



MATERIAL SAFETY DATA SHEET

GTX RESIN
GRADE : GTX PX5000

1. IDENTIFICATION

PRODCUT NAME:	GTX PX5000
PRODUCT DISCRIPTION:	PA/PPE
PRODUCT USAGE:	MAY BE USED TO PRODUCE MOLDED OR EXTRUDED ARTICLES OR AS A COMPONENTS OF OTHER INDUSTRIAL PRODUCTS.
MANUFACTURER'S NAME:	POLYMERTECH CO., LTD.
MANUFACTURER INFORMATION:	42-5, Sinjang 6-gil, jangchenon-myeon,Gumi-si KYUNG SANG BUK-DO, KOREA TEL : 054-472-0431 FAX : 054-472-0432

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	%
Poly[imino(1,6-dioxo-1,6-hexanediyl)imino-1,6hexanediyl]	32131-17-2	50-60
2,6-Dimethylphenol homopolymer	25134-01-4	30-40
OTHERS(ADDITIVES)	-	0 ~ 5

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4) : HEALTH=0 FIRE=0 REACTIVITY=0

EC CLASSIFICATION (CALCULATED) : No classification assigned.

EMERGENCY OVERVIEWS :

Solid pellets with slight or no odor. Spilled pellets 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.

Secondary operations, such as grinding, sanding or sawing, can produces dust which may present an explosion or respiratory hazard.

POTENTIAL HEALTH EFFECTS :

EYE :	Product may cause irritation or injury due to mechanical action.
SKIN :	Pellets not likely to cause skin irritation.
INGESTIO :	Not acutely toxic.
INHALATIO:	Pellet inhalation unlikely due to physical form.
CHRONIC / CARCINOGENICITY :	
NTP :	Not Tested
OSHA :	Not Regulate
IARC :	Not Listed

4. FIRST AID MEASURES

MEDICAL RESTRICTIONS :	
EYE :	Do Not rub your eyes. Immediately flush eyes with plenty of water for at least 15minutes and call a doctor/physician.
SKIN :	Flush skin with plenty of wter for at least 15 minutes while removing contaminated clothing
	clothing and shoes. Laundering enough contaminated clothing before reuse.
INGESTIO :	About whether I should induce vomiting Take the advice of a doctor.
	Rinse your mouth with water immediately.
Notes to physician :	Notify medical personnel of contaminated situations and have them take appropriate protective measures.
MELT PROCESSING :	
For molten plastic skin contact, cool rapidly flush water and immediately seek medical attention. Do not attempt removal of plastic without medical assistance. Do not use solvent for removal. For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop seek medical attention at once, even if symptoms develop at a later time. For skin contact with fume condiesate, immediately eash thoroughly with soap and water. If irritation develops seek medical attention.	

5. FIRE FIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

Dry Chemical, carbon dioxide, regular foam extinguishing agent, spray - Avoid use of water jet for extinguishing
Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

may Ignite by Heat, sparks, flames.

Easy to burn, but Not Easy to fire.

Irritating, or toxic gases may occur by fire.

Inhalation of MATERIALS may be harmful.

C. Special protective actions for firefighters

Move containers from fire area, if you can Do without the risk.

Keep unauthorized personnel out.

Withdraw Immediately in case of rising sound from venting safety devices or discoloration of tank.

Notify your local firestation and inform the location of the fire and characteristics hazard.

Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

Ventilate closed spaces before entering.

Must work against the wind, let the upwind people to evacuate.

Do not touch spilled material. Stop leak if you can do it without risk.

Handling the damaged containers or spilled material after wearing protective equipment.

B. Environmental precautions

Prevent runoff and contact with waterways, drains or sewers.

If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

Large spill : Stay upwind and keep out of low areas. Dike for later disposal.

Notification to central government, local government. When emissions at least of the standard amount.

Dispose of waste in accordance with local regulation.

Appropriate container for disposal of spilled material collected.

Small liquid state spills: Appropriate container for disposal of spilled material collected.

For disposal of spilled material in appropriate containers collected and clear surface.

7. HANDLING AND STORAGE

A. Precautions for safe handling

Avoid direct physical contact.

Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even container is emptied.

Refer to Engineering controls and personal protective equipment.

Do not handle until all safety precautions have been read and understood.

B. Conditions for safe storage, including any incompatibilities

Check regularly for leaks.

Do not apply any physical shock to container.

Keep sealed when not in use.

No open fire.

Prevent static electricity and keep away from combustible materials or heat sources.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

ACGIH TLV

- Not available

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits.

Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

- Follow the appropriate engineering controls because unconfirmed gases for hazard among extrusion process may expose.

C. Personal protective equipment

Respiratory protection

Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Dust, mist, fume-purifying respiratory protection

Any air-purifying respirator with a corpuscle filter of high efficiency

Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)

Self-contained breathing apparatus with a corpuscle filter of high efficiency

For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

Eye protection

Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

Wear appropriate glove.

Skin protection

Wear appropriate clothing.

