COMPANY PROFILE

AG KAYATAMA

PT. ANUGERAH GEMILANG KAYATAMA

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ABOUT COMPANY

PT. ANUGERAH GEMILANG KAYATAMA adalah perusahaan yang bergerak dalam bidang penyediaan barang untuk kebutuhan industri dengan produk-produk yang memiliki standar kualitas internasional.

Kami juga menangani pengerjaan proyek industrial dengan memberikan layanan teknik meliputi Instalasi, Fabrikasi, Perbaikan, Rekondisi, Pembuatan dan pemasangan di lokasi industri.

VISION & MISSION

Vision

Menjadi perusahaan yang menyediakan produk-produk industri yang berkualitas, dan memberikan layanan terbaik dengan sumber daya yang ahli dibidangnya.

Mission

- Memberikan layanan terbaik dan profesional dan dapat dipercaya untuk pelanggan.
- Mengembangkan produk - produk yang berkualitas tinggi.
- Meningkatkan kompetensi sumber daya manusia yang handal.
- Berkomitmen memberikan kepuasan pelanggan dengan menjaga kualitas, harga, dan waktu pengerjaan.
- Memberikan solusi bagi pelanggan dalam mencari produk yang berkualitas.

OUR BUSINESS

Kayata Welding Electrodes

◀◀◀◀

Kawat las yang diproduksi untuk berbagai macam kebutuhan pengelasan. Tersedia berbagai macam type kawat las yang dapat dipilih, sesuai dengan kebutuhan saat pengaplikasian.

Kayata Hammer Shredder

◀◀◀◀

Kayata Cane Knife Tip

▶▶▶▶

OUR BUSINESS

Industrial Pumps

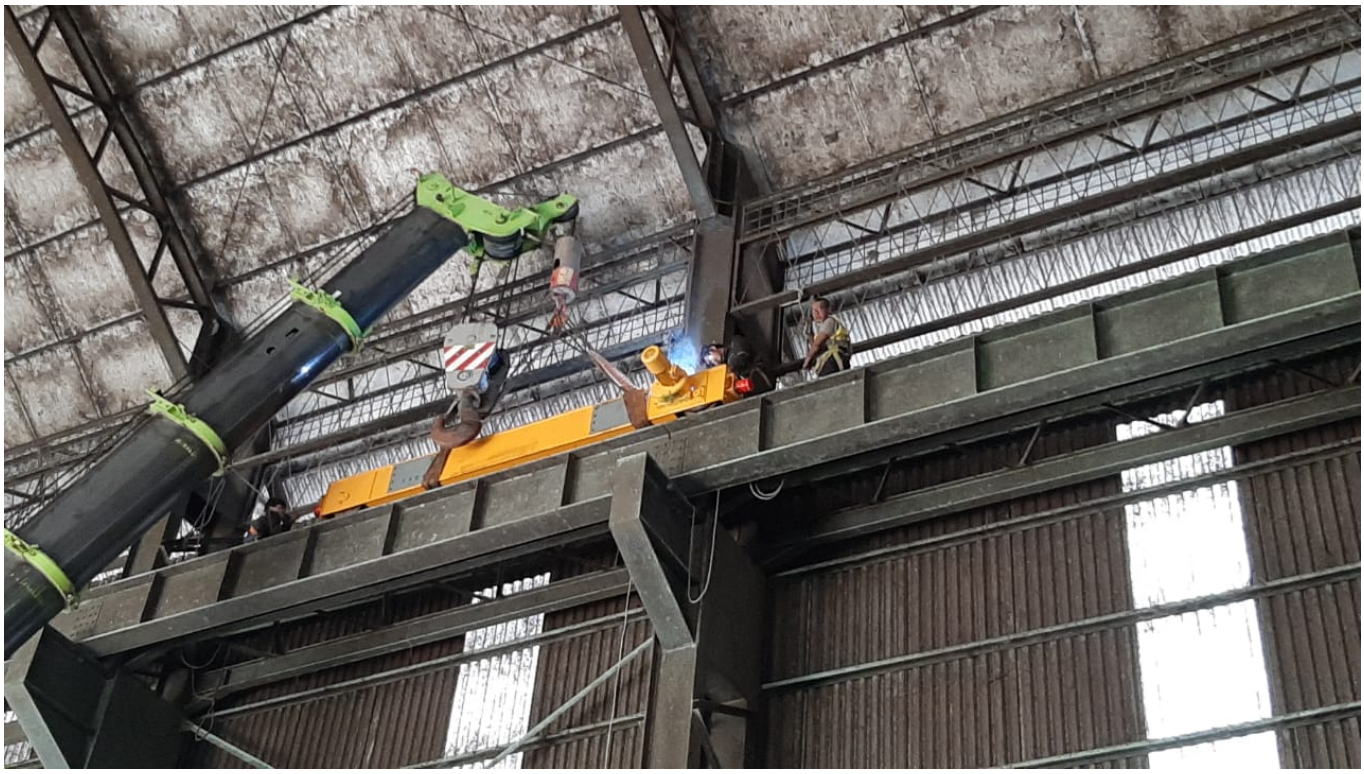
Brass Bearing /
Metal Bearing

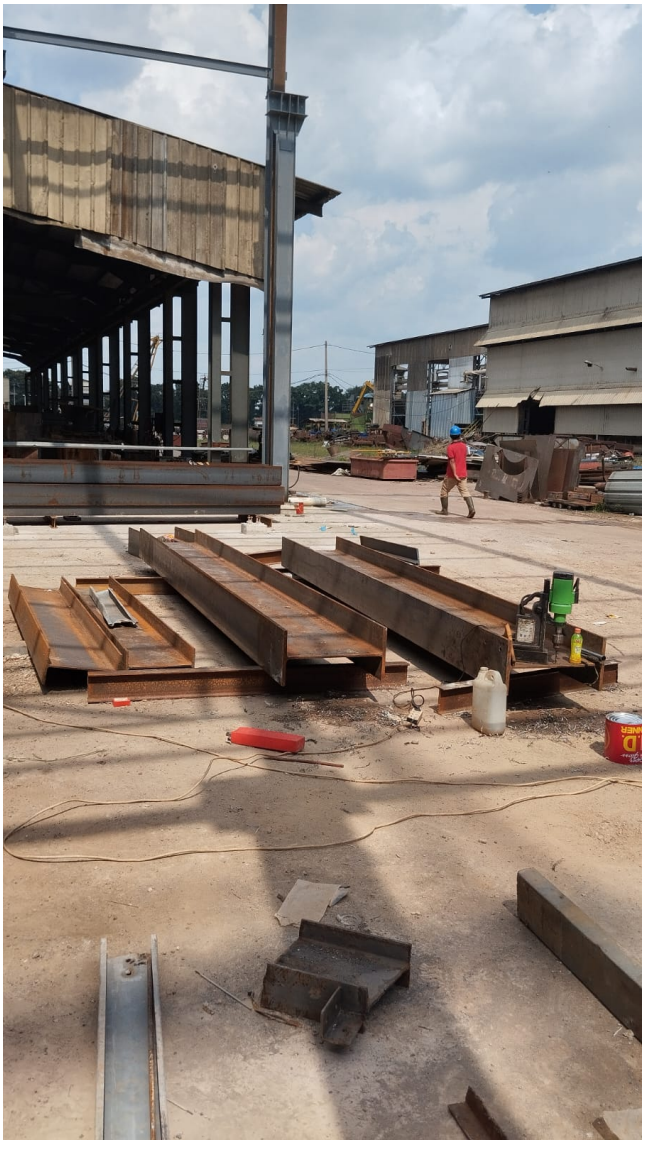
Juice Heaters

Pipe Boiler Tube,
Pipe Juice Heater Tube,
Evaporator Tube,
Batch Vacuum Pan Tube,
Continuous Vacuum Pan Tube.

OUR PROJECT

- **Installation**
- **Fabrication**
- **Repair**
- **Recondition**
- **Coating**





AG KAYATAMA

FW Finework cranes

Henan FineWork Cranes Co., Ltd.

Henan FineWork Cranes Co.,Ltd is a professional manufacturer and service supplier of material handling equipment integrating R&D, design, manufacturing and marketing, all the cranes and electric hoists comply to FEM/DIN standard.
It is one of the most competitive enterprise with the largest production & sales turnover, it Is also one of the most influential brand in Chinese crane industry. Our products include single & double girder EOT cranes, gantry crane, elecl.nc hoist, bridge girder erection machine, rail transit machine, and other types of cra.ne like explosion-proof, insulation, electronic magnetic, frequency conversion, the metallurgy casting hoist crane, series of European standard cranes and electric hoists etc.

More than 2600 people are working in our company, including 300 senior engineers and technical staffs. The company covers 820,000m2 and owns 570 millions of assets. We have all kinds of manufacturing equipments and detecting equipment for more than 650 sets. The annual output of double girder crane with capacity 320T, gantry crane and grab bucket crane, single girder crane, and electrfc hoist are 2958 sets, 19723 sets, 24654 sets respectively.

SINCE 1984

COOPERATION IS BASED ON TRUST, TRUST IS BASED ON SERVICE AND QUALITY.

