

POLIREM KIMYA SANAYI VE TICARET A.S.



KIMYA SANAYI VE TICARET A.S.



www.polirem.com.tr

TSE ISO9001

OHSAS 18001

Colizom Kimus Consul vo Tioszot A C

Our company brings together technical know-how and engineering experience of many years in plastic industry under the trademark of Polirem and aims at offering the highest quality of products and services to its customers at affordable costs.

Our motivation is to provide uncompromising high quality products and tailor-made solutions addressing genuine needs of our clients, allowing them to develop and set higher standards in their services. Every customer is a business partner of the Polirem Company and we believe that our business can only grow to the extent our partners' businesses grow.

Our Mission

Our mission is to provide our clients with innovative, high value added products and services by using all the technological and engineering possibilities for the plastic sector and taking customer satisfaction as a reference.

Our Vision

To build and be a part of socially, economically, and environmentally sustainable world with our products and services.

Production

We produce well-kneaded and finely dispersed compound masterbatches without any degradation of polymers and other ingredients via highly efficient twin-screw (56 L/D) extruders. They produce very high torque and are equipped with gravimetric feeders, a double bolt continuous screen changer, a diverter valve, an underwater pelletizer, and a liquid ring vacuum pump.









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> CaCO₃ FILLER MASTERBATCHES

Polirem filler masterbatches are concentrates of finely dispersed calcium carbonate (CaCO₃) in a high quality virgin polymer base, having optimized flow properties for easy processing. Polirem CaCO₃ filler masterbatches not only reduces production expenses by replacing virgin polymer and white masterbatch, but also enhances heat resistance, rigidity, stiffness, and toughness of products. Besides, it provides good texture, smooth, and uniform surface for easy printing.

Calcium carbonate filler masterbatches are not used for coloring plastics. On the other hand, when used together with TiO₂ based white masterbatch, it facilitates dispersion of white pigment and contributes to opacity of the product due to its natural color.

Our filler masterbatches, when demanded, can be compounded with UV stabilizers, optic brighteners, and antistatic additives.

FILLER MASTERBATCHES		
	FRBATCHES	FILLER

PRODUCT CODE	PRODUCT NAME	CaCO ₃ (%)	APPLICATION RATIO (%)
C280.PE	(CaCO₃) Filler PE Masterbatch	80	5-30
C275.PE	(CaCO ₃) Filler PE Masterbatch	75	5-30
C370.PE	(CaCO ₃) Filler PE Masterbatch	70	5-25
C460.PE	(CaCO ₃) Filler PE Masterbatch	60	5-20
C280.PP	(CaCO ₃) Filler PP Masterbatch	80	5-30
C275.PP	(CaCO ₃) Filler PP Masterbatch	75	5-30
C370.PP	(CaCO ₃) Filler PP Masterbatch	70	5-25
C460.PP	(CaCO ₃) Filler PP Masterbatch	60	5-20





> WHITE MASTERBATCHES

Polirem offers premium quality white masterbatches with high opacity, excellent whiteness, and fine dispersion. Our white masterbatches are formulated using superior quality virgin polymers and finest grade titanium dioxide with high refractive index and meet international food contact regulations. They can be produced with various percentages of titanium dioxide and additives (such as polymer processing aids, slip, antistatic, antisplit and UV stabilizers) to meet our customers' requirements.

WHITE MASTERBATCHES

PRODUCT CODE	PRODUCT NAME	TiO ₂ (%)	APPLICATION AREAS AND RATIO (%)
T370.PE	(TiO ₂) White PE Masterbatch	70	They can be used as a white paint at 1-30% in films, raffia, and injection molding.
T275.PE	(TiO ₂) White PE Masterbatch	75	They enhance opacity and reduce UV penetration in blown films.
T370.PP	(TiO ₂) White PP Masterbatch	70	They increase mechanical properties and reduce wastes in color transitions.
T275.PP	(TiO ₂) White PP Masterbatch	75	

ANTISTATIC WHITE MASTERBATCHES

PRODUCT CODE	PRODUCT NAME	TiO ₂ (%)	ANTISTATIC (%)	APPLICATION AREAS AND RATIO (%)
TA267.PE	(TiO ₂) White PE Antistatic Masterbatch	68	7	They enhance opacity and reduce UV penetration in blown films.
TA365.PE	(TiO ₂) White PE Antistatic Masterbatch	65	5	They can be used as a white paint at 1-30% in films, raffia, and injection molding.
TA267.PP	(TiO ₂) White PP Antistatic Masterbatch	68	7	
TA365.PP	(TiO ₂) White PP Antistatic Masterbatch	65	5	They increase mechanical properties and reduce wastes in color transitions.



