

Product Solutions

FOR BETTER LIVING





Because our plastic and chemical products are all around you,
we take utmost care in every step throughout their journey
to deliver only the best for you.



About GC

PTT Global Chemical Public Company Limited (GC) is PTT Group's petrochemical flagship. We are committed to strengthening our leading position in the chemicals business by combining environmentally-friendly innovations with advanced technologies to develop products for people's better living.

GC comprises diversified and comprehensive petrochemical businesses, including manufacturing and distribution of upstream, intermediate, and downstream petrochemical products.

These products can be converted into other chemical products and serve as basic feedstock for downstream industries such as packaging, apparel, communications and electronic equipment, electrical appliances, vehicles, construction materials, engineering-based plastics, agricultural equipment, and much more. These products are not only part of our daily lives but they also enhance the way we live.



Shareholder

We deliver the best business performance through trustworthiness to create fair and sustainable value for shareholders.

Business Partner

We provide superior solutions from innovative and sustainable products and services to be the best choice for our business partners.



Mission



Vision

To be a Leading
Global Chemical Company
for Better Living



Society

We integrate social and environmental responsibility into our business practices to achieve sustainable development.

Employee

We build an organization that is prepared for dynamic change and learning by providing a happy working environment promoting the development of employees' capabilities and enabling them to meet new challenges with dedication to the organization and to professional excellence.

Product Overview & Certificate



InnoPlus is a registered trademark of PTT Global Chemical Public Company Limited (GC). GC manufactures Polyethylene (PE), nameplate capacity at 1,950,000 MTA per year and Polyethylene Terephthalate (PET) nameplate capacity at 200,000 MTA per year.



HDPE

InnoPlus High Density Polyethylene (HDPE) has a total production capacity at 850 KTPA. InnoPlus HDPE is made from the low-pressure polymerization using the slurry process of Mitsui Technology. InnoPlus HDPE offers high certainty of specific properties to meet all particular needs and complies with international standards regulations i.e., U.S FDA 21 CFR 177.1520 and EU 10/2011. InnoPlus HDPE also meet the Restriction of Hazardous Substances (RoHS) according to 2002/95/EC

LLDPE

InnoPlus Linear Low Density Polyethylene (LLDPE) has a total production capacity at 400 KTPA. This technology can provide a wide range of LLDPE products.

LDPE

InnoPlus Low Density Polyethylene (LDPE) has a total production capacity of 300 KTPA. InnoPlus LDPE is produced by a high pressure tubular process, a technology licensed by LyondellBasell.

Certificate of HDPE, LDPE, LLDPE



ISO 9001
Quality Management System by MASCI



ISO 50001
Energy Management System by MASCI



GHPs
Good Manufacturing Practice System by MASCI



mLLDPE

InnoPlus Metallocene Low Density Polyethylene (mLLDPE) has a total production capacity at 400 KTPA. InnoPlus mLLDPE is produced by low pressure polymerization, using gasphase of Unipol Process under the license of Univation Technolog who is leading global technology licensor of proven metallocene PE technology. These unconventional mLLDPE from variety of catalyst offer a superior puncture and draft impact resistance, good seal ability and excellent optical property.

InnoPlus mLLDE is widely used for cast and blown film applications.

PET

InnoPlus Polyethylene Terephthalate (PET) has total production capacity at 200 KTPA. InnoPlus PET is produced by the leading technological know-how of Lurgi Zimmer GMBH (Germany) and Bühler AG (Switzerland).



ISO 14001
Environment
Management
System by MASCI



ISO45001
Occupational
Health and Safety
Assessment
Series by MASCI



HACCP
Hazard Analysis
Critical Control
Point System
by MASCI

GC Product Brand of Other Polymers



PlastMate is registered trademark of PTT Global Chemical Public Company Limited (GC) for various type of compound resin such as PE compound, PP compound, PS compound, PC compound, ABS compound and Bioplastics Compound.



InnoEco is registered trademark of PTT Global Chemical Public Company Limited (GC) for high quality recycled plastic resin products. (Post-consumer recycled: PCR) of the GC group.

Maximum production capacity of 45,000 tons of recycled plastic resins each year.

