

MATERIAL SAFETY DATA SHEET

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1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trademark: STATKON*
Product Name: WE002 -NC
Product Description: Polybutylene Terephthalate [CASRN 30965-26-5]

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

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2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS:

Chemical Name	CAS Number	Weight %
Carbon fiber	7440-44-0	10 - 30
Tetrahydrofuran	109-99-9	0.1 - 1.0

If present, components listed above are physical or health hazards as defined in the Hazard Communication Standard. The quantities represent typical or average values for the materials shown. Additional compositional data are provided in Section 15, REGULATORY INFORMATION.

3. HAZARDS IDENTIFICATION

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.

HMIS Rating

Health: 0

Flammability: 1

Reactivity: 0

Skin Contact:

Not a hazard with pellets during normal industrial use.

Eye Contact:

Resin particles, like other inert materials, are mechanically irritating to eyes.

Inhalation:

Pellet inhalation unlikely due to physical form. Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). NTP has listed tetrahydrofuran as a carcinogen. Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection.

Ingestion:

Pellet ingestion unlikely due to physical form.

Sensitization:

No information available on this product

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.

Chronic/Carcinogenic Information

Chronic Toxicity:

No information available

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.

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:	No hazards which require special first aid measures.
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, 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.
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. 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	US OSHA PEL (8 Hr)	ACGIH	Canada - Alberta (8 Hr)	Mexico OEL Data	SABIC Recom.(8 Hr)*
Carbon fiber 7440-44-0	2.5 mg/m ³ Respirable dust. 5 mg/m ³ Respirable fraction. 10 mg/m ³ Total dust.	2 mg/m ³ Respirable fraction.	2 mg/m ³ Respirable dust.	2 mg/m ³ 10 mg/m ³	No Information
Tetrahydrofuran 109-99-9	FRL_STEL: 735 mg/m ³ , 250 ppm ; FRL_TWA: 590 mg/m ³ , 200 ppm ; TL_PEL: 590 mg/m ³ , 200 ppm	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	OEL_15 mins: 295 mg/m ³ , 100 ppm ; OEL_8 hr: 147 mg/m ³ , 50 ppm ; Substance interaction: SI_1	LMPE-PPT: 200 ppm , 590 mg/m ³ ; LMPE-CT: 250 ppm , 735 mg/m ³	50 ppm TWA

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

Engineering Measures to Reduce Exposure:

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. 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)
VOC content (%):	Negligible
Explosive Limits	
upper:	Not determined
lower:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under ambient conditions. Hazardous polymerisation 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

Acute Toxicity

LD50/oral/rat:	>5000 mg/kg
LD50/dermal/rabbit:	>2000 mg/kg
Inhalation:	Pellet inhalation unlikely due to physical form. Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). NTP has listed tetrahydrofuran as a carcinogen. Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection.
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:	Pellet ingestion unlikely due to physical form.
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
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.

13. DISPOSAL CONSIDERATIONS

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

DOT

ADR/RID/ADN

IMDG

ICAO

IATA-DGR

MEXICO

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

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.

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

Section 313 of 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:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS hazard class:

Non-controlled

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 2002/95/EC:

The subjected product is in compliance with EU RoHS Directive 2002/95/EC. 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

STATKON* is a trademark of SABIC Innovative Plastics IP BV

Prepared by: Product Stewardship & Toxicology.

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End of Material Safety Data Sheet