

SAFETY DATA SHEET

South America GHS Format

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1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trademark:	THERMOTUF™
Product Code:	W1000I - 1001
Product Description:	Poly (butylene terephthalate) [CASRN 30965-26-5]
Product Type:	Commercial Product
Recommended use:	May be used to produce molded or extruded articles or as a component of other industrial products.
Manufacturer:	SABIC Innovative Plastics South America Industry and Trade of Plastics LTDA Manoel Thomaz Street, 545. 13067-230 Campinas SP Brazil
Emergency Telephone Number:	0800 771 37 33 (CTI) or 0800 118 270 (ABIQUIM) [in Brazil] 0800-222-2933 (CIQUIME) Emergencies with Dangerous Goods [in Argentina]
Emergency Transportation/CHEMTRAC (24 HOUR):	800 424-9300 (USA) +1 703-527-3887 (globally, outside USA)
E-mail:	webinquiries@sabic.com
Website Address:	www.sabic.com

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 of the substance or mixture

Not hazardous Not classified

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

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]:
Tetrahydrofuran	109-99-9	0.1 - 0.3	Classification: F; R11, R19 Xi; R36/37, R40	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H335) Carc. 2 (H351)

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: Immediately cool the skin by rinsing with cold water after contact with hot material. Wash off immediately with soap and plenty of water. 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: 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: 360°C (680°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 Do not use a solid water stream as it may scatter and spread fire for Safety Reasons:

Hazardous Decomposition Products: Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbons fragments.

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.

Special Protective Equipment for Firefighters: In the event of fire, wear self-contained breathing apparatus

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. Handle in accordance with good industrial hygiene and safety practice for diagnostics.

Storage: Store in closed container in a dry and cool area. Keep away from heat sources and sources of ignition. Keep in a dry place. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep away from food and drink.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:

No components with information, unless noted below

Chemical Name	Brazil NR15	Argentina Annex III	ACGIH	US OSHA PEL (8 Hr)	SABIC Recommend (8 Hr)*
Tetrahydrofuran 109-99-9	No Information	No Information	STEL: 100 ppm ; TWA: 50 ppm ; Notations: Confirmed Animal Carcinogen with Unknown Relevance to Humans , Skin ; Crit Eff: CNS impairment , Kidney damage , Upper respiratory tract irritation	FRL_STEL: 735 mg/m ³ , 250 ppm ; FRL_TWA: 590 mg/m ³ , 200 ppm ; TL_PEL: 590 mg/m ³ , 200 ppm	50 ppm TWA

*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. Polybutyleneterephthalate fumes and condensates may contain trace quantities of tetrahydrofuran (typically less than 1 ppm, see section 2, 3 and 11).

Hand Protection:

Protective gloves should be worn.

Eye Protection:

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.

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
Melting point/range:	Various
Autoignition Temperature:	360°C (680°F) estimated
Vapor Pressure:	Negligible
Water Solubility:	Insoluble
Evaporation Rate:	Negligible
Specific gravity:	>1; (water = 1)
Explosive Limits	
upper:	Not determined
lower:	Not determined
VOC content (%):	Negligible

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, tetrahydrofuran (THF), aliphatic aldehydes.

11. TOXICOLOGICAL INFORMATION

LD50/oral/rat:	>5000 mg/kg
LD50/dermal/rabbit:	>2000 mg/kg
Subchronic Toxicity:	No information available
Primary Irritation:	Substance does not generally irritate and is only mildly irritating to the skin
OSHA:	Not regulated
NTP:	Tetrahydrofuran: In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm.
Remarks:	The toxicological data has been taken from products of similar composition
Special Studies:	PROCESSING FUMES: Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection. In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to tetrahydrofuran at concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm.

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

13. DISPOSAL CONSIDERATIONS

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

DOT

ADR/RID/ADN

IMDG

ICAO

IATA-DGR

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):	Listed

REACH Information: For this product's REACH related information, please contact webinquiries@sabic.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:
4-Vinylcyclohexene 100-40-3	≤100 ppm	Listed: May 1, 1996 Carcinogenic.
Butadiene 106-99-0	≤10 ppm	Type of Toxicity: cancer ; Type of Reproductive Toxicity: developmental, female, male

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

Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
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:

Brazil: Conforms to ABNT Standard NBR 14725-4:2012

Argentina: Conforms to IRAM 41400

This document is also applicable in other countries and regions.

Prepared by: Product Stewardship & Toxicology

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End of Safety Data Sheet