Our cranes have been successfully exported to more than 90 countries and regions, such as the Untted States, Great Britain, Russia, India, Brazil, Peru, South Africa, Mongolia, South Korea, Austrana, Southeast Asia, the Mid-East, etc. And we enjoyed the well reputation from all the global customers.

河南泛沃起重机电配套有限公司
Henan Finework Cranes Co., Ltd

Appointment Letter

PT ANUGERAH GEMILANG KAYATAMA
Lingkungan VB RT 26/ RW 10 ,
Kelurahan Yukum Jaya , Kecamatan Terbanggi Besar ,
Lampung Tengah 34163

Dear Mrs Widya,

HENAN FIREWORK CRANES CO.,LTD herewith appoints **PT. ANUGERAH GEMILANG KAYATAMA** as Lampung - Sumatera Selatan , Indonesia - Distributor for the product :

- European wire rope hoist
- Overhead crane
- Gantry crane
- Winch

The Appointment shall be valid until December 2026.
Renewal of agreement shall be shall be communicated between both parties by the end of the validity.

This appointment letter is made to be used the properly.

Yours faithfully.

河南泛沃起重机电配套有限公司
HENAN FINEWORK CRANES CO., LTD

SINGLE GIRDER OVERHEAD CRANE

The single girder overhead crane is cheap but with advanced technology. It has the features of strong rigidity, light weight, reducing the crane rail load, superior design, and prominent traveling system which make it to be your best choice. It can meet your various requirements and make your working efficient and reliable. The max. lifting capacity is 20 tons.

- The main load-bearing girder is in box type with computer optimization design.
- The end carriage is in anti-torsion box type.
- The connection between main girder and end carriage conform to the tolerance in mechanical engineering, which reduce the wear to the minimum.
- The height with chain hoist or wire rope hoist is small, which make the hook near the border and increase the service area.
- High flexible flat cable power supply to the trolley with ground protection.
- Anti-swaying function ensures the stable operation.

Technical Parameters of CXTS Single Girder Overhead Crane

CAPACITY (kg)	WORKING CLASS (FEM)	WORKING CLASS (ISO/GB)	LIFTING HEIGHT (m)	SPAN / (m)	LIFTING SPEED (m/min)	TROLLEY SPEED (m/min)	CRANE SPEED (m/min)
2000	1AM–4M	M3–M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
3200	1AM–4M	M3–M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
5000	1AM–4M	M3–M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
6300	1AM–4M	M3–M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
8000	1AM–4M	M3–M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
10000	1AM–4M	M3–M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
12500	1AM–3M	M3–M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
16000	1AM–3M	M3–M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.66/4	2~20	3~30
20000	1AM–3M	M3–M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.66/4	2~20	3~30

DOUBLE GIRDER OVERHEAD CRANE

The double girder overhead crane has excellent ratio of dead weight/load capacity. Its reasonable structure ensures the good running status and reduces the wear. The hook can be risen to the middle between the two main girders, which greatly improves the lifting height. According to customer's request, the crane can be in remote coontrol or cab control. As an option, maintanance walkway and trolley maintanance platform is available, which is not only convenient for the maintanance, but also convenient for the maintanance personnel rapidly and safely accesses to the other devices in workshop, such as lightning equipment, heating and power pipeline, etc. The max lifting capacity is 500 tons.

Advantages and Features

- High efficient work due to double girder design and high speed running of trolley and crane;
- Light weight save the invest cost.
- Available options
  - maintanance platform
  - cab control
- High flexible flat cable power supply to the trolley with ground protection.
- Anti-swaying function ensures the stable operation.

Technical Parameters of CTXD Double Girder Overhead Crane / MG Gantry Crane

CAPACITY (kg)	WORKING CLASS (FEM)	WORKING CLASS (ISO/GB)	LIFTING HEIGHT (m)	SPAN / (m)	LIFTING SPEED (m/min)	TROLLEY SPEED (m/min)	CRANE SPEED (m/min)
2000	1AM-4M	M3-M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
3200	1AM-4M	M3-M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
5000	1AM-4M	M3-M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
6300	1AM-4M	M3-M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
8000	1AM-4M	M3-M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
10000	1AM-4M	M3-M6	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
12500	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/5	2~20	3~30
16000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.66/4	2~20	3~30
20000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.66/4	2~20	3~30
25000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/3.2	2~20	3~30
32000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/3.2	2~20	3~30
40000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/3.2	2~20	3~30
50000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0.8/3.2	2~20	3~30
63000	1AM-3M	M3-M5	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0~2.9	2~20	3~30
80000	1AM-2M	M3-M4	6/9/12/15/18	10.5/13.5/16.5/19.5/22.5/25.5/28.5	0~2.9	2~20	3~30

▶ MH type electric hoist gantry crane

▶ MB type gantry crane

▶ Container gantry crane

▶ MG type double girder gantry crane

▶ L type gantry crane

▶ Double wheel double girder gantry crane

▶ MG type truss gantry crane

▶ MZ double beam grab gantry crane

AG KAYATAMA

thortex

UNIQUE POLYMER SYSTEMS

INNOVATE | REBUILD | ENHANCE

AG KAYATAMA

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

THE HISTORY OF UNIQUE POLYMER SYSTEMS

Founded in the Heart of the United Kingdom in 1992, Unique Polymer Systems (UPS) is a globally recognised supplier of a unique range of high-performance repair composite materials and specialist protective coatings.

UPS are able to offer unique solutions such as fluid flow equipment linings to corrosion protection for offshore platforms. Our unique solutions can be applied throughout all industrial sectors; Oil & Gas, Marine (ThistleBond), Power Generation, Paper & Pulp, Chemical & Corrosion, Water & Wastewater, Petrochemical & General Industry.

The unique range of products are supplied worldwide throughout our extensive network of global Distributors and Applicators. This enables us to provide local solutions throughout the world including North & South America, Africa, Europe, Middle East and Asia.

Our highly trained team are able to offer onsite technical support, training, presentations and seminars back by system recommendations and technical specifications.

We are dedicated to providing unique solutions that fit the specific needs of every client in every industry possible. Our high-quality products linked with our years of experience ensures a remarkable standard of long-term protection, cost effective solutions that ultimately minimise industry downtime.

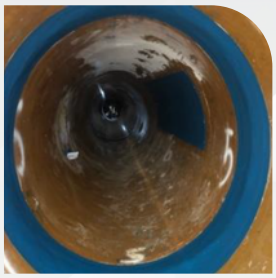
PT. ANUGERAH GEMILANG KAYATAMA is a company engaged in the supply of **Thortex & UNIQUE POLYMERS SYSTEMS** coatings products and services, especially for repair & maintenance of fluid flow system components,damaged. such as

- **Casing Pump & Impeller**
- **Vacum Pump**
- **Heat Exchanger**
- **Tanks**
- **Pipes, Chutes, Hoper & Sparating Cone**
- **Valve**
- **Tube Sheet Chiler**
- **VRM**
- **Shaft**
- **Cooling Tower**
- **Chemical Protection**
- **Floor Protection.**

Some of Our Experience in The Coating Projects :

Impeller

Chiller

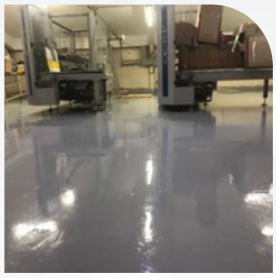


Line CWP

Degasifier Tank

Vacuum Pump

Pump



Floor Protection

Cooling Tower

AG KAYATAMA

INTIJAKARAYA

SURAT PENUNJUKAN SUB DEALER

Nomor : 002/IJR/SD/AGK-BL/IV/23

Yang bertanda tangan di bawah ini:

Nama	: Ir. Iwan Mudriawan
Jabatan	: Direktur
Bertindak untuk dan atas nama	: PT INTI JAKA RAYA
Alamat	: JL. Indrayasa No.116 Cibaduyut - Bojongloa Kidul Kota Bandung – Jawa Barat 40236
Telpon	: 022 – 42823264 / M-08121110709
Email	: sales_ijr@intijakaraya.com mudriawan@intijakaraya.com

Bertindak dan atas nama PT. INTI JAKA RAYA, setelah mempertimbangkan syarat-syarat sebagai Sub Dealer, menunjuk :

PT. ANUGERAH GEMILANG KAYATAMA

Lingkungan VB, Desa/Kel. Yukum Jaya
Kec. Terbanggi Besar
Kab. Lampung Tengah
Provinsi Lampung

Sebagai Sub Dealer Product Specialty Coating :

1. **UNIQUE POLYMER SYSTEMS**
2. **THORTEX**

Untuk wilayah Provinsi Lampung, terhitung sejak 1 April 2023 s/d 31 Maret 2024.

Demikian surat Penunjukan ini kami buat dengan sebenarnya, untuk dapat dipergunakan sebagaimana mestinya.