Consisting of 30,000 tons of PCR PET resin and 15,000 tons of PCR HDPE resin.



DIAREX is a registered trademark of PTT Global Chemical Public Company Limited for Polystyrene (GPPS and HIPS).

The capacity of GPPS and HIPS are 60,000 MTA and 30,000 MTA, totally 90,000 MTA. Furthermore, we offer a wide range of Diarex grade with various properties for using in injection molding or extrusion process.



X PURGE is registered trademark of GC Marketing Solutions Company Limited (GCM) subsidiary of PTT Global Chemical Public Company Limited (GC) for Purging compound. Distributed by GC Marketing Solutions Company Limited (GCM)

X PURGE is a high efficiency ready-to-use purging compound which provides fast and effective color, material change and contaminant removal in the machine without disassembly. X PURGE will reduce machine downtime and/or maximize productivity. This product is designed for cleaning various types of the machines i.e., injection molding machines, blow molding machine, blown film machine, sheet casting machine.



InnoSis is a registered trademark of GC Marketing Solutions Company Limited, a subsidiary of PTT Global Chemical Public Company Limited (GC) for polyethylene trading.

Trading polyethylene of InnoSis is the product under the concept of being a leading distributor of plastic resin who is developing products to meet customer needs and create better quality products.

GC Product Label

Bioplastics are plastics derived from agricultural raw materials (Biobased) or petroleum (Petrobased). Bioplastics have a plastic-like quality and characteristics. They can be melted and formed by general processes with general machines; only slight adjustments may be needed. For bioplastics made from agricultural raw materials, they are produced by a fermentation process that converts agricultural raw materials into monomers, which are then used to produce plastic pellets. Currently, the raw materials used in bioplastics production are corn, sugarcane, and cassava.





START
TODAY
SAVE
TOMORROW

ประหยัด
ต้นทุน
เพิ่มกำไร

103.90
103.90





Solutions

For Every Product Applications

GC commits to continually develop plastic resins covering all applications various market to support all needs, reinforce efficiency including adding value to products for all industries such as packaging, agriculture, home goods and personal care, construction, electrical appliances, automotive and others.

Light Weight & Composite Material



Construction



Composite Surfboard

Epoxy resin is a thermosetting polymer formed by copolymerization of an epoxide with another compound having two hydroxyl groups. These resins are known for their enhanced performance in numerous industrial applications.

Drivers to growth of epoxy resin market include increasing paints & coatings demand on account of positive outlook on construction and automotive industries has developed the global epoxy resins industry. This trend is expected to continue over the forecast period. Growing end-use industries including transportation, marine coatings, aerospace, electrical & electronic laminates, composites, and decorative powder coatings particularly in the Asia Pacific is also expected to impact the global market positively. Increasing R&D initiatives by key participants coupled with technology innovation in the field of modified resins is expected to create new avenues for industrial applications. The global demand is fueled by rapidly expanding wind energy capacity installation on account of a shift towards the development of renewable energy.

Epoxy Composites		
Properties	E211-S	H6141-S
Product Properties		
Curing system	-	Slow cure
Appearance	Clear liquid	Clear liquid
Color	Colorless to slightly yellow	Colorless to slightly yellow
Odor	Mild	Mild ammonia
Viscosity at 25 °C (CP)	1,500 - 1,800	350 - 450
Density at 20 °C	1.16	0.93

Epoxy Composites	
Properties	E211-S : H6141-S
Mixed Product Properties	
Mixing ratio (w/w)	100 : 57
Appearance	Clear solid
Color	Slightly yellow
Cure time at 25 °C (min)	70

Handling and Storage: For storage conditions, product is hygroscopic, water contamination should be avoided. Keep container tightly closed without air contamination. The periods of exposure to high temperatures should be minimized. Avoid direct contact to sunlight and higher temperature. For longer term stability, it is recommended that the product be stored under an indoor. Please use best before 1 year.