Others

Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE :	Solid
COLOR AND APPEARAN :	Plastic pellet with slight odor
BOILING POINT :	Not Applicable
MELTING POINT (°C) :	Over 300 °C
VAPOR PRESSURE (mm) :	Negligible
VAPOR DENSITY (Air=1) :	Not Applicable
SPECIFIC GRAVITY :	1.05 ~ 1.15 (water = 1)
WATER SOLUBILITY :	Insoluble
SOLVENT SOLUBILITY :	Slightly soluble in strong polar slovent or chlorinated solvents
% VOLATTILES :	Negligible
pH :	Not Applicable
ODOR THRESHOLD :	Not Established
EVAPORATION RATE :	Negligible
COEFFICIENT WATER / OIL DISTRIBUTIO:	Not Established
COMMENT	This product does not exhibit a sharp melting point, but softens gradually over a wide temperature range.

10. STABILITY AND REACTIVITY

A. Chemical stability

This material is stable under recommended storage and handling conditions.

This material is stable under conditions at room temperature and normal pressure.

B. Possibility of hazardous reactions

Hazardous Polymerization will not occur.

Containers may explode if heated..

Easy to burn, but not easy to fire.

Irritating, or toxic gases may occur by fire.

Inhalation of materials may be harmful.

C. Conditions to avoid

Avoid contact with incompatible materials and condition.

Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible materials

Combustible materials, irritating, toxic gases

E. Hazardous decomposition products

Not available

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

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POLYMERTECH CO,LTD

(Respiratory tracts)

Not available

(Oral)

Not available

(Eye·Skin)

Not available

B. Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

* Oral

- Not available

* Dermal

- Not available

* Inhalation

- [Poly[imino(1,6-dioxo-1,6-hexanediy)imino-1,6-hexanediy]] : Mist LC50 7.26 mg/l 4 hr Rat

Skin corrosion/irritation

- Not available

Serious eye damage/irritation

- Not available

Respiratory sensitization

- Not available

Skin sensitization

- Not available

Carcinogenicity

* IARC

- Not available

* OSHA

- Not available

* ACGIH

- Not available

* NTP

- Not available

* EU CLP

- Not available

Germ cell mutagenicity

- Not available

Reproductive toxicity

- Not available

STOT-single exposure

- Not available

STOT-repeated exposure

- Not available

Aspiration hazard

- Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

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Fish

- Not available

Crustaceans

- Not available

Algae

- Not available

B. Persistence and degradability

Persistence

- Not available

Degradability

- Not available

C. Bioaccumulative potential

Bioaccumulative potential

- Not available

Biodegradation

- Not available

D. Mobility in soil

- Not available

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.

- If water separation is possible, pre-process with Water separation process.

- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.

- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN number

- Not available

B. Proper shipping name

- Not available

C. Hazard class

- Not available

D. Packing group

- Not available

E. Marine pollutant

- Not available

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency

requirements.

- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

15. REGULATORY INFORMATION

A. National and/or international regulatory information

POPs Management Law

- Not applicable

Information of EU Classification

* Classification

- Not applicable

* Risk Phrases

- Not applicable

* Safety Phrase

- Not applicable

U.S. Federal regulations

* OSHA PROCESS SAFETY (29CFR1910.119)

- Not applicable

* CERCLA Section 103 (40CFR302.4)

- Not applicable

* EPCRA Section 302 (40CFR355.30)

- Not applicable

* EPCRA Section 304 (40CFR355.40)

- Not applicable

* EPCRA Section 313 (40CFR372.65)

- Not applicable

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product.

No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

- ACGIH(American Conference of Governmental Industrial Hygienists)
- CCRIS(Chemical Carcinogenesis Information)
- ChemIDplus(Chemical Identification/Dictionary)
- CICADs(Concise International Chemical Assessment Documents)
- CPDB(Carcinogenic Potency Database)
- CRC Handbook
- CTD(Comparative Toxicogenomics Database)

- ECHA Registered Substance(REACH)
 - e-ChemPortal
 - Environmental Health Criteria (EHC) Monographs
 - ERG(emergency response guidebook)
 - ESIS(European chemical Substances Information System)
 - Harmonization Project Publications
 - HSDB(Hazardous Substances Data Bank)
 - International Agency for Research on Cancer (IARC) - Summaries and Evaluations
 - International Chemical Safety Cards (ICSCs)
 - IPCS INCHEM(International Programme on Chemical Safety)
 - IPCS/CEC Evaluation of Antidotes Series
 - IRIS(Integrated Risk Information)
 - IUCLID(International Uniform Chemical Information Database)
 - Joint Expert Committee on Food Additives (JECFA) - Monographs and Evaluations
 - NLM(National Library of Medicine)
 - NTP(National Toxicity Program)
 - Pesticide Documents (PDs)
 - Poisons Information Monographs Archive (PIMs, 1989-2002)
 - Screening Information Data Set (SIDS) for High Production Volume Chemicals
 - The Merck Index 13th Ed.
 - UK Poison Information Documents (UKPID)
 - UN RTDG
 - Globally Harmonized System of Classification and Labeling of Chemicals
 - Chemicals Information System (NCIS)
 - National Emergency Management Agency / Korea dangerous material inventory management system
 - Korea Occupational Safety & Health Agency (KOSHA)
- B. Other**
- This MSDS is prepared according to the Globally Harmonized System (GHS).