Bandung, 1 April 2023

Hormat Kami,

PT INTI JAKA RAYA

Ir. Iwan Mudriawan
Direktur

Telp. +6222 428 23 264
Ptc +62812 1110 709
Email sales_ijr@intijakaraya.com

Address :
Jl. Indrayasa No.116 Bojongloa Kidul
Kota Bandung - Jawa Barat

METAL REPAIR SYSTEM

Unique Solutions for Repairing & Rebuilding Metal Surfaces and Components

Unique Polymer Systems (UPS is a globally renown supplier of a wide range of high-performance Metal Repair materials which offer ideal solutions to worn or damaged mechanical components and process equipment surfaces.

Oil & Gas | Marine (ThistleBond) | Power Generation | Paper & Pulp | General Industry | Chemical & Corrosion | Water & Wastewater | Petrochemical

TYPICAL APPLICATIONS FOR THE UPS METAL REPAIR SYSTEMS

Repair Cracked Engine Blocks	Repair Holed Pump Casing
Bond Dissimilar Metal	Reform Flange Faces
Repair Worn Bearing Housings	Repair Worn Bearing Housings
Resurface Scored Hydraulic Rams	Rebuild Worn Shaft

OUR PRODUCT

THORTEX METAL TECH XG
@5Kg/Kit (A+B)

THORTEX METAL TECH EG
@2Kg/Kit (A+B)

UNIQUE POLYMERS SYSTEMS 105 EG
@1Kg/Kit (A+B)
THISTLEBOND METAL REPAIR PASTE

UNIQUE POLYMERS SYSTEMS 19060 SG
@125 gm/Stick (A+B)
THISTLEBOND STICK GRADE METAL

thortex

Metal-Tech XG

Data Sheet and Application Guide

Product Description

Thortex Metal Tech XG has been specifically developed as a high performance repair system with extended working time for rebuilding and repairing equipment requiring good mechanical strength, making the product ideal for use in warm environments.

Product Features

- Good application characteristics with good build characteristics.
- Designed for application by trowel or spatula at thicknesses up to 12mm.
- Outstanding cold weld capabilities.
- Suitable for use to repair cracked castings and rebuilding worn shafts, bearing housings, flanges etc.
- Excellent adhesion to correctly prepared metal surfaces.

General Application Steps

1. Remove oil, grease and loosely adhering deposits.
2. Abrade by appropriate means to create a coarse profile.
3. Apply Thortex Metal Tech XG to the required thickness.
4. Allow to cure.
5. Visually inspect the system for defects.
6. Repair any defects.
7. Carry out machining as required.

Surface Preparation

Heavy contamination due to oil or grease must first be removed using solvent-based cleaner. All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder, needle gun or abrasive blasting.

When treating existing equipment which may have become salt impregnated due to service conditions, surfaces should first be wet blasted then dry blasted and tested for presence of salts. This process should be repeated until all salts are removed.

Where grinding or needle gunning is used, the surface should be cross-scored to improve adhesion. Care must be taken, when angle grinding, to avoid polishing rather than roughening metal surfaces. Where possible, abrasive blasting is the preferred surface preparation, especially in fluid flow repairs.

Surfaces should finally be carefully degreased using solvent-based cleaner. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, the cleaner should be worked into the surface by brush and washed off using excess cleaner.

Parts (for example, threads or bearing surfaces) which must remain in position during application but must not adhere to Thortex Metal Tech XG must be coated with Thortex Release Agent prior to application of the repair product.

Product Mixing

Thortex Metal Tech XG is a two component solvent free material comprising Base and Activator components which must be mixed together prior to use.

Measure equal volumes of Base component and Activator component onto a clean mixing board or other suitable surface. The two components should then be thoroughly mixed until completely streak free.

The mixed material should be used within 60 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

Application Procedures

The mixed material should be pressed firmly onto the prepared area, working the material into any cracks and surface defects.

When Thortex Metal Tech XG is being used to bond two surfaces together, both surfaces should be coated with the material. The two pieces should then be pressed firmly together and clamped in position until the product has set, any excess material squeezed out should be scraped away before the product begins to cure.

When Thortex Reinforcement Tape is being used to strengthen the repairs the tape should either be impregnated with Thortex Metal Tech XG or the tape should be laid over the Thortex Metal Tech XG surface and stippled into the material before it cures, then additional Thortex Metal Tech XG applied over the surface. Where additional applications are required to build up thickness, the additional application must be carried out within the initial set time of the previous application, otherwise the surface of the previous application must be abraded.

Properties

Property	Value
Color	Grey
Ratio	1:1 By volume 1.1:1 By weight
Drying & Cure times at 20°C (68°F)	
Useable life	60 mins
Initial Set	4 hours
Hard Dry for machining	12 hours
Full Mechanical Cure	5 days
Volume Solids	100%
Film Thickness	Up to 12 mm (.47 in)
Volume Capacity	392cc (23.94 cu ins) per kilo
Flexural Strength	56 Mpa (80000 psi) ASTM D695)
Compressive Strength	70 Mpa (10000 psi) ASTM D695)
Heat Distortion Temperature	60°C (140°F) (ASTM D648)
Tensile Shear Adhesion	17.24 Mpa (2500 psi) on grit blasted steel (ASTM D1002)
Corrosion Resistance	5000 hours (ASTM B117)
Shore D Hardness	85 (ASTM D2260)
Maximum Operating Temperature	120°C (248°F) - Dry 70°C (158°F) - Wet

TECHNICAL DATA SHEET
UPS 105 EG THISTLEBOND METAL REPAIR PASTE
IMPA 81 22 11

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 105 EG ThistleBond Metal Repair Paste is a high-performance multi-purpose synthetic metal repair compound specially developed for metal repairs requiring excellent mechanical strength combined with easy machining properties.

Product Information

Product Features

- Good machining characteristics with good mechanical properties.
- Advance solvent free epoxy technology.
- Designed for application by trowel or spatula at thicknesses up to 12mm (472mil).
- No shrinkage.
- Fully machinable after 2 hours.
- Outstanding cold weld capabilities.
- High build capability – Up to 25mm without slumping.
- Excellent adhesion to correctly prepared metal surfaces.
- Suitable for all metallic surfaces.
- BV Type Approved product
- IMPA Code: 81 22 11

Product Applications

UPS 105 EG can be applied to any damaged component in one easy application and is ideal for repairing;

Worn or damaged pump shafts, cracked pump or valve casings, scored hydraulic rams, worn bearing housings, damaged flanges, leaking tank seams, worn keyways, cracked engine blocks, etc.

Surface Preparation Manual – Mechanical – Abrasive Blast

2 hours to Machining

Dry Heat Resistance in Excess of 200°C (392°F)

Cost Effect Solution

Surface Preparation

Metallic Substrates – Mechanical Abrasion

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be mechanically abraded using the UPS Miniblaster or equivalent handheld grinders, to ISO 8501/4 ST3 (SSPC SP3 ST3)
3. Once abraded the surface must be degreased and cleaned using UPS 9918 MEK Cleaner.
4. All surfaces must be coated before flash rusting or oxidation occurs.

Metallic Substrates – Abrasive Blast Cleaning

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

On cracked surfaces, the cracks should be stabilized by drilling the termination points and the cracks '*veed*' out and drilled, tapped and bolted every 75-100mm (3-4").

Where abrasive blast cleaning is not possible (excluding salt contaminated surfaces) the surface should be roughened by UPS Mini-Blaster, Needle Gun or Grinding.

In areas where the product should not adhere, a thin layer of UPS 9921 Release Agent should be applied taking care not to contaminate other areas.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Mix all Base and Activator together on a clean plastic mixing surface
2. Using a spatula, mix the 2 components until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 25-30 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed. For part mixing, using a spatula place 3 equal measures from the Base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 1 equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Application

Spatula or applicator tool applications -

1. Apply the material to the prepared surface, ensure the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.

PLEASE NOTE: Where a machined finished is required, the repair area should be overfilled by up to 1.5mm (60mil). Once hardened, machine using a surface cutting speed of 200ft /minute and a feed rate of 50 thou /rev and 10 thou /rev for finishing.

Technical Data & Performance

Coverage Rates

1KG (2.2LB) of fully mixed product will give the following coverage rates -	
0.406m² at 1mm	4.3ft² at 40mil
0.203m² at 2mm	2.2ft² at 80mil
0.135m² at 3mm	1.45ft² at 1/8"

TECHNICAL DATA SHEET
UPS 19060 SG THISTLEBOND STICK GRADE METAL
IMPA 81 22 02

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 19060 SG ThistleBond Stick Grade Metal is a specially packaged rapid curing synthetic two component metal repair in stick form. A metal repair adhesive which is for on-site repairs to metal components such as leaking pipes, tanks, ducts, radiators, etc.,

Product Information

Product Features

- Simple to use; only requiring simple hand mixing to activate reaction between the concentrically packed components.
- High mechanical strength in a short period of time.
- Rapid curing – hard dry in 30 minutes.
- Non-rusting steel reinforced epoxy putty
- Designed for application by gloved hand, putty knife or spatula.
- Can be applied to any damaged metal surface, plus glass, fiberglass and other composite surfaces.
- Designed for rapid repairs to cracked casting, leaking pipes, tanks, flanges, etc., minimizing downtime.
- Exhibits excellent adhesion to correctly prepared metal surfaces.
- WRAS Approved for potable water applications.

