



## SAFETY DATA SHEET

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

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### 1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

<b>Trademark:</b>	THERMOTUF™
<b>Product Code:</b>	OF008I - BK1B638
<b>Product Description:</b>	Polyphenylene sulfide [CASRN 26125-40-6] glass fiber filled
<b>Product Type:</b>	Commercial Product
<b>Recommended use:</b>	May be used to produce molded or extruded articles or as a component of other industrial products.
<b>Company:</b>	SABIC Innovative Plastics B.V. Plasticslaan 1 P.O. Box 117 4600 AC Bergen op Zoom The Netherlands
<b>Manufacturer:</b>	SABIC Innovative Plastics Ottergeerde 22-28 4941 VM Raamsdonksveer The Netherlands
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<b>Website Address:</b>	<a href="http://www.sabic-ip.com">www.sabic-ip.com</a>

### 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]:
Fiberglass, EU/GHS classified	65997-17-3	30-70	Classification: Carc.Cat.3; R40	Carc. 2 (H351)
Carbon black	1333-86-4	0.3-1.0		

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

<b>If Inhalation:</b>	Move to fresh air in case of accidental inhalation of fumes from overheating or combustion If symptoms persist, call a physician
<b>On skin contact:</b>	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
<b>On contact with eyes:</b>	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
<b>On ingestion:</b>	No hazards which require special first aid measures
<b>Precautions:</b>	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

<b>Autoignition Temperature:</b>	No information available
<b>Explosive Limits upper:</b>	Not determined
<b>lower:</b>	Not determined
<b>Suitable Extinguishing Media:</b>	Use dry chemical, CO <sub>2</sub> , 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.)
<b>Unsuitable Extinguishing Media for Safety Reasons:</b>	Do not use a solid water stream as it may scatter and spread fire
<b>Hazardous Decomposition Products:</b>	See section 10
<b>Special Protective Equipment for Firefighters:</b>	In the event of fire, wear self-contained breathing apparatus (EU: NEN-EN137)
<b>Specific Hazards:</b>	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

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

## 7. HANDLING AND STORAGE

<b>Handling:</b>	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.
<b>Storage:</b>	Store in closed container in a dry and cool area. Keep away from heat sources and sources of ignition.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure limits:</b>	No components with information, unless noted below
<b>Chemical Name</b>	<b>Fiberglass, EU/GHS classified</b>
<b>EU TWA</b>	<b>65997-17-3</b>
<b>Netherlands OEL - MAC</b>	5 mg/m <sup>3</sup>
	10 MGM3 Dust.
	2 MGM3 Respirable dust.
	2 FIBERS/CM3 Respirable fibers.
<b>UK EH40 MEL (TWA)</b>	WEL_TWA: 1 mg/m <sup>3</sup> as W; WEL_STEL: 3 mg/m <sup>3</sup> as W
<b>Spain - Valores Limite Ambientales - VLE</b>	1 FIBERS/CM3
	0.5 FIBERS/CM3
<b>Switzerland SUVA Limit Values at the Workplace Data - Time Weighted Average (TWA):</b>	Kol_C: k_1C ; Comments: No data
<b>Norway Exposure Limit Values Data - Threshold Limit Value:</b>	KONS: 5 mg/m <sup>3</sup> totalstøv
<b>Ireland Exposure Limit Values Data - Time Weighted Average (TWA):</b>	TWA 5 mg/m <sup>3</sup> , 1 fibres/cm3 of air
<b>Italy - OEL</b>	0.2 FIBERS/CM3 Fiber.
	1 FIBERS/CM3 Fiber.
	5 MGM3 Inhalable fraction.
<b>Chemical Name</b>	<b>Carbon black</b>
	<b>1333-86-4</b>
<b>France INRS (VME)</b>	3.5 MGM3
<b>Netherlands OEL - MAC</b>	3.5 mg/m <sup>3</sup>
<b>UK EH40 MEL (TWA)</b>	WEL_TWA: 3.5 mg/m <sup>3</sup> ; WEL_STEL: 7 mg/m <sup>3</sup>
<b>Spain - Valores Limite Ambientales - VLE</b>	VLA-ED: 3.5 mg/m <sup>3</sup>
<b>Denmark TWA Data - Threshold Limit Values (TLV):</b>	ANM: p_K ; GR: 3.5 mg/m <sup>3</sup>
<b>Sweden Threshold Limit Values Data -</b>	NGV: 3 MGM3 totaldamm
<b>Portugal - TWAs</b>	VLE-MP: 3.5 mg/m <sup>3</sup> ; NOT: A_4; FUND: Pulmão
<b>Norway Exposure Limit Values Data - Threshold Limit Value:</b>	KONS: 3.5 mg/m <sup>3</sup>
<b>Ireland Exposure Limit Values Data - Time Weighted Average (TWA):</b>	TWA 3.5 mg/m <sup>3</sup> ; STEL 7 mg/m <sup>3</sup>
<b>Greece - OEL</b>	DT_1 3.5 mg/m <sup>3</sup> ; DT_2 7 mg/m <sup>3</sup>
<b>Finland Exposure Limit Values Data - Time Weighted Average (TWA):</b>	HTP_8: 3.5 mg/m <sup>3</sup> ; HTP_15: 7 mg/m <sup>3</sup>
<b>Italy - OEL</b>	3.5 mg/m <sup>3</sup>

