufacture into that country/region. Articles are exempt from registration and are therefore not listed on the national chemical inventories.

SVHC (REACH Regulation (EC) No 1907/2006 and 453/2010, as amended):

This product does not intentionally contain SVHC chemicals except as noted below. Incidental amounts of impurities, if present, would be below the threshold limit of 0.1% by weight.

SARA (313) Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA (311, 312) hazard class:

Acute Health Hazard	N
Chronic Health Hazard	N
Fire Hazard	N
Sudden Release of Pressure Hazard	N
Reactive Hazard	N

Canada - WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR. Unless noted below, this product is non-controlled. Some classifications may not apply to the entire product.

California Proposition 65:

This product does not contain components known to the State of California to cause cancer and/or reproductive effects.

RoHS EU Directive 2011/65/EU:

The subject product is in compliance with EU RoHS Directive 2011/65/EU. All below chemicals are not employed in the manufacture of the product: a.Cadmium and its compounds, b.Lead and its compounds, c.Mercury and its compounds, d.Hexavalent chromium compounds, e.Polybrominated biphenyls (PBBs), f.Polybrominated diphenyl ethers (PBDEs including Deca-BDE). The trace levels of heavy metals may be present as impurities within threshold limits (<0.1% for Pb, Hg, Cr VI, and <0.01% for Cd). We are disclosing this information, to the best of our knowledge, based upon data from our raw material manufacturers.

HMIS Rating

Health: 0

Flammability: 1

Reactivity: 0

16. OTHER INFORMATION

SABIC and brands marked with TM are trademarks of SABIC or its subsidiaries or affiliates.

Visit our public website to search, view and print Safety Data Sheets for commercial products:

<http://eur.sabic-ip.com/ordeur/pages/msds/MSDSearch.jsp?app=sabic-ip>

SDS Scope:

USA: Conforms to 29 CFR 1910.1200 (2012 OSHA Hazard Communication Standard)

This document is also applicable in other countries and regions.

Prepared by: Product Stewardship & Toxicology

Reason for revision: Update to GHS format

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End of Safety Data Sheet