Product Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as;

Worn, damaged, or cracked pump shafts, cracked pump or valve casings, scored hydraulic rams, worn bearing housings, damaged flanges, leaking tank seams, worn keyways, cracked engine blocks, etc.,

No Specialist Tools Required	60 Minutes to Full Cure	Temperature limitations 120°C continuous 150°C intermittent	Cost Effect Solution

Surface Preparation

Metallic Substrates – Hand Tools

1. All oil and grease must be removed from the surface of the using UPS 9918 MEK Cleaner.
2. All surfaces must be cleaned which is suitable for application to manually prepared surfaces such as hand wire brush, sanding, mechanical grinding or wire brush.
3. Once abraded, the surface must be degreased and cleaned using UPS 9918 MEK Cleaner.

Metallic Substrates – Mechanical Tools

1. All oil and grease must be removed from the surface of the using UPS 9918 MEK Cleaner.
2. Use a handheld mechanical grinder with a coarse grinding pad or rotary wire brush. **UPS MiniBlaster** – The best mechanical surface preparation results are provided by using a UPS MiniBlaster. All surfaces must be technically abraded using handheld grinders to ISO 8501/4 ST3 (SSPC SP3 ST3)
3. Remove all loose material such as rust or flaking paint prior to the application of this product.

Mixing

1. The base component is at room temperature between approx. 20°C (68°F). The ambient surface temperature is above 5°C (41°F)

Then proceed with mixing the product:

1. The product is supplied in stock form and therefore the Base and Activator components are premeasured.
2. Break off the required amount of material from the stick and using gloved hands, knead the product until the black and grey components become a consistent mid grey.
3. The product once fully mixed has a useable life of 3-5 minutes at 20°C (68°F)

Application

Using your hands with gloves, spatula or putty knife application -

1. Press the mixed product onto the prepared surface, rubbing with a damp cloth for a smooth appearance.

Adhesive Use – Force putty against each surface before pressing them together, support the joint until putty has hardened.

Repair Use – Force putty into area that requires filling/repairing, shape and strike off excess using a wetted tool.

Technical Data & Performance

Drying & Cure Times

At 20°C (68°F) the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated.
These times will be extended at lower temperatures and reduced at high temperatures:

Useable Life	5 minutes
Hard Dry	30 minutes
Machining & Light Loading	30 minutes
Full Loading	1 hour
Immersion	1 hour

Appearance

Mixed Material Colour	Mid Grey Putty
Base Colour	Dark Grey Stick
Activator Colour	Light grey

Available Colours

Grey

CERAMIC LINING SYSTEM

Ceramic Enhanced Composites for Repairs to Process Equipment Subject to Abrasion, Wear and Impact

Unique Polymer Systems (UPS) supplies and distributes a wide range of ceramic enhanced epoxy repair materials which are ideal for repairs to process equipment and components subject to abrasion, wear and impact.

Oil & Gas | Marine (ThistleBond) | Power Generation | Paper & Pulp | General Industry | Chemical & Corrosion | Water & Wastewater | Petrochemical

TYPICAL APPLICATIONS FOR THE UPS CERAMIC LINING SYSTEMS

Erroded slury, Sewage & Salt Water Pump Casing - Impeller	Internal Pipe Surface & Elbows
Damaged Chutes & Hoppers	Internal Tank Lining
Erroded Sparator	Damaged Tube Sheet & End Plate
Erroded Rudder	Erroded Turbine Blade

OUR PRODUCT

UNIQUE POLYMERS SYSTEMS 205 FG
@1Kg/Kit (A+B)
FLUID GRADE CERAMIC

UNIQUE POLYMERS SYSTEMS 200 EG
@2Kg/Kit (A+B)
CERAMIC CARBIDE REPAIR

UNIQUE POLYMERS SYSTEMS 225 HT
@1 Kg/Kit
HIGH TEMPERATURE CERAMIC

UNIQUE POLYMERS SYSTEMS 241 HDX
@5 Kg/Kit
HEAVY DUTY CERAMIC X

UNIQUE POLYMERS SYSTEMS 243 HDX-HT
@5 Kg/Kit
HEAVY DUTY CERAMIC

TECHNICAL DATA SHEET
UPS 205 FG FLUID GRADE CERAMIC

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 205 FG Fluid Grade Ceramic is a high-performance fluid grade, erosion / corrosion resistant for heavy abrasion. Resurfacing compound designed for use in fluid flow environments.

The product contains hardened ceramic fillers and is ideal for protecting metallic surfaces in aggressive fluid flow environments.

Product Information

Product Features

- Designed for application by stiff brush or squeegee.
- Provides outstanding resistance to impingement, entrainment and erosion / corrosion.
- Ideal for resurfacing metallic surfaces used in aggressive fluid flow environments.
- Excellent adhesion to correctly prepared metal surfaces.
- Provides a protective topcoat to surfaces repair with UPS 105 EG Metal Repair Paste / UPS 200 EG Ceramic Repair Paste.

Product Applications

Suitable for the coating of equipment such as;

Impellers, pump casings, valves, heat exchanger end plates, water boxes, separator housings, pipes, propellers, kort nozzles and rudders.

Brush Applied or Applicator Tool	6 hours to Machining	Dry Heat Resistance in Excess of 200°C (392°F	Surface Preparation Mechanical – Abrasive Blast

Surface Preparation

Metallic Substrates – Abrasive blast cleaning

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

On surfaces already rebuilt with UPS 105 EG Metal Repair Paste or UPS 200 EG Ceramic Repair Paste no further surface preparation is required where over-coating times place within 3 hours. After this maximum over-coating time has elapsed roughen the surface by flash blasting or other means of abrasion.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Pour the activator unit into the base container
2. Using a spatula, mix the 2 components until they are free of any streaks.
3. From the commencement of mixing the whole of the material should be used within 25 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed.
For part mixing, use a mixing ratio of 8:1 by weight or 3:1 by volume. Mix as above.

Application

Short-bristled brush (2cm) or applicator tool applications -

1. Apply the material to the prepared surface.
2. The product should be applied at a target wet film thickness of 250-350 microns (10-14 mil) per coat.
3. The product must be applied to any metallic surface in two coats to give a minimum dry film thickness of 500 microns (20 mil).
4. As soon as possible after application of the first layer, and after no longer than 6 hours, apply a further coat as above. If the maximum over-coating time is exceeded, the first layer should be brush blasted or abraded before applying the second coat.

Technical Data & Performance

Coverage Rates

1KG (2.2LB) of fully mixed product will give the following coverage rates -	
1.78m² at 250 microns	19ft² at 10 mil
1.485m² at 300 microns	16ft² at 12 mil
1.28m² at 350 microns	14ft² at 14 mil

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated. These times will be doubled at 10°C (50°F) and halved at 30°C (86°F).

Useable Life	25 minutes
Movement Without Load or Immersion	2 hours
Machining & Light Loading	6 hours
Full Loading	2 days

TECHNICAL DATA SHEET
UPS 200 EG CERAMIC CARBIDE REPAIR PASTE

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 200 EG Ceramic Carbide Repair Paste is a high-performance multi-purpose ceramic repair compound specifically developed for rebuilding metallic surfaces in fluid flow environments damaged by erosion and corrosion.

Product Information

Product Features

- Designed for application by towel or spatula at thicknesses up to 25mm 1").
- Provides outstanding wear and abrasion resistance.
- Designed for use to repair cracked pump housings, worn impellers, propellers, guide vanes, valves, tube sheets, etc.,

Product Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as;

Worn impellers, damaged valves, eroded separator housings, damaged pump casings, eroded pipe work, propellers, bow thrusters, rudders corroded water boxes and eroded end plates and tube sheets.

Surface Preparation Mechanical I - Abrasive Blast

2 hours to Machining

Resistant to dry heat in excess of 200°C

Cost Effect Solution

Surface Preparation

Metallic Substrates – Abrasive blast cleaning

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 5°C (41°F).

Once checked, then proceed with mixing the product:

1. Mix all Base and Activator together on a clean plastic mixing surface
2. Using a spatula, mix the 2 components until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 25-30 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed. For part mixing, using a spatula place 3 equal measures from the Base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 1 equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Application

Spatula or applicator tool applications -

1. Apply the material to the prepared surface, ensure the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.

Technical Data & Performance

Coverage Rates

1KG (2.2LB) of fully mixed product will give the following coverage rates -	
0.406m² at 1mm	4.3ft² at 40mil
0.203m² at 2mm	2.2ft² at 80mil
0.135m² at 3mm	1.45ft² at 1/8"

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated. These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)

Useable Life	30 minutes
Movement Without Load or Immersion	1.5 hours
Machining & Light Loading	2 hours
Full Loading	2 days
Immersion	3 days

For Optimum Performance

After an initial curing period of at least 4 hours at 20°C (68°F), raising the cure temperature progressively to 60 – 100°C (140 – 212°F) for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties.