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

<b>Engineering Measures to Exposure:</b>	In the case of hazardous fumes, wear self-contained breathing apparatus. Wear face-shield and protective suit for abnormal processing problems. Handle in accordance with good industrial hygiene and safety practice. Provide for appropriate exhaust ventilation at machinery. Handle in accordance with good industrial hygiene and safety practice for diagnostics. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
<b>Hand Protection:</b>	Protective gloves should be worn. (EU: NEN-EN 374).
<b>Eye Protection:</b>	Safety glasses with side-shields. (EU: NEN-EN 165-166).
<b>Respiratory Protection:</b>	In the case of hazardous fumes, wear self contained breathing apparatus. In case of insufficient ventilation wear suitable respiratory equipment. (EU: NEN-EN149).
<b>Body Protection:</b>	Long sleeved clothing. (EU: NEN-EN 340-369-465).
<b>Hygiene Measures:</b>	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
Melting point/range:	Various
Autoignition Temperature:	No information available
Vapor Pressure:	Negligible
Water Solubility:	Insoluble
Evaporation Rate:	Negligible
Specific gravity:	>1; (water = 1)
VOC content (%):	Negligible
Explosive Limits	
upper:	Not determined
lower:	Not determined

## 10. STABILITY AND REACTIVITY

Stability:	Hazardous polymerization does not occur. Stable under ambient conditions.
Conditions to Avoid:	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:	Traces of, carbon oxides, sulfur oxides, carbonyl sulfide.

## 11. TOXICOLOGICAL INFORMATION

<b>LD50/oral/rat:</b>	>5000 mg/kg
<b>LD50/dermal/rabbit:</b>	>2000 mg/kg
<b>Subchronic Toxicity:</b>	No information available
<b>Primary Irritation:</b>	Substance does not generally irritate and is only mildly irritating to the skin Skin irritation
<b>Remarks:</b>	The toxicological data has been taken from products of similar composition
<b>Special Studies:</b>	<p>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 from 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. 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.</p>

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity Effects:</b>	Do not flush into surface water or sanitary sewer system.
<b>Ecotoxicity - Invertebrate Data:</b>	Ecological damages are not known or expected under normal use.

## 13. DISPOSAL CONSIDERATIONS

<b>Waste from residues / unused products:</b>	Where possible recycling is preferred to disposal or incineration. Dispose of in accordance with local regulations.
<b>Contaminated Packaging:</b>	Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.
<b>EWC waste disposal no:</b>	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.

### International Inventories:

<b>TSCA (USA):</b>	Listed
<b>DSL (Canada):</b>	Listed
<b>EINECS/ELINCS (Europe):</b>	Listed
<b>ENCS (Japan):</b>	Listed
<b>IECSC (China):</b>	Listed
<b>KECL (Korea):</b>	Listed
<b>PICCS (Philippines):</b>	Listed
<b>AICS (Australia):</b>	Listed
<b>NZIoC (New Zealand):</b>	Listed
<b>REACH Information:</b>	For this product's REACH related information, please contact <a href="mailto:webinquiries@sabic-ip.com">webinquiries@sabic-ip.com</a>

### 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:
Fiberglass, EU/GHS classified 65997-17-3	30-70	Listed: July 1, 1990 Carcinogenic. (airborne, unbound particles of respirable size)
Carbon black 1333-86-4	0.3-1.0	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

H351 - Suspected of causing cancer in contact with skin

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

### 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**