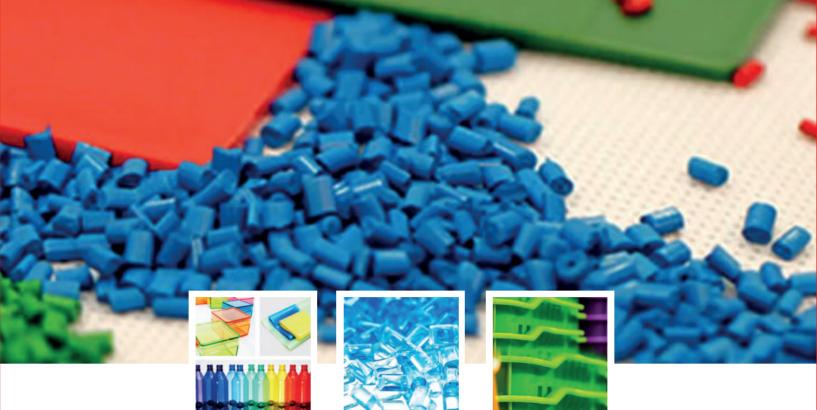
> WHITE MASTERBATCHES WITH CALCIUM CARBONATE

White masterbatches can be compounded with calcium carbonate filler to some extent to reduce production cost and to improve their thermal and mechanical properties; such as rigidity, toughness, and stiffness.

WHITE MASTERBATCHES with CaCO₃

PRODUCT CODE	PRODUCT NAME	TiO ₂ (%)	CaCO ₃ (%)	APPLICATION AREAS AND RATIO (%)
TK252.PE	(TiO ₂) White PE Masterbatch with (CaCO ₃)	50	25	They can be used as a white paint at 1-30% in films, raffia, and injection molding.
TK243.PE	(TiO ₂) White PE Masterbatch with (CaCO ₃)	40	35	
TK225.PE	(TiO ₂) White PE Masterbatch with (CaCO ₃)	25	50	
TK144.PE	(TiO ₂) White PE Masterbatch with (CaCO ₃)	40	44	
TK253.PE	(TiO ₂) White PE Masterbatch with (CaCO ₃)	50	30	
TK352.PE	(TiO ₂) White PE Masterbatch with (CaCO ₃)	49	17	
TK252.PP	(TiO ₂) White PP Masterbatch with (CaCO ₃)	50	25	They can be used as a white paint at 1-30% in films, raffia, and injection molding.
TK243.PP	(TiO ₂) White PP Masterbatch with (CaCO ₃)	40	35	
TK225.PP	(TiO ₂) White PP Masterbatch with (CaCO ₃)	25	50	

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> ADDITIVES

Additive masterbatches are used to improve the performance of plastic products. They can prevent degradation of the product resulting from heat and light exposure, improve processibility, optical, physical (antistatic, antiblock, etc.) and chemical properties (antioxidant), and limit flammability of plastic materials.

