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SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 and 453/2010 (REACH)

Print date: 12-May-2015 *Revision Number: 2* *Revision date: 05-May-2015*

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trademark:	LUBRICOMP™
Product Code:	ZL003 - BK80859
Product Description:	Polyphenylene ether [CASRN 25134-01-4]/High impact polystyrene [CASRN 9003-55-8] and/or polystyrene [CASRN 9003-53-6] blend
Product Type:	Commercial Product
Restrictions on Use:	Contains Industry recycled material
Recommended use:	May be used to produce molded or extruded articles or as a component of other industrial products.
Company:	SABIC Innovative Plastics B.V. Plasticslaan 1 P.O. Box 117 4600 AC Bergen op Zoom The Netherlands
Manufacturer:	SABIC Innovative Plastics Ottergeerde 22-28 4941 VM Raamsdonksveer The Netherlands
Emergency Telephone Number (United States):	Bergen op Zoom +31(0)164-292911 (24/24)
Emergency Transportation/CHEMTREC (24 HOUR):	800 424-9300 (USA) +1 703-527-3887 (globally, outside USA)
E-mail:	webinquiries@sabic-ip.com
Website Address:	**www.sabic-ip.com**

2. HAZARDS IDENTIFICATION

The additives in this product 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 of the substance or mixture

REGULATION (EC) No 1272/2008

Not hazardous Not classified

Classification according to EU Directives 67/548/EEC or 1999/45/EC

In 1995, the International Agency for Research on Cancer (IARC) concluded that there is "sufficient evidence in experimental animals for the carcinogenicity of carbon black." IARC's overall evaluation was that "Carbon black is possibly carcinogenic to humans (2B)." In 2006, IARC re-affirmed this classification. There has been no causal link between carbon black exposure and cancer risk in humans. Applying the rules of the Globally Harmonized System of Classification and Labelling (GHS, e.g. UN `Purple Book´, EU CLP Regulation) the results of repeated dose toxicity and carcinogenicity studies in animals do not lead to classification of Carbon Black for Specific Target Organ Toxicity (Repeated exposure) and carcinogenicity. UN GHS says, that even if adverse effects are seen in animal studies or in-vitro tests, no classification is needed if the mechanism or mode of action is not relevant to humans. The European CLP Regulation also mentions, that no classification is indicated if the mechanism is not relevant to humans. Furthermore, the CLP guidance on classification and labelling states, that “lung overload“ in animals is listed under mechanism not relevant to humans.

CLP/GHS-Labeling

GHS Labeling not required

Precautionary Statements

No GHS specific Precautionary Statements required - observe all other warnings and handling instructions in this SDS.

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 %	Classification (67/548/EEC):	GHS Classification (EC) No. 1272/2008 [CLP]:
Carbon black	1333-86-4	1-5		
Isodecyl diphenyl phosphite	26544-23-0	0.3-1.0		Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411) Acute Tox. 5 (H303) Aquatic Acute 2 (H401)

For the full text of the H-phrases, 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 If symptoms persist, call a physician 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: Immediately cool the skin by rinsing with cold water after contact with hot material Wash off immediately with soap and plenty of water Consult a physician If skin irritation persists, call a physician

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: No hazards which require special first aid measures

Precautions: Processing vapors inhalation may be irritating to the respiratory tract. If symptoms are experienced remove victim from the source of contamination or move victim to fresh air and obtain medical advice Cool molten product on skin with plenty of water. Do not remove solidified product Do not peel polymer from the skin

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5. FIRE-FIGHTING MEASURES

Autoignition Temperature:	490 °C (914°F) estimated
Explosive Limits upper:	Not determined
lower:	Not determined
Suitable Extinguishing Media:	Use dry chemical, CO2, 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
Hazardous Decomposition Products:	Fire will produce dense black smoke containing hazardous combustion products carbon oxides hydrocarbons fragments hydrogen fluoride carbonyl fluoride fluorocarbons
Hazards from Combustion Products:	Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbon fragments.
Special Protective Equipment for Firefighters:	In the event of fire, wear self-contained breathing apparatus
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:	Store in closed container in a dry and cool area. Keep away from heat sources and sources of ignition. Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:	No components with information, unless noted below
Chemical Name	**Carbon black**
	1333-86-4
France INRS (VME)	3.5 MGM3
Netherlands OEL - MAC	3.5 mg/m³
UK EH40 MEL (TWA)	WEL_TWA: 3.5 mg/m³ ; WEL_STEL: 7 mg/m³
Spain - Valores Limite Ambientales - VLE	VLA-ED: 3.5 mg/m³
Denmark TWA Data - Threshold Limit Values (TLV):	ANM: p_K ; GR: 3.5 mg/m³
Sweden Threshold Limit Values Data -	NGV: 3 MGM3 totaldamm
Portugal - TWAs	VLE-MP: 3.5 mg/m³ ; NOT: A_4; FUND: Pulmão
Norway Exposure Limit Values Data - Threshold Limit Value:	KONS: 3.5 mg/m³
Ireland Exposure Limit Values Data - Time Weighted Average (TWA):	TWA 3.5 mg/m³ ; STEL 7 mg/m³
Greece - OEL	DT_1 3.5 mg/m³ ; DT_2 7 mg/m³
Finland Exposure Limit Values Data - Time Weighted Average (TWA):	HTP_8: 3.5 mg/m³ ; HTP_15: 7 mg/m³
Italy - OEL	3.5 mg/m³

