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# MATERIAL SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: **TB110SG30 (PA6 Resin)**

MANUFACTURER: **MANDO Advanced Materials Co., Ltd**  
110-15, Yodang-Ri, Yanggam-Myon, Hwasung-Si, Kyunggi-Do, Korea

FOR MORE INFORMATION CALL : 82-2-3461-4100

IN CASE OF EMERGENCY CALL : 82-2-3461-4100

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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

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<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Polyamide6	25038-54-4	75 ~ 85
Glass fiber	65997-17-3	25 ~ 35
Proprietary Toughener		< 15
Others		<1

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## 3. HAZARDS IDENTIFICATION

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**EMERGENCY OVERVIEW:** Resin pellets are not considered hazardous at ambient conditions. Exposure to fire will release irritating, toxic and/or flammable fumes and vapors.

### POTENTIAL HEALTH HAZARDS

**SKIN:** Pellets or dusts in contact with skin may cause mechanical irritation. Hot or molten polymer can burn the skin.

**EYES:** Contact with powders or dusts may cause mechanical irritation. Thermal processing fumes/vapors may irritate the eyes.

**INHALATION:** Thermal processing fumes/vapors or dusts may irritate the mucous membranes of the nose and throat.

**INGESTION:** Ingestion is not a likely route of exposure. Ingestion of product may cause gastrointestinal discomfort.

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## 4. FIRST AID MEASURES

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**SKIN:** For irritation, flush the skin with cool running water. Wash the affected area with mild soap and water. Obtain medical attention if irritation persists. If hot or molten polymer burns the skin, immerse the burned area in cold running water and obtain medical attention immediately.

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**EYES:** Flush eyes with running water. If irritation develops or persists, obtain medical attention.

**INHALATION:** Remove person to fresh air. If irritation develops or persists, obtain medical attention.

**INGESTION:** Ingestion is not a likely route of exposure. If product is ingested, seek medical attention.

**ADVICE TO PHYSICIAN:** There are no specific recommendations for treatment of effects associated with exposure to these products. Base treatments on clinical findings.

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## 5. FIRE FIGHTING MEASURES

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### FLAMMABLE PROPERTIES

FLASH POINT: 400 °C (752°F) (ASTM D 1929)

FLAMMABILITY : HB

AUTOIGNITION TEMPERATURE: Not determined.

**HAZARDOUS COMBUSTION PRODUCTS:** Irritating gases and dense smoke

**EXTINGUISHING MEDIA:** Usually use water and use extinguishing media appropriate to surrounding conditions.

**SPECIAL FIRE FIGHTING INSTRUCTIONS/PRECAUTIONS:** Wear self-contained, positive-pressure breathing apparatus (full face-piece type) and full protective clothing.

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## 6. ACCIDENTAL RELEASE MEASURES

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**IN CASE OF SPILL OR OTHER RELEASE** Sweep or vacuum material and place in container for re-use or disposal. Spills and releases may have to be reported to Federal and/or local authorities.

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## 7. HANDLING AND STORAGE

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**NORMAL HANDLING:** Avoid processing material above recommended thermal processing temperatures. Avoid breathing thermal processing fumes and vapors. Avoid inhalation and/or skin contact with product dusts or pellets. Avoid dust or pellets in contact with the eyes. Consider the use of local exhaust ventilation at all processing emission points. Wash thoroughly after handling.

**STORAGE RECOMMENDATIONS:** To maintain product quality store product in a cool, dry area. Keep in a tightly sealed container. Store food grade materials in areas free of pests and hazardous materials.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**ENGINEERING CONTROLS:** Good manufacturing practice and good industrial hygiene practice recommend the use of local exhaust ventilation at thermal processing emission points. Processors should evaluate the need for local exhaust ventilation at each processing emission point.

### **PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:** Wear gloves when handling drums and when handling hot polymer. Use arm protection to protect against thermal burns.

**EYE PROTECTION:** Wear safety glasses with sideshields as a minimum. Use a faceshield when processing molten material.

**RESPIRATORY PROTECTION:** If dusty conditions exist, use a mechanical filter respiratory.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**APPEARANCE AND ODOR :** White, tan or black pellets all with mild odor.

**PHYSICAL STATE:** Solid.

**SPECIFIC GRAVITY (water = 1.0):** 1.0 ~ 1.2

**SOLUBILITY :** Insoluble

**BOILING POINT:** Not applicable at standard conditions.

**VAPOR PRESSURE:** Not applicable at standard conditions.

**VAPOR DENSITY:** Not applicable at standard conditions.

**EVAPORATION RATE:** Not applicable at standard conditions.

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## 10. STABILITY AND REACTIVITY

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**NORMALLY STABLE? (CONDITIONS TO AVOID):** Product is stable. Avoid exposure to open flame or temperatures exceeding optimum recommended processing temperatures. Avoid prolonged exposure to processing temperatures. Consult technical service personnel for recommended processing conditions.

**MATERIALS TO AVOID:** Strong mineral acids.

**CONDITIONS TO AVOID:** Heating above 340°C.

**HAZARDOUS DECOMPOSITION PRODUCTS :** Thermal breakdown products may include a complex mixture of compounds, including but not limited to carbon monoxide, ammonia, aliphatic amines, amides, ketones, nitriles, and hydrogen cyanide, which may be flammable, toxic and/or irritating. The specific materials generated will vary depending on the additives and colorants used, specific temperature, time of exposure and other immediate environmental factors.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

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**IMMEDIATE (ACUTE) EFFECTS:** Toxicological data concerning immediate (acute) health effects of the product are not available.

**DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:** Toxicological data concerning delayed health effects of the product are not available.

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## 12. ECOLOGICAL INFORMATION

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No ecological information is available for the products. These products are not considered degradable or toxic in terms of their physical impact. Pellets left at large (spills) in the general environment may be ingested by animals. Material is expected to have low aquatic toxicity because of its insolubility in water..

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## 13. DISPOSAL CONSIDERATIONS

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**SPILL OR RELEASE:** Clean up by vacuuming or wet sweeping to minimize dust exposure.

**WASTE DISPOSAL:** Landfill or incineration in compliance with local regulation.

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## 14. TRANSPORT INFORMATION

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Not classified as hazardous under transport regulations

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## 15. REGULATORY INFORMATION

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**TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY STATUS:** All components are listed on the TSCA Inventory.

**SARA HAZARD CATEGORY :** This product has reviewed according to the EPA Hazard Categories promulgated under SECTION 311 and 312 of Title 3 of the Superfund Amendments and Reauthorization Act of 1986 and is considered, under applicable definitions, to meet the following categories : Not to have met any hazard category

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## 16. OTHER INFORMATION

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The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties.