Material Safety Data Sheet

Section 1

MSDS: Polybutylene Terephthalate (PBT) Glass Filled

Dynamic Polymer Solutions
Telephone Numbers: (810) 324-1451
Chemtrec - Transportation Emergency:
(800) 424-9300

MATERIAL IDENTIFICATION

PRODUCT NAME:	DYN-PBT15G, DYN-PBT30G		
CHEMICAL NAME:	Polybutylene Terephthalate		
CAS NO.:	PBT	30965-26-5	< 70.00%
	Glass Fiber Filament	65997-17-3	< 30.00%
	Carbon Black (if Black)	1333-86-4	< 2.0 – 4.0%
	Lube	n/a	< 2.0%
PRODUCT USE:	Engineering Thermoplastic Injection Molding		

Section 2

HAZARDOUS INGREDIENTS **(Additives not hazardous by 29 CFR 1910.1200)**

Identity	CAS Number	Concentration
Glass Fiber Filament Dust		10mg/m^3

Section 3

HEALTH HAZARD DATA

Acute or immediate effects:
Routes of entry and systems: Skin and eye contact; inhalation of vapors if overheated

Ingestion:	No specific information available on the product. Low toxicity by this route is expected based on the biological activity of high molecular weight polyesters.
Skin:	No specific information available on the product. Hot of molten material has the potential to cause thermal burns. Polymer particles can cause mechanical irritation.

Eye:	No specific information available on the product. Polymer particles can cause mechanical irritation. Degradation vapors may cause irritation.
Inhalation:	No specific information available on the product. In the form supplied, this material is not considered an inhalation hazard. Polymer particles may be considered an inert nuisance particulate. Overheating in processing may generate hazardous, irritating vapors.

Section 4

EMERGENCY FIRST AID

Eyes:	Flush with plenty of water. Seek medical attention if discomfort persists, and to remove foreign body.
Skin:	If hot or molten polymer or hot vapors contact skin, cool rapidly with cold water. If polymer is stuck to skin, do not remove. Seek medical attention. Allow adhered polymer to come off naturally. Removal of adhered polymer may result in more tissue damage than if polymer is allowed to come off over time.
Inhalation:	Remove to fresh air. Seek medical attention if breathing difficulties occur.
Ingestion:	If a significant quantity is swallowed, give two glasses of water to dilute. Seek medical attention.
Note to Physician:	Product is essentially inert and nontoxic. If it is heated at too high a temperature, or if it is burned, gases may be released (See Section 5 and Section 10). Patients who have been exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal, asphyxia is a possibility. As with any fire, irritant gases may have formed. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema.
Medical Conditions generally aggravated by this material:	No specific information is available for this product. Off-gases, which may be released if overheated, may affect those with chronic diseases of the respiratory system.

Section 5

FIRE AND EXPLOSION HAZARD DATA

Flash Ignition Temperature:	> 200F (93C)
Unusual Fire/Explosion Hazards:	Base resin dust/powder has a US Bureau of Mines relative dust explosion hazard rating of weak.
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide
Special Fire Fighting Instructions:	Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear (bunker gear). Keep personnel removed from and upwind of fire. Water should be used to keep fire-exposed containers cool. Water, foam, and dry chemical may cause damage to electrical equipment.
Extinguishing Media:	Water, foam, carbon dioxide, dry chemical

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Section 6

ACCIDENTAL RELEASES

Spill or Release: Sweep or gather up spills and place in proper container for recovery or disposal.

Section 7

STORAGE CONDITIONS

NORMAL HANDLING: Do not handle hot or molten material without appropriate protective equipment. Maintain good housekeeping in work areas. Do not exceed recommended process temperatures to minimize release of decomposition products. Do not smoke in areas where polymer dust is present. Appropriate measures should be taken to control the generation and accumulation of dust during conveying and processing operations.

STORAGE RECOMMENDATIONS: Store in a cool, dry place. Maintain dryness of resin. Keep material in a tightly sealed container.

Section 8

PROTECTION INFORMATION

Eye:	Safety eyewear is recommended
Skin:	When thermal or melt processing, wear long pants, long sleeves, well insulated gloves, and face shield when there is a chance of contact.
Ventilation:	Local exhaust is recommended when appropriate to control employee exposure to dust or process vapors. General exhaust may not be adequate as the sole means to control employee exposure.
Respirator:	A NIOSH approved respirator is recommended if there is a possibility of dust generation above permissible exposure limits, or that decomposition vapors may be generated.
Additional Protective Measures:	The glass particles in this product are wetted by the polymer system. Residual glass (<1.0%) may be present and cause mechanical eye, skin, and respiratory irritation. Operations involving grinding and machining or parts should be reviewed to assure that particulate levels are kept below recommended levels.

Exposure Guidelines

Section 9

PHYSICAL/CHEMICAL DATA

Appearance:	Solid Pellets
Odor:	Slight characteristic odor
Melting Point:	442.4F (228.0C)
Solubility in Water:	Negligible (< 0.1%)
Volatile Content %:	< 0.5% by weight
Specific Gravity:	1.3 – 1.65

Section 10

HAZARDOUS REACTIVITY

Stability at Room Temperature:	Stable under ordinary conditions of use and storage.
Materials to Avoid:	Strong bases
Conditions to Avoid:	Open flame; temperatures in excess of 550F

	(288C); prolonged exposure to temperatures above 520F (271C).
Decomposition Temperature:	
Decomposition Products:	Aldehydes, ketones, esters, acids, alcohols, butadiene, tetrahydrofuran, toluene, benzoic acid, terephthalic acid

Section 11

TOXICOLOGICAL INFORMATION

No specific information available on the product.

Section 12

ECOLOGICAL INFORMATION

Aquatic Toxicity: The effect of resin pellets on the wildlife that may ingest them is not well understood. In the case of seabirds, some marine biologists believe that the fowl may not be able to pass plastic pellets through their digestive tracts. Thus, large quantities of ingested pellets may cause intestinal blockage, false feelings of satiation, or reduction in absorption of nutrients, cause malnutrition and starvation.

Section 13

DISPOSAL

Waste Disposal: Recycling is encouraged. Dispose of in accordance with federal, state/provincial, and local regulations. This product, as shipped, is not a RCRA hazardous waste under present EPA regulations.

RCRA Status: Not a RCRA hazardous waste under present EPA regulations.

Section 14

TRANSPORT INFORMATION
Not regulated under US Department of Transportation.

Section 15

REGULATORY INFORMATION

OSHA Status

SARA TITLE III: This product does not contain any toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.

United States TSCA Status: All ingredients are listed in the TSCA Inventory or are compliant with the TSCA Polymer Exemption Rule.

STATE RIGHT TO KNOW LAWS – The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state

Component Name	
CAS Number	Concentration

No chemicals listed.

HMIS Rating

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Health	1
Flammability	1
Reactivity	0
PPE	
# Acute *Chronic	

Section 16

MISCELLANEOUS INFORMATION

The information set forth herein has been gathered from standard reference materials and/or supplier test data and is, to the best knowledge and belief of Dynamic Polymer Solutions, accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and it is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones that exist. Dynamic Polymer Solutions makes no warranties, expressed or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.

END OF MSDS