Appearance

Mixed Material Colour	Dark Grey Paste
Base Component Colour	Dark Grey Paste
Activator Component	Light Grey Paste

Available Colours

Grey

PRODUCT LEAFLET
UPS 225 HT HIGH TEMPERATURE CERAMIC

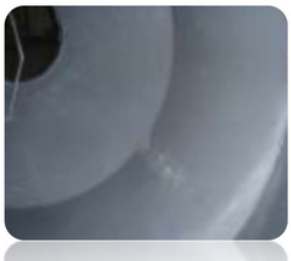
UPS 225 HT High Temperature Ceramic is a two-component solvent free epoxy novolac repair fluid. The product can resist continuous immersion conditions in hydrocarbons up to 130°C. the coating contains hardened ceramic particles to give superior abrasion resistance even at elevated temperatures.

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

Product Features

- Designed for application by brush or squeegee.
- Provides a high build protective system capable of resisting wet heat up to 130°C (266°F).
- Primarily designed for resurfacing and lining metal components.
- Exhibits excellent adhesion to correctly prepared metal surfaces.
- Solvent free epoxy novolac technology
- Apply in 2 coats at 500-600 microns per coat
- Protects against hydrocarbons and alkaline fluids

PROCESS VESSEL OPERATING AT 95°C


PROCESS VESSEL OPERATING AT 95°C



Product Applications

UPS 225 HT High Temperature Ceramic can be used to rebuild damaged or worn surfaces on equipment such as;

- **Process vessels**
- **Chemical storage tanks**
- **Internal pipe surfaces**
- **Pump & process systems**
- **Tube sheets, end covers & water boxes**
- **Separators, Distillers & Filters**

Global Availability

UPS 225 HT High Temperature Ceramic is available from a network of Global Distributors for prompt delivery. For further details and the location of your local distributor, please contact Unique Polymer Systems on:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

Technical Service

Complete technical assistance is available. Please contact Unique Polymer Systems with your requirements:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

Official Approvals

BUREAU VERITAS
Certificate No. 58535/A0 BV

USDA complaint for incidental food contact

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Company Registration No. 02727459 I Company VAT No. GB 647 1468 21

PL – UPS225HT – Version 5 – September 2020

TECHNICAL DATA SHEET
UPS 241 HDX HEAVY DUTY CERAMIC X

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 241 HDX Heavy Duty Ceramic X is specifically developed for resurfacing equipment subject to sever abrasion.

The material is exceptionally suitable to small particle erosion environments, dry, wet or fully immersed. Containing ceramic beads for extreme wear environments.

Product Information

Product Features

- Provides outstanding resistance to sliding abrasion.
- Designed for application by trowel or spatula at thicknesses up to 6mm (240 mil).
- Excellent adhesion to correctly prepared metal surfaces.

Product Applications

For use on equipment such as;

Chutes, hoppers, pipe bends, pump casings, Slurry pumps, Transport screws, Fan blades & housing, Internal pipe surfaces, etc., which are subject to high abrasive wear.

Useable Life 30 minutes	Cost effective	Immersed conditions at temperature 60*°C (140°F)*	Surface Preparation Mechanical – Abrasive Blast

Surface Preparation

Metallic Substrates – Abrasive blast cleaning:

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE – For salt contaminated surfaces the area must be abrasive blast cleaned as mentioned above and left for 24 hours to allow any ingrained salts to come to the surface. After this 24-hour period the surface must be washed with *UPS 9918 MEK Cleaner* prior to brush blasting to remove the surface salts. This process must be repeated until all ingrained contaminants have been sweated out of the surface.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50°F).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Once check then proceed with mixing the product:

1. Mix all Base and Activator together on a clean plastic mixing surface
2. Using a spatula, mix the 2 components until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 30 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed. For part mixing, using a spatula place 2 equal measures from the Base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 1 equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Application

Spatula or applicator tool applications -

1. Apply the material to the prepared surface, ensure the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.

Technical Data & Performance

Coverage Rates

1.5KG (3.3LB) of fully mixed product will give the following coverage rates -	
0.219m² at 3mm	2.245ft² at 120mil
0.111m² at 6mm	1.193ft² at ¼"
Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.	

5KG (11LB) of fully mixed product will give the following coverage rates -	
0.73m² at 3mm	7.848ft² at 120 mil
0.220m² at 10mm	3.978ft² at ¼"
Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.	

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated.
These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)

Useable Life	30 minutes
Movement Without Load or Immersion	4 hours
Light Loading	8 hours
Full Loading	4 days

For Optimum Performance

After an initial curing period of at least 4 hours at 20°C (68°F), raising the cure temperature progressively to 60 – 100°C (140 – 212°F) for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties.

TECHNICAL DATA SHEET
UPS 243 HDX- HT HEAVY DUTY CERAMIC

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 243 HDX- HT Heavy Duty Ceramic is a two-component solvent free epoxy novolac repair compound.

Once cured the repair materials can withstand immersion temperatures up to 130*°C (266°F) and dry temperatures up to 240°C (464°F)*

Product Information

Product Features

- Apply to abrasive blast cleaned surfaces
- Ideal wet slurry abrasion & extreme sliding wear from fine particles
- *High mechanical adhesion to metal substrates*

Product Applications

For use on equipment such as;

Slurry pumps, buns & hoppers, fan blades & housings, internal pipe surfaces, wear plates, pipe elbows, chutes, transport screws, pulverizes, ceramic tile lined chutes.

Useable Life 30 minutes	Cost Effective Solution	Immersed conditions at temperature 130°C (266°F)	Surface Preparation Mechanical – Abrasive Blast

Surface Preparation

Metallic Substrates – Abrasive blast cleaning;

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE – For salt contaminated surfaces the area must be abrasive blast cleaned as mentioned above and left for 24 hours to allow any ingrained salts to come to the surface. After this 24 hour period the surface must be washed with *UPS 9918 MEK Cleaner* prior to brush blasting to remove the surface salts. This process must be repeated until all ingrained contaminants have been sweated out of the surface.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50°F).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Mix all Base and Activator together on a clean plastic mixing surface.
2. Using a spatula, mix the 2 components until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 30 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed. For part mixing, using a spatula place 5 equal measures from the Base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 2 equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Application

Spatula or applicator tool applications -

1. Apply the material to the prepared surface, ensure the product is pressed into any holes, scars or cracks and profile the repair to a smooth finish.
2. Can be applied in a single coat at a wet film thickness of 3-6mm.

Technical Data & Performance

Coverage Rates

5KG (11LB) of fully mixed product will give the following coverage rates -	
0.747m² at 3mm	8.03ft² at 120mil
0.373m² at 6mm	4.01ft² at ¼"

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated.
These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)

Useable Life	30 minutes
Minimum Overcoating	4 hours
Maximum Overcoating	12 hours
Full Cure	3 days

For Optimum Performance

After an initial curing period of at least 4 hours at 20°C (68°F), raising the cure temperature progressively to 60 – 100°C (140 – 212°F) for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties.

Appearance

Mixed Material Colour	Dark Grey Paste
Base Component Colour	Mid Grey Paste
Activator Component	Blue Paste

Available Colours

Grey

CHEMICAL & CORROSION PROTECTIVE COATINGS

Solvent Free Epoxy, Epoxy Novolac, Polyurethane & Silicone Protective Coatings For Ultimate Protection

Unique Polymer Systems (UPS) has developed a range of protective coatings that offer high performance protection from a wide range of aggressive industrial chemicals for continuous immersion. The products ensure expensive chemical processing assets are protected from chemical attack and premature failure

Oil & Gas | Marine (ThistleBond) | Power Generation | Paper & Pulp | General Industry | Chemical & Corrosion | Water & Wastewater | Petrochemical

TYPICAL APPLICATIONS FOR THE UPS CHEMICAL & CORROSION PROTECTIVE COATINGS

Fuel Tanks	Chemical Dykes
Containment Areas	Structural Steel
Processing Equipment	Treatment Plants
Pipework	Drainage Channels

OUR PRODUCT

UNIQUE POLYMERS SYSTEMS 402 ENHT
@1Gal/Kit (A+B) 4LTR
EPOXY HIGH TEMPERATURE

UNIQUE POLYMERS SYSTEMS 405 EPC-NF
@1Gal/Kit (A+B) 3.6LTR
EPOXY PROTECTIVE COATING
NEW FORMULA

UNIQUE POLYMERS SYSTEMS 909 PP
@1Gal/Kit (A+B) 4LTR
POROUS PRIMER

UNIQUE POLYMERS SYSTEMS 407
@1Gal/Kit (A+B) 4LTR
EN EPOXY NOVOLAC

UNIQUE POLYMERS SYSTEMS 509 UVST
@1Gal/Kit (A+B) 5LTR
UV STABLE TOP-COAT

UNIQUE POLYMERS SYSTEMS 510
@1Gal/Kit (A+B) 20 LTR
UN UNI-NOX

TECHNICAL DATA SHEET
UPS 402 ENHT EPOXY HIGH TEMPERATURE

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 402 ENHT Epoxy High Temperature is a high build solvent-free epoxy novolac coating.

Designed to provide outstanding abrasion and chemical protection of steel and concrete structures at elevated temperatures.