ADDITIVE MASTERBATCHES

PRODUCT CODE	PRODUCT NAME	ACTIVE MATERIAL (%)	APPLICATION AREAS AND RATIO (%)
AD955.PE.SP	PE Masterbatch with Slip Additive	5	It is used at 1-3% to reduce coefficient of friction of polymer films
AD955.PP.SP	PP Masterbatch with Slip Additive	5	in extrusion.
AD955.PE.AB	PE Masterbatch with Antiblock Additive	5	It is used at 1-3% to prevent adhesion between polymer film
AD955.PP.AB	PP Masterbatch with Antiblock Additive	5	layers.
AD901.PE.AO	Antioxidant PE Masterbatch	10	It is used at 1-3% to delay oxidation of polymers resulting from
AD901.PP.AO	Antioxidant PP Masterbatch	10	exposure to air, light, and heat.
AD946.PE.AS	Antistatic PE Masterbatch	5,5	
AD928.PE.AS	Antistatic PE Masterbatch	7	It is used at 1-4% to prevent accumulation of dust and dirt on the products by reducing static electricity.
AD946.PP.AS	Antistatic PP Masterbatch	5,5	
AD782.PP.UV	UV-PP Masterbatch	20	It is used to prevent degradation of the polymers resulting from UV exposure. They are not suitable for food packaging.
AD851.PP.UV	UV-PP Masterbatch	15	It is used at 1-5% to prevent degradation of the polymers resulting from UV exposure. They are suitable for food packaging.
AD851.PE.ANT	PE Antislip Masterbatch	10	Slip and antiblock additives are used at 1-3%.
AD973.PE.PPA	PE Process Masterbatch	3	It is used to at 1-4% reduce coefficient of friction in polymer films, thus provides energy saving.



Our quality control policy requires providing fast and reliable solutions by understanding and evaluating customer demands and performing (inter)nationally accepted tests to ensure permanent and consistent quality in long-term production. Our laboratories house modern equipments and advanced analytical instruments. It is our main duty to maintain customer satisfaction on the basis of professional and ethical rules.

We have adopted the principles of saving and efficiency and struggling with waste, reducing waste to minimum, preventing pollution in source, and using energy efficiently. Meeting the requirements of related environmental and energy legislation is our priority.

The employment of individuals, who are productive, participatory, development and team-oriented, self-confident, responsible, impartial, and reliable, is an indispensable part of our permanent quality policy.

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Our laboratories are equipped with modern equipments that are in compliance with (inter)national standards. Our team keeps track of technological and scientific developments to ensure that the most accurate results are achieved.

MELT-FLOW INDEXER (MFI)

The composite material is melted and a specific load is applied to it. Under this load, the amount of material movement in a capillary tube in 10 minutes is determined. The MFI is the viscosity index of a polymeric material at a specific temperature and measured via a melt flow indexer according to ISO 1133 standards. This is the most critical property of polymers to be molded.

MOISTURE ANALYZER

It is a gravimetric measuring system consisting of a balance and a heater. It calculates the % moisture or dry matter ratio in a short time by comparing the initial weight and weight loss during drying.

DENSITY MEASURING APPARATUS

It is used to determine density of polymeric compounds according to ISO 1183 standards.

MUFFLE FURNACE

It is used to heat the polymeric compound at very high temperatures to decompose all of the organic ingredients. Thus, inorganic content of the compound is determined from the remaining ash.

FPV TEST INSTRUMENT

Optimization of extrusion head pressures is very critical in polymeric film production and directly related with the morphology of the masterbatch. FPV instrument is equipped with pressure sensors and a computer. S

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Masterbatches can be defined as raw materials of plastic tools and equipment that we use frequently in our daily life. They are widely used in automotive, domestic appliance, electrical/electronic, PET bottle, and packaging industries.







CASE



> BLOWN MOLDED BOTTLE



ISNON

> DOMESTIC APPLIANCE PARTS



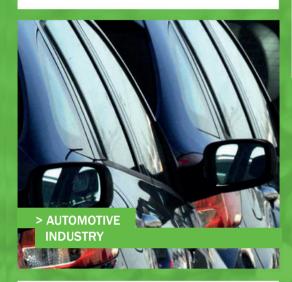
> HEAVY DUTY LARGE BAG



> CARRYING BAG













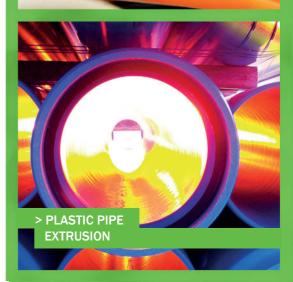


> ELECTRIC - ELECTRONIC INDUSTRY



ISNO

> PACKAGING INDUSTRY



POLİREM C280.PE

Calcium carbonate (CaCO₃) filled polymer. It is the most effective cost-saving solution with excellent anti-fibrillation, enhanced anti-slip property, improved stiffness and toughness.