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

Engineering Measures toExposure:	Handle in accordance with good industrial hygiene and safety practice. 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. In the case of hazardous fumes, wear self-contained breathing apparatus. Wear face-shield and protective suit for abnormal processing problems.
Hand Protection:	Protective gloves should be worn.
Eye Protection:	Safety glasses with side-shields or chemical goggles. In addition, use full-face shield when cleaning processing vapor condensates from hood, ducts, and other surfaces. Safety glasses with side-shields.
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. In the case of hazardous fumes, wear self contained breathing apparatus. In case of insufficient ventilation wear suitable respiratory equipment.
Body Protection:	Long sleeved clothing.
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:	None or slight Slight
Melting point/range:	This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
Autoignition Temperature:	490 °C (914°F) estimated
Vapor Pressure:	Negligible
Water Solubility:	Insoluble
Evaporation Rate:	Negligible
Specific gravity:	>1; (water = 1)
VOC content (%):	Negligible
Explosive Limits	
Explosion Limits	Not determined
upper:	Not determined
Explosion Limits	Not determined
lower:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under ambient conditions. Hazardous polymerization does not occur. Hazardous polymerization does not occur.
Conditions to Avoid:	Avoid temperatures above 490°C. 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. Avoid temperatures above 490 °C without adequate ventilation.
Hazardous Decomposition Products:	Process vapors under recommended processing conditions may include trace levels of hydrocarbons, alkylphenols, aldehydes, alcohols, aliphatic amines, dimethylcyclohexanone, trimethylanisole, dihydrobenzofuran, hydrogen fluoride, carbonyl fluoride, perfluorohydrocarbon fragments, styrene, toluene, styrene dimers, aliphatic amines, aldehydes and alcohols, ethylbenzene and 4-vinylcyclohexene, Traces of, fluorocarbons, phenols, diarylcarbonates.
Incompatible Products:	Strong acids, strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

LD50/oral/rat: >15 g/kg (estimated) >5000 mg/kg

LD50/dermal/rabbit: >2 g/kg estimated >2000 mg/kg

Subchronic Toxicity: In a 13 week dust inhalation study, laboratory rats were exposed to up to 50 mg/m^3 PPE dust for 6 hrs/day for 13 weeks with a 13-week non-exposure recovery period. There was no evidence of systemic toxicity at the highest dose. Localized toxicity was observed in the lungs and regional lymph nodes of the 50 mg/m^3 exposure group. These findings decreased in severity in the 7 and 1 mg/m^3 exposure groups. A no adverse effect level for PPE is estimated to be 7 mg/m^3 and a no observable effect level is 1 mg/m^3. No information available

Primary Irritation: Substance does not generally irritate and is only mildly irritating to the skin

IARC: Not listed

OSHA: Not regulated

NTP: Not tested

Remarks: The toxicological data has been taken from products of similar composition

Special Studies: Polyphenylene ether: In two independent 2 year dietary studies, purebred beagles and laboratory rats were fed polyphenylene ether resin powder (up to 10% by weight in the animal diet). In both studies, there were no adverse effects on physical appearance, behavior, growth, food consumption, survival, clinical laboratory results, organ weights or gross or microscopic pathology. In a 6 month chronic inhalation study, rats and guinea pigs exposed 6 hrs/day to up to 300 mg/m^3 PPE dust developed no physical, nutritional, hematologic, clinical or pathological reaction except to lung tissue changes which consisted of macrophage accumulation, many of which were degenerative in the pulmonary alveoli. Polyphenylene ether is not a mutagen by Ames (Salmonella) Assay with and without activation. Carbon Black: The International Agency for Research on Cancer (IARC) has determined that carbon black is a class 2B known animal and possible human carcinogen by the route of inhalation. Rats exposed to high doses of carbon black by inhalation developed statistically significant increases in lung fibrosis and lung tumors. Carbon Black: The scientific discussions about the carcinogenic potential of inorganic low solubility particles (fine dust) including carbon black has not been concluded. Many inhalation toxicologists believe the lung fibrosis and tumors that developed in rats following exposure to carbon black result form massive accumulation of small dust particles that overwhelm the clearance mechanism and produce what is termed "lung overload," an effect considered to be rat specific and not relevant to humans. In addition, based on epidemiological studies, no causal link between carbon black exposure and cancer risk in humans has been demonstrated. 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.

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12. ECOLOGICAL INFORMATION

Ecotoxicity Effects: Do not flush into surface water or sanitary sewer system.

Ecotoxicity - Invertebrate Data: Ecological damages are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Where possible recycling is preferred to disposal or incineration. Dispose of in accordance with local regulations.

Contaminated Packaging: Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.

EWC waste disposal no: 702 - waste from the manufacture, formulation, supply and use of plastics, synthetic rubber and man-made fibres.

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

15. REGULATORY INFORMATION

This substance is classified and labelled according to Annex I of Directive 67/548/EEC, as amended. This product should follow related Japanese local chemical regulations and transportation requirement.

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):	Listed
REACH Information:	For this product's REACH related information, please contact webinquiries@sabic-ip.com

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.

California Proposition 65:
Components in this product known to the State of California to cause cancer and/or reproductive effects, are listed below:

Chemical Name	Weight %	California Proposition 65:	
Carbon black 1333-86-4	1-5	Listed: February 21, 2003	Carcinogenic. (airborne, unbound particles of respirable size)

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.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H411 - Toxic to aquatic life with long lasting effects
H303 - May be harmful if swallowed
H401 - Toxic to aquatic life

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SDS Scope:
Europe: Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010. This document is also applicable in other countries and regions.

Prepared by: Product Stewardship & Toxicology

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End of Safety Data Sheet