Product Information

Product Features

- The coating contains hardened ceramic particles making it ideal for highly abrasive environments with strong industrial chemicals and acids.
- Can be applied by brush, roller and airless spray.
- 100% solids high performance epoxy novolac.
- Excellent abrasion resistance.
- Resistant to high acidic slurries at elevated temperatures.

Product Applications

UPS 402 ENHT is suitable for use on;

Tank lining, Internal pipe surfaces, process vessels, sumps, chemical drains and channels, pumps and valves etc.

Apply by Airless spray

Apply by Roller

Apply by Brush

Wet Heat Resistance up to 90°C (194°F).

Surface Preparation

Metallic surfaces

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

Concrete

1. Pressure wash surface if contaminated.
2. When surface is dry, abrasive blast lightly (take care not to expose aggregate).
3. Clean dust and debris from the surface and prime using UPS 909 PP.
4. Apply UPS 909 PP at 150 microns WFT and leave to cure for 3 hours (20°C) before overcoating.

PLEASE NOTE - Allow new concrete to cure for a minimum of 21 days, likewise, treat to remove any surface laitance and check the moisture content of the concrete is 8% or below before coating.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Pour the activator unit into the base container
2. Using an electric paddle mixer, mix the 2 components until they are free of any streaks.
3. From commencement of mixing the material should be used within 45 minutes at 20°C (68°F).

Application

Brush (synthetic) or Roller applications -

1. Pour mixed product into a paint tray.
2. Using a 50mm (2") wide synthetic brush, stripe coat surface edges, joints, corners and equipment with a 100mm (4") wide stripe, at a wet film thickness of 500 microns (20 mil).
3. Once stripe coat has cured and can be over coated, apply 1st coat at same thickness.
4. When 1st coat has cured, after approx. 8 hours at 20°C (68°F) apply a further coat as above.

Spray Application

1. Spray application should be applied using an airless spray with a 60:1 ratio pump with attached hot water pump to heat the spray lines.
2. The temperature around the spray lines should be kept at 25-35°C (77-95°F).
3. Spray using 3500psi with a tip size of 19-23 thou.
4. Use as short a line as possible to maintain product temperature (maximum 8 meters).
5. Circulate the product for a short time to achieve temperature equilibrium.
6. Apply 1st coat at a wet film thickness of 500 microns (20 mil).
7. When 1st coat has cured, after approx. 8 hours at 20°C (68°F) apply a further coat as above.

Technical Data & Performance

Coverage Rates

4 LTR (1.05 US Gallon) of fully mixed material will give the following coverage rates -	
8m² at 500 microns	85ft² at 20 mil
16 LTR (4.2 US Gallon) of fully mixed material will give the following coverage rates -	
32m² at 500 microns	343ft² at 20mil

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

TECHNICAL DATA SHEET
UPS 405 EPC EPOXY PROTECTIVE COATING

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 405 EPC Epoxy Protective Coating is a high build solvent free epoxy coating. Designed for the long-term protection of steel and concrete structures against corrosion, abrasion and chemical attack.

Product Information

Product Features

- The coating can be applied to mechanical or abrasive blast clean surfaces curing at temperatures as low as 5°C (41°F)
- Excellent adhesion to correctly prepared surfaces.
- Excellent resistance to abrasion and mechanical damage.
- Suitable for a wide range of industrial chemicals, oils and marine structures.

Product Applications

UPS 405 EPC is typically used;

Within pipelines, tank internals, chemical containment, bund areas, sheet and bearing piles, sumps, chemical intake areas, chemical puts, structural steel, etc.,

Surface Preparation Manual – Mechanical – Abrasive Blast

Brush Applied

Roller Applied & Airless Spray Applied

Immersed conditions at temperatures up to 60°C (120°F)

Surface Preparation

Metallic substrates – Mechanical abrasion

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be mechanically abraded using the UPS Miniblaster or equivalent handheld grinders, to **ISO 8501/4 ST3 (SSPC SP3 ST3)**
3. Once abraded the surface must be degreased and cleaned using UPS 9918 MEK Cleaner.
4. All surfaces must be coated before flash rusting or oxidation occurs.

Metallic substrates – Hydro blasting

1. All surfaces must be hydro -blasted using clean water at 12,000 psi (850bar) to **NACE 5 (SSPC SP13 WJ3-WJ1).**
2. All surfaces must be coated before flash rusting or oxidation occurs.

Metallic substrates – Abrasive blast cleaning

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

Where abrasive blast cleaning is not possible (excluding salt contaminated surfaces) the surface should be roughened by UPS Mini-Blaster, needle gun or grinding. Under these conditions' adhesion levels will not be optimal although still satisfactory for most applications.

Concrete

1. Pressure wash surface if contaminated.
2. When surface is dry, abrasive blast lightly (take care not to expose aggregate).
3. Clean dust and debris from the surface and prime using UPS 909 PP.

PLEASE NOTE: Allow new concrete to cure for a minimum of 21 days, likewise, treat to remove any surface laitance and check the moisture content of the concrete is 8% or below before coating. For optimum results on damp concrete, condition with UPS 905 DP. Where the concrete is dry but highly porous, it is recommended to condition with UPS 909 PP.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperatures are not less than 5°C (41°F) above the dew point.

Then proceed with mixing the product:

1. Pour half the contents of the Activator unit into the Base container and mix carefully using a spatula.
2. Once the two materials have been combined, add the remainder of the Activator.
3. Mix the two components together until they are streak free.
4. From the commencement of mixing the whole of the material should be used within 20 - 25 minutes at 20°C (68°F).

PLEASE NOTE: This product can also be part mixed. For part mixing, use a mixing ratio of 4:1 by weight or 2.4:1 by volume. Mix as above.

Application

Brush or Roller applications -

1. Pour mixed product into a paint tray.
2. Apply 1st coat at a thickness of 250 microns (10 mil).
3. When 1st coat is dry apply a further coat as above (as soon as possible after the first coat is dry and not in excess of 36 hours).

TECHNICAL DATA SHEET
UPS 407 EN EPOXY NOVOLAC

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 407 EN Epoxy Novolac is a high build solvent free epoxy novolac coating.

Designed to provide outstanding chemical and corrosion protection of steel and concrete structures. The coating is particular resistant to attack by strong acids including 98% sulphuric acid.

Product Information

Product Features

- Excellent adhesion to currently prepared surfaces.
- Excellent resistance to abrasion and mechanical damage.
- Outstanding chemical resistance to a wide variety of industrial chemicals.
- Solvent free epoxy novolac technology.
- Hand or spray applied
- Resistant to 98% sulphuric acid & 36% hydrochloric acid in immersion conditions.

Product Applications

UPS 407 EN is typically used within;
Chemical containment and bund areas, tanks, pumps, chemical drains, chemical channels, sumps and pipework etc.

Airless Spray Application

Brush Application

Brush Application

Immersed conditions temperatures up to 60°C (120°F).

Surface Preparation

Metallic surfaces

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10 / NACE 2)** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before flash rusting or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above, as well as left for 24 hours to allow any ingrained salts to come to the surface. After the 24-hour period the surface must be washed with UPS 9918 MEK Cleaner prior to brush blasting to remove the surface salts. Repeat this process until all ingrained contaminants have been sweated out of the surface.

Where abrasive blast cleaning is not possible (excluding salt contaminated surfaces) the surface should be roughened by UPS Mini-Blaster, needle gun or grinding. Under these conditions' adhesion levels will not be optimal although still satisfactory for most applications.

Concrete

1. Pressure wash surface if contaminated.
2. When surface is dry, abrasive blast lightly (take care not to expose aggregate).
3. Clean dust and debris from the surface and prime using UPS 909 PP.

PLEASE NOTE: Allow new concrete to cure for a minimum of 21 days, likewise, treat to remove any surface laitance and check the moisture content of the concrete is 8% or below before coating. For optimum results on damp concrete, condition with UPS 905 DP. Where the concrete is dry but highly porous, it is recommended to condition with UPS 909 PP.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Pour half the contents of the Activator unit into the Base container.
2. Mix the two components with a spatula.
3. Add the remaining Activator and mix well until a uniform material free of any streaks is achieved.
4. From the commencement of mixing the whole of the material should be used within 30-40 minutes at 20°C (68°F).

Application

Brush or Roller Applications -

1. Pour mixed product into a paint tray.
2. Stripe coat surface edges, joints, corners and equipment with a 50mm (2") wide stripe, at a wet film thickness of 300-400 microns (12-16 mil).
3. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply 1st coat at a thickness of 400-500 microns (16-20 mil).
4. Once the 1st coat of material has cured, approximately 4 hours at 20°C (68°F), apply a 2nd coat of material to all surfaces at 400-500 (16-20 mil) microns wet film thickness.