	GENERAL PROPERTIES
Colour	Natural (Opaque)
Product Shape	Granule (3.2mm)
Odour	Natural Odour
Applications	Injection, extrusion, blow molding, thermoforming, raffia.
Packaging	25 kg PP Bags
USP Class VI Compliance	USP Class VI Compliant

APPLICATION AREAS AND RATIOS

METHOD	APPLICATION AREA	RATIO
Extrusion	PE and PP Film, Packaging Industry, Carrying Bag, Raffia, Big Bag	%5 - %30
Injection	Buckets, Plastic Furniture Industry, Plastic Case	%5 - %30
Blow Moulding	Plastic Bins, Bottles, etc.	%5 - %20
Thermoforming	Thermoform Vacuum Products	%5 - %15

EXPERIMENTAL PROPERTIES

FEATURES	TEST CRITERIA	UNIT	STANDARD	VALUE
Melt Flow Index (MFI)	190 °C / 2.16 kg	g/10 min	ASTM D 1238	It is determined according to customer needs
Density		g/cm ³	ASTM D 792	min 1.0 - max 1.2
Humidity		%	ISO 3451-1	max 0.15
Ash Test	600°C	%	ISO 3451-1	It is determined according to customer needs

TEMPERATURE PROFILES

EKSTR	USION	INJE	CTION
SEGMENT	TEMPERATURE (°C)	SEGMENT	TEMPERATURE (°C)
Rear	160 - 180	Rear	160 - 180
Middle	165 - 180	Middle	165 - 180
Front	170 - 190	Front	170 - 190
Mould	180 - 220	Head	180 - 210
		Carrier	200 - 220

ADDITIONAL INFORMATION

POLİREM C370.PE

Calcium carbonate (CaCO₃) filled polymer. It is the most effective cost-saving solution with excellent anti-fibrillation, enhanced anti-slip property, improved stiffness and toughness.

	GENERAL PROPERTIES
Colour	Natural (Opaque)
Product Shape	Granule (3.2mm)
Odour	Natural Odour
Applications	Injection, extrusion, blow molding, thermoforming, raffia.
Packaging	25 kg PP Bags
USP Class VI Compliance	USP Class VI Compliant

APPLICATION AREAS AND RATIOS

METHOD	APPLICATION AREA	RATIO
Extrusion	PE and PP Film, Packaging Industry, Carrying Bag, Raffia, Big Bag	%5 - %30
Injection	Buckets, Plastic Furniture Industry, Plastic Case	%5 - %30
Blow Moulding	Plastic Bins, Bottles, etc.	%5 - %20
Thermoforming	Thermoform Vacuum Products	%5 - %15

EXPERIMENTAL PROPERTIES

FEATURES	TEST CRITERIA	UNIT	STANDARD	VALUE
Melt Flow Index (MFI)	190 °C / 2.16 kg	g/10 min	ASTM D 1238	It is determined according to customer needs
Density		g/cm ³	ASTM D 792	min 1.0 - max 1.2
Humidity		%	ISO 3451-1	max 0.15
Ash Test	600°C	%	ISO 3451-1	It is determined according to customer needs

TEMPERATURE PROFILES

EKSTRUSION		INJECTION	
SEGMENT	TEMPERATURE (°C)	SEGMENT	TEMPERATURE (°C)
Rear	160 - 180	Rear	160 - 180
Middle	165 - 180	Middle	165 - 180
Front	170 - 190	Front	170 - 190
Mould	180 - 220	Head	180 - 210
		Carrier	200 - 220

ADDITIONAL INFORMATION

POLİREM T370.PE

Titanium oxide (TiO₂) filled polymer (white masterbatch). It gives excellent whiteness and good opacity to the products due to its finely dispersed and high quality titanium oxide content.