Disclaimer: To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however, we do not assume any liability what so ever for the accuracy and completeness of such information. We make no warranties which extend beyond the description contained herein. Nothing herein shall constitute any implied warranty of merchantability or fitness for a particular purpose. It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products. No liability can be accepted in respect of the use of our products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

Epoxy Composites			
Properties	Test Method	Unit	Grade
			H431-T
Physical Properties			
Molecular weight (Avg.)	-	g/eq	162 - 166
Appearance	ASTM D104	-	Orange to amber liquid
Viscosity (Brookfield, at 25 °C)	ASTM D150	cP	175 - 250
Curing time at 150 °C	-	min	9.30 - 10.30
Formulation Example			
Standard BPA epoxy			100 Parts
H431-T			85 Parts

Product Technical Bulletin: This formulation has a Shyodu gel time of 20-25 minutes at 200 °F (100 g sample). When cured in an oven 1 hour at 300 °F, the formulation has a T_g of 225 °F.

Handling and Storage: H431-T will react with water to form diacids. This is normally undesirable, so H431-T should be stored in such a way that it is carefully protected from moisture contamination. Follow the recommendations in the SDS for personal protective equipment when handling these materials. At a minimum, these procedures typically include protective chemical goggles, impenetrable gloves and measures to avoid breathing chemical vapors.

Epoxy Composites			
Properties	Test Method	Unit	Grade
			H432-T
Product Properties			
Molecular weight (Avg.)	-	g/eq	162 - 166
Appearance	ASTM D104	-	Yellow liquid
Gardner color	-	-	<8
Viscosity (Brookfield, at 25 °C)	ASTM D150	cP	50 - 150
Density at 25 °C	-	g/cm ³	1.18 - 1.22



Product Technical Bulletin: This formulation was recommended about 5-10% based on total hardener formulation.

Handling and Storage: H432-T will react with water to form diacids. This is normally undesirable, so H432-T should be stored in such a way that it is carefully protected from moisture contamination. Follow the recommendations in the SDS for personal protective equipment when handling these materials. At a minimum, these procedures typically include protective chemical goggles, impenetrable gloves and measures to avoid breathing chemical vapors.

Epoxy Composites			
Properties	Test Method	Unit	Grade
			H441-T
Product Properties			
Molecular weight (Avg.)	-	g/eq	162 - 166
Appearance	ASTM D104	-	Orange to amber liquid
Viscosity (Brookfield, at 25 °C)	ASTM D150	cP	175 - 250
"Curing time at 150°C	-	min	9.30 - 10.30
(Epoxy resin: H441-T = 100:85)"	-	-	7.30 - 8.30
Formulation Example			
Standard BPA epoxy			100 Parts
H441-T			85 Parts

Product Technical Bulletin: This formulation has a Shyodu gel time of 20 - 25 minutes at 200oF (100 g sample). When cured in an oven 1 hour at 300oF, the formulation has a Tg of 225oF.

Handling and Storage: H441-T will react with water to form diacids. This is normally undesirable, so H441-T should be stored in such a way that it is carefully protected from moisture contamination. Follow the recommendations in the SDS for personal protective equipment when handling these materials. At a minimum, these procedures typically include protective chemical goggles, impenetrable gloves and measures to avoid breathing chemical vapors.

Epoxy Composites	
Properties	H613-T
Product Properties	
Appearance	Clear liquid
Color	Slightly yellow
Odor	Mild
Viscosity at 25 °C (cP)	400 - 500
Density at 20 °C	0.95

Epoxy Composites	
Properties	Neat epoxy resin : H613-T
Mixed Product Properties	
Mixing ratio (w/w)	100 : 35
Appearance	Clear / Liquid
Color	Slightly yellow
Odor	Mild
Viscosity at 25 °C (cP)	1,000 - 1,200
Cure time at 25 °C (hr)	4.00 - 4.30

Handling and Storage: For storage conditions, product is hygroscopic, water contamination should be avoided. Keep container tightly closed without air contamination. The periods of exposure to high temperatures should be minimized. Avoid direct contact to sunlight and higher temperature. For longer term stability, it is recommended that the product be stored under an indoor. Please use best before 1 year.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. All above values are typical values, not to be construed as specification.



Chemistry For Better Living





Website



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Technical Document
for Polymer Products



LINE
Official Account

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Date as of December 2023