Spray Applications

1. Spray application should be carried out by airless spray using a 45:1 ratio pump with an attached hot water pump to heat the spray lines.
2. The temperature around the spray lines should be kept around 25 - 35°C (77-95°F).
3. Spray pressure of 3,600psi and a tip size of 19-23 thou should be used.
4. Use as short line as possible to maintain product temperature (maximum 8 meters (26 foot).
5. Circulate the product for a short time to achieve temperature equilibrium.
6. Using a 50mm (2"). Synthetic brush, stripe. Coat all edges, joints, corners and equipment with the mixed material. The stripe coat must be approximately 100mm (4") wide, at 300-400 microns (12-16mil) wet film thickness.
7. Once the stripe coat has. Cured sufficiently and is capable of being overcoated, apply the 1st coat of mixed product to all surfaces to 400-500 microns (16-20mil) wet film thickness
8. Once the 1st coat of material has cured sufficiently, approximately 4 hours at 20°C (68°F), apply a 2nd coat of material to all surfaces at 400-500 microns (16-20mil) wet film thickness.

TECHNICAL DATA SHEET
UPS 909 PP POROUS PRIMER

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 909 PP Porous Primer is a low viscosity solvent free epoxy primer, for use sealing and consolidating concrete and cementitious surfaces.

Product Information

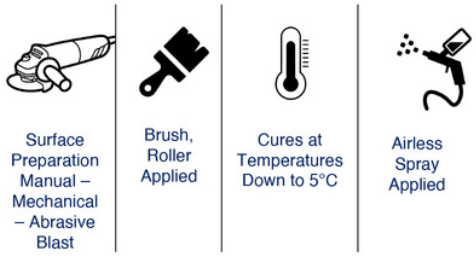
Product Features

- Solvent free epoxy technology.
- Cures at temperatures down to 5°C.
- No shrinkage.
- Apply by brush, roller or standard airless spray.
- Applied in 1 or 2 coats at 100-125 microns per coat.

Product Applications

UPS 909 PP is suitable for priming surfaces, such as;

Internal and external tank surfaces, floors and structural concrete.



Surface Preparation Manual – Mechanical – Abrasive Blast | Brush, Roller Applied | Cures at Temperatures Down to 5°C | Airless Spray Applied

Surface Preparation

Existing Concrete

1. Check the surface for contaminants (such as; oil or grease) and clean using a pressure washer.
2. Once concrete is dry, lightly abrasive blast/scarify (taking care not to expose the aggregate).
3. Clean all dust and debris from the surface.

New Concrete

1. Let new concrete to cure for a minimum of 21 days (20°C).
2. Check that the moisture content of the concrete is 8% or below before coating.
3. Lightly abrasive blast or scarify the concrete surface (take care not to expose the aggregate).
4. Clean all dust and debris from the surface.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 5°C (41°F).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Transfer the contents of the Activator unit into the Base container.
2. Mix the components with an electric paddle mixer until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole material should be used within 25 minutes at 20°C (68°F).

Application

Brush or Roller Applications -

1. Pour the mixture into a paint kettle or tray.
2. Apply a 100mm (4") wide stripe coat to all edges, joints, corners and equipment with a 50mm (2") synthetic brush at a wet thickness at 150microns (6mils).
3. Once the stripe coat has cured sufficiently for overcoating, apply the mixed product to all surfaces at 150 microns (6mils) wet thickness.

When Mixing with Kiln Dry Sand

UPS 909 PP can be mixed with Kiln Dry Sand to produce different levels of epoxy mortars.

As a general rule a 4LTR Unit of UPS 909 PP mixed with 15KGS of Kiln Dry Sand will produce a mortar with a coverage rate of 9m² per Unit at 1mm.

Technical Data & Performance

Coverage Rates

4 LTR (1.1 US Gallon) of fully mixed material will give the following coverage rates -	
26.6m² at 150 microns	286ft² at 6mil
18 LTR (4.75 US Gallon) of fully mixed material will give the following coverage rates -	
119m² at 250 microns	1280ft² at 10mil

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures.

Useable Life	25 minutes
Minimum overcoating time	3 hours
Maximum overcoating time	36 hours

Appearance

Base Material Colour	Pale Straw liquid
Activator Material Colour	Amber liquid
Mixed Material Colour	Pale Straw liquid

Available Colours

Amber

Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry (approx. 3 hrs)
Maximum	The overcoating time should not exceed 36 hours.

Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Mixing Ratio

Component	Base	Activator
By Weight	2.24	1
By Volume	2	1

TECHNICAL DATA SHEET
UPS 509 UVST UV STABLE TOP-COAT

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 509 UVST UV Stable Topcoat is a two-pack solvent based polyurethane UV stable coating.

Once cured it offers a tough UV resistant finish with excellent durability and light fastness. The product is normally used as a UV stable finishing layer to surfaces previously coated with UPS 405 EPC Epoxy Protective Coating or UPS 908 MP Metal Primer.

Product Information

Product Features

- Suitable for use in flooring and corrosion protection applications.
- Ideal for protection against UV degradation, corrosion and weathering.
- Combines good application characteristics with excellent gloss and colour retention.
- Widely used throughout the rail and road infrastructure for bridge protection.
- Excellent chemical and solvent resistance.
- Available in a wide range of colours.

Product Applications

UPS 509 UVST is typically used within;

External surfaces of pipelines, tanks and other land and marine structures.

Surface Preparation

Metallic Substrates – UPS Corrosion Protection System

UPS 509 UVST must be used as part of the UPS Corrosion Protection System, UPS 509 UVST can be used as a UV stable topcoat to surfaces prime with UPS 908 MP Metal Primer or UPS 405 EPC Epoxy Protective Coating.

Metallic Substrates – Mechanical Abrasion

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be mechanically abraded using handheld grinders to ISO 8501/4 STT3 (SSPC SP3 ST3).
3. Once abraded, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. Prime the prepared metallic surface with UPS 908 MP Metal Primer (applied at 150 microns (6mil) WFT or UPS 405 EPC Epoxy Protective Coating (applied at 250 microns (10mil) WFT.

Concrete Substrates – UPS Corrosion Protection System

UPS 509 UVST must be used as part of the UPS Corrosion Protection System, UPS 509 UVST can be used as a UV stable topcoat to surfaces prime with UPS 908 MP Metal Primer or UPS 405 EPC Epoxy Protective Coating.

Existing Concrete

1. If the concrete is contaminated, pressure wash using clean water.
2. Once the concrete is dry, lightly abrasive blat or scarify taking care not to expose the aggregate.
3. Clean all dust and debris from the surface.
4. Prime the prepared area with UPS 909 PP (applied at 150 microns (6mil) WFT). Or UPS 905 DP (applied at 150 microns (6mil) WFT).

New Concrete

1. Allow new concrete to cure for a minimum 21 days and treat to remove any surface laitance.
2. Check the moisture content of the concrete prior to coating (8% moisture content or below).
3. Lightly scarify the surface taking care not to exposure the aggregate.
4. Clean all dust and debris from the surface.
5. Prime the prepared area with UPS 909 PP (applied at 150 microns (6mil) WFT). Or UPS 905 DP (applied at 150 microns (6mil) WFT).

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

1. Transfer the contents of the Activator unit into the Base container.
2. Using a paddle mixer, mix the components well until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 30 minutes at 20°C (68°F).

Application

Brush or Roller applications -

1. Pour mixed product into a paint tray.
2. Stripe coat surface edges, joints, corners and equipment with a 100mm (2") wide stripe, at a wet film thickness of 100 microns (4 mil).
3. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply 1st coat at a thickness of 100 microns (4 mil).
4. Once the 1st coat of material has cured, approximately 90 minutes at 20°C (68°F), apply a 2nd coat of material to all surfaces at 100 (4 mil) microns wet film thickness.

Technical Data & Performance

Coverage Rates

5LTR (1.3 US Gallon) of fully mixed product will give the following coverage rates -	
50m² at 100 microns	536ft² at 4mil

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures.

Useable Life	30 minutes
Minimum overcoating time	90 minutes
Maximum overcoating times	36 hours

TECHNICAL DATA SHEET
UPS 510 UN UNI-NOX

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 510 UN Uni-Nox is a single pack water based high build acrylic coating.

The product is supplied ready to use and is ideal for protecting metallic and cementations surfaces subject to weathering and corrosion.

Product Information

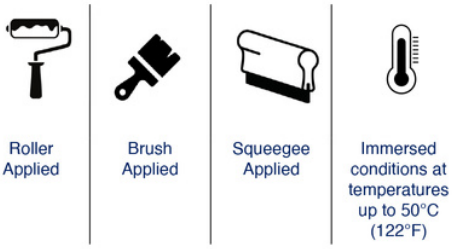
Product Features

- Capable of long-term corrosion protection on Hydro blasted, mechanically abraded or abrasive blast cleaned surfaces.
- Single pack high build acrylic coating.
- Exceptional UV resistance and flexible once cured.
- Outstanding corrosion protection.
- 10 years + protection.

Product Applications

UPS 510 Uni-Nox is typically used within;

Structural steel, external tank surfaces, concrete structures.



Roller Applied	Brush Applied	Squeegee Applied	Immersed conditions at temperatures up to 50°C (122°F)

Surface Preparation

Metallic Surfaces – Mechanical Abrasion

1. All oil and grease must be removed from the surface using an appropriate cleaner such as UPS 9918 MEK Cleaner.
2. All surfaces must be mechanically abraded using handheld grinders to **ISO 8501/4 ST3 (SSPC SP3 ST3).**
3. Once abraded, the surface must be degreased and cleaned using UPS 9918 MEK or similar type material.
4. All surfaces must be coated before gingering or oxidation occurs.