	GENERAL PROPERTIES
Colour	Natural (Opaque)
Product Shape	Granule (3.2mm)
Odour	Natural Odour
Applications	Injection, extrusion, blow molding, thermoforming, raffia.
Packaging	25 kg PP Bags
USP Class VI Compliance	USP Class VI Compliant

APPLICATION AREAS AND RATIOS

METHOD	APPLICATION AREA	RATIO
Extrusion	PE and PP Film, Packaging Industry, Carrying Bag, Raffia, Big Bag	%5- %15
Injection	Buckets, Plastic Furniture Industry, Plastic Case	%5- %10
Blow Moulding	Plastic Bins, Bottles, etc.	%5- %15
Thermoforming	Thermoform Vacuum Products	%5- %10

EXPERIMENTAL PROPERTIES

FEATURES	TEST CRITERIA	UNIT	STANDARD	VALUE
Melt Flow Index (MFI)	190 °C / 2.16 kg	g/10 min	ASTM D 1238	It is determined according to customer needs
Density		g/cm ³	ASTM D 792	min 1.0 - max 1.25
Humidity		%	ISO 3451-1	max 0.15
Ash Test	600°C	%	ISO 3451-1	It is determined according to customer needs

TEMPERATURE PROFILES

EKSTRUSION		INJECTION	
SEGMENT	TEMPERATURE (°C)	SEGMENT	TEMPERATURE (°C)
Rear	160 - 180	Rear	160 - 180
Middle	165 - 180	Middle	165 - 180
Front	170 - 190	Front	170 - 190
Mould	180 - 220	Head	180 - 210
		Carrier	200 - 220

ADDITIONAL INFORMATION

POLİREM TK225.PE

Titanium oxide (TiO_2) and calcium carbonate $(CaCO_3)$ filled polymer (white masterbatch). It gives excellent whiteness and good opacity to the products due to its finely dispersed and high quality titanium oxide content. Calcium carbonate content provides mechanical strength, energy and cost optimization.

	GENERAL PROPERTIES
Colour	Natural (Opaque)
Product Shape	Granule (3.2mm)
Odour	Natural Odour
Applications	Injection, extrusion, blow molding, thermoforming, raffia.
Packaging	25 kg PP Bags
USP Class VI Compliance	USP Class VI Compliant

APPLICATION AREAS AND RATIOS

METHOD	APPLICATION AREA	RATIO
Extrusion	PE and PP Film, Packaging Industry, Carrying Bag, Raffia, Big Bag	%5- %30
Injection	Buckets, Plastic Furniture Industry, Plastic Case	%5- %30
Blow Moulding	Plastic Bins, Bottles, etc.	%5- %20
Thermoforming	Thermoform Vacuum Products	%5- %15

EXPERIMENTAL PROPERTIES

FEATURES	TEST CRITERIA	UNIT	STANDARD	VALUE
Melt Flow Index (MFI)	190 °C / 2.16 kg	g/10 min	ASTM D 1238	It is determined according to customer needs
Density		g/cm ³	ASTM D 792	min 0.8 - max 1.1
Humidity		%	ISO 3451-1	max 0.15
Ash Test	600°C	%	ISO 3451-1	It is determined according to customer needs

TEMPERATURE PROFILES

EKSTRUSION		INJECTION	
SEGMENT	TEMPERATURE (°C)	SEGMENT	TEMPERATURE (°C)
Rear	160 - 180	Rear	160 - 180
Middle	165 - 180	Middle	165 - 180
Front	170 - 190	Front	170 - 190
Mould	180 - 220	Head	180 - 210
		Carrier	200 - 220

ADDITIONAL INFORMATION

POLİREM TK252.PE

Titanium oxide (TiO_2) and calcium carbonate $(CaCO_3)$ filled polymer (white masterbatch). It gives excellent whiteness and good opacity to the products due to its finely dispersed and high quality titanium oxide content. Calcium carbonate content provides mechanical strength, energy and cost optimization.

	GENERAL PROPERTIES
Colour	Natural (Opaque)
Product Shape	Granule (3.2mm)
Odour	Natural Odour
Applications	Injection, extrusion, blow molding, thermoforming, raffia.
Packaging	25 kg PP Bags
USP Class VI Compliance	USP Class VI Compliant

APPLICATION AREAS AND RATIOS

METHOD	APPLICATION AREA	RATIO
Extrusion	PE and PP Film, Packaging Industry, Carrying Bag, Raffia, Big Bag	%5- %30
Injection	Buckets, Plastic Furniture Industry, Plastic Case	%5- %30
Blow Moulding	Plastic Bins, Bottles, etc.	%5- %20
Thermoforming	Thermoform Vacuum Products	%5- %15

EXPERIMENTAL PROPERTIES

FEATURES	TEST CRITERIA	UNIT	STANDARD	VALUE
Melt Flow Index (MFI)	190 °C / 2.16 kg	g/10 min	ASTM D 1238	It is determined according to customer needs
Density		g/cm ³	ASTM D 792	min 0.8 - max 1.1
Humidity		%	ISO 3451-1	max 0.15
Ash Test	600°C	%	ISO 3451-1	It is determined according to customer needs

TEMPERATURE PROFILES

EKSTRUSION		INJECTION		
SEGMENT	TEMPERATURE (°C)	SEGMENT	TEMPERATURE (°C)	
Rear	160 - 180	Rear	160 - 180	
Middle	165 - 180	Middle	165 - 180	
Front	170 - 190	Front	170 - 190	
Mould	180 - 220	Head	180 - 210	
		Carrier	200 - 220	

ADDITIONAL INFORMATION





POLIREM KİMYA SANAYİ VE TİCARET A.Ş. POLİREM KİMYA SAN. VE TİC. A.Ş.

ÇERKEŞ ORGANİZE SANAYİ BÖLGESİ 2. ETAP 464 ADA 5 NOLU PARSEL ÇERKEŞ – ÇANKIRI – TURKEY

with a scope of

PLASTIC RAW MATERIAL PRODUCTION AND SALES

Has established a quality management system in accordance with international standard.

" Following elements of the standard are excluded " " None "

ISO 9001:2015

Certificate No: M 10833Initial Certification Date: 24 November 2017Certification Date: 24 November 2017Expiration Date: 23 November 2020

General Manager

Kiwa Certification Services Inc. ITOSB 9. Cadde No. 15 Tepeören Tuzla - Istanbul - Turkey Tel: + 90 216 593 25 75 Faks : + 90 216 593 25 74 Web: <u>www.kiwa.com.tr</u> E-mail: <u>info@kiwa.com.tr</u> *Certificate is valid till expiration date, subject to successful completion of periodical surveillance audits.* Please contact above numbers for detailed information.

TÜRKAK BDS NC YS-fCD7-7D66







POLİREM KİMYA SAN. VE TİC. A.Ş.

POLİREM KİMYA SANAYİ VE TİCARET A.Ş.

ÇERKEŞ ORGANİZE SANAYİ BÖLGESİ 2. ETAP 464 ADA 5 NOLU PARSEL ÇERKEŞ - ÇANKIRI - TURKEY

with a scope of

PLASTIC RAW MATERIAL PRODUCTION AND SALES

Has established an environmental management system in accordance with international standard.

ISO 14001:2015

Certificate No : M 10834

Certification Date

Expiration Date

- Initial Certification Date

- : 24 November 2017
- : 24 November 2017
 - : 23 November 2020

General Manager

Kiwa Certification Services Inc. ITOSB 9. Cadde No. 15 Tepeören Tuzla - Istanbul - Turkey Tel: + 90 216 593 25 75 Faks : + 90 216 593 25 74 Web: www.kiwa.com.tr E-mail: info@kiwa.com.tr Certificate is valid till expiration date, subject to successful completion of periodical surveillance audits. Please contact above numbers for detailed information.







POLİREM KİMYA SAN. VE TİC. A.Ş.

POLİREM KİMYA SANAYİ VE TİCARET A.Ş.

ÇERKEŞ ORGANİZE SANAYİ BÖLGESİ 2. ETAP 464 ADA 5 NOLU PARSEL ÇERKEŞ – ÇANKIRI – TURKEY

with a scope of

PLASTIC RAW MATERIAL PRODUCTION AND SALES

Has established an occupational health and safety management system in accordance with standard.

OHSAS 18001:2007

Certificate No: M 10835Initial Certification Date: 24 November 2017Certification Date: 24 November 2017Expiration Date: 23 November 2020

General Manager

Kiwa Certification Services Inc. ITOSB 9. Cadde No. 15 Tepeören Tuzla - Istanbul - Turkey Tel: + 90 216 593 25 75 Faks : + 90 216 593 25 74 Web: <u>www.kiwa.com.tr</u> E-mail: <u>info@kiwa.com.tr</u> *Certificate is valid till expiration date, subject to successful completion of periodical surveillance audits.* Please contact above numbers for detailed information.





Ensures Permanent Quality in Polymeric Compounds







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