Metallic Surfaces – Hydro-Blasting

1. All surfaces must be hydro-blasted using clean water at 2,000 psi + (130bar) to **NACE 5 (SSPC SP13 WJ3-WJ1).**
2. All surfaces must be coated before gingering or oxidation occurs.

Concrete

1. Pressure wash surface if contaminated.
2. When surface is dry, abrasive blast lightly (take care not to expose aggregate).
3. Clean dust and debris from the surface and prime using UPS 909 PP.
4. Apply UPS 909 PP at 150 microns WFT and leave to cure for 3 hours 20°C (68°F) before overcoating.

PLEASE NOTE - Allow new concrete to cure for a minimum of 21 days, likewise, treat to remove any surface laitance and check the moisture content of the concrete is 8% or below before coating.

Mixing

This product is a single component, however, **please ensure the following;**

1. The material is at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50°F).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Once these 3 checks have been met, please proceed with mixing the product.

1. Agitate the product using an electric mixer to ensure you have a consistent mix of acrylic emulsion.

Application

Brush, Roller, Squeegee applications

1. Pour the material into a paint kettle or paint tray.
2. Using a 50mm (2") wide synthetic brush, stripe coat all edges, joints, corners and equipment with UPS 510 UN. The stripe coat must be approximately 100mm (4") wide, at 300 microns (12 mil) wet film thickness.
3. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply the 1st coat of mixed product to all surfaces at 400 microns (16mil) wet film. Thickness
4. Once the 1st coat if material has cured sufficiently, approximately 30 minutes at 20°C (68°F), apply the 2nd coat of material to all surfaces at 400 microns (16mil) wet film thickness.

Spray Application

1. Spray application should be carried out by airless spray using a 30:1 ratio pump.
2. Stray pressure of 2000 psi and a tip size of 15-21 thou should be used.
3. Apply the 1st coat of mixed product to all surfaces at 400 microns (16mil) wet film thickness
4. Once the 1stt coat of material has cured sufficiently, approximately 30 minutes at 20°C (68°F), apply a 2nd coat of material to all surfaces at 400 microns (16 mil) wet film thickness.

Technical Data & Performance

Coverage Rates

20LTR (5.25 US Gallon) of fully mixed product will give the following coverage rates -	
50m² at 400 microns	536ft² at 16mil
Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.	

CONCRETE REPAIR AND SCREED SYSTEMS

High Performance Epoxy Mortars That Can Reinstate Badly Damaged Cementtious Surfaces

This unique range of concrete repair and screed systems have been specially developed to repair badly damaged cementitious surfaces and provide the ultimate protection from further ware and abrasion.

Oil & Gas | Marine (ThistleBond) | Power Generation | Paper & Pulp | General Industry | Chemical & Corrosion | Water & Wastewater | Petrochemical

TYPICAL APPLICATIONS FOR THE UPS CONCRETE REPAIR & SCREED SYSTEMS

Damaged concrete sills	Walkway
Ramps	Step
Lintels	Loading Bays

OUR PRODUCT

UNIQUE POLYMERS SYSTEMS 821 FFP
@8 Kg/Pail
FASTFILL PLUG

UNIQUE POLYMERS SYSTEMS CS 819
@PACKING SIZE 25Kg/Bag
CONCRETE SEAL

UNIQUE POLYMERS SYSTEMS 813 EQS
@1Gal/Kit (A+B) 10Kg
EPOXY QUARTZ SCREED

TECHNICAL DATA SHEET
UPS 813 EQS EPOXY QUARTZ SCREED

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 813 EQS Epoxy Quartz Screed is a solvent free high build epoxy resin repair mortar for use on concrete flooring.

The product has been designed to be applied to uneven concrete surfaces at a wet film thickness of 10-30mm. (3/8"-1 1/4"). on curing the product will ensure any imperfections on the surface of the concrete are reduced.

Product Information

Product Features

- Hard wearing product.
- Would work well for heavy traffic areas.
- High compressive strength (3 times high than concrete).
- Excellent chemical resistance.
- Applied up to a 30mm wet film thickness.
- Solvent free epoxy technology.

Product Applications

Ideal for coating concrete floors, problematic cementitious surfaces in industrial warehouses and manufacturing, offices and laboratories.

Surface Preparation Mechanical – Abrasive Blast

Useable Life 25 minutes

Brush or Roller Applied Primer

Trowel or Squeegee Applied Mortar

Surface Preparation

Existing Concrete

1. If the concrete surface is contaminated, pressure wash using clean water.
2. Once the concrete is dry, lightly abrasive blast or scarify taking care not to expose the aggregate.

New Concrete

1. Let new concrete to cure for a minimum of 21 days (20°C) and treat to remove any surface laitance.
2. Check the moisture concrete of the concrete prior to coating (8% moisture content or below).
3. Lightly abrasive blast or scarify the concrete surface (take care not to expose the aggregate).

Porous Concrete

1. Check the surface for contaminants (such as; oil or grease).
2. Larger areas of contamination can be cleaned using heat compressed air, for smaller areas can be cleaned using a standard degreaser product.
3. Use a floor grinder or shot blaster to prepare the surface for the product.

Prime all surfaces

1. Ensure all concrete surfaces are primed prior to applying UPS 813 EQS.
2. Apply UPS 909 PP Porous Primer a low viscosity epoxy primer to the repair surface suing a brush or roller.
3. Apply UPS 909 PP at a wet film thickness of 150 microns.
4. Leave to cure for a minimum of 3 hours at 20°C (68°F).

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (37.4°F) above the dew point.

Then proceed with mixing the product:

UPS 813 EQS consist of several components:
1 x Base Resin, 1 x Activator Resin, Natural or Grey coloured aggregate.

1. Transfer the contents of the Activator unit into the Base container.
2. Mix the components well until a uniform material free of any streaks is achieved (pay close attention to the bottom and sides of container).
3. Pour the mixed into the large 20ltr container provided.
4. Pour half the blended aggregate into the container and use an electric paddle to mix.
5. After 2 minutes mix in the remaining aggregate until streak through.

Please Note – In colder climates or when the product is being applied to concrete surfaces lower than 12°C (50°F), add 75% of the aggregate and check the consistency of the mix. Colder temperatures will thickness then resin and therefore less aggregate is required to create a trowel applied product. Just add part of the remaining 25% of aggregate to create the correct level of consistency.

Application

Primer

Brush or Roller applications -

1. Use a brush or roller to apply the mixed primer to the repair surface.
2. Once the surface has been coated with primer leave to cure for at least 3 hours at 20°C (68°F).

Repair Mortar

Trowel or Squeegee applications -

1. Empty the contents of the mixed product to the primed repair surface.
2. Spread material with trowel and smooth off.
3. Once area has been filled with material, wash off trowel with clean water and skim surface of the repair.

Technical Data & Performance

Coverage Rates

10KG Unit (4.3 LTR / 1.15 US Gallon) of fully mixed material will give the following coverage rates -	
0.86m² at 5mm	9.25ft² at 0.20"
0.43m² at 10mm	4.6ft² at 0.4"
0.215m² at 20mm	2.3ft² at 0.75"

TECHNICAL DATA SHEET
UPS 819 CS CONCRETE SEAL

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

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UPS 819 CS Concrete Seal is a single component, engineering grade, polymer modified, reactive cementitious coating with high adhesive properties. It is used in permanent immersion or negative pressure waterproofing.

Incorporating the most advance micro-silica, polymer and fibre technology, curing to give a dense matric which is impermeable to water under 10 bat hydrostatic head. Supplied as a single component system, ready for. On-site mixing and use.

Product Information

Product Features

- Resists 10 bar negative hydrostatic pressure.
- Ideal as a render to combat moisture ingress.
- Fully compatible with UPS primers and chemical top coats.

Product Applications

Sealing and waterproofing structures such as basements, containment areas, sumps etc., This material has been designed to be used in conjunction with the UPS range of coatings.

Surface Preparation

1. All debris, dust and loose material must be removed from the area.
2. Roughen smooth surfaces using a grinder.
3. Make sure the substrate is free from water back pressure.
4. Soak the surface with clean water thoroughly, removing any excess.

Surface Preparation

Useable Life 30 minutes

Render application

Trowel application

Mixing

Prior to mixing please ensure the following:

1. The water used to mix with the cement mortar powder must be at a temperature between 15-25°C (60-77°F).
2. The ambient & surface temperature is above 10°C (50°F).

Then proceed with mixing the product:

Brush or thin applications

1. Pour 4.25ltr of clean water into the mixing container.
2. Add the 25kg bag of UPS 819 CS. Always add powder to water.
3. Mix the product well until streak free.

Render applications

1. Pour 2.5ltr of clean water into the mixing container.
2. Add the 25kg bag of UPS 819 CS. Always add powder to water.
3. Mix the product well until streak free.

Application

Brush or thin film applications -

1. On 1st coat apply the material using a brush to a thickness of 2-3mm (up to 1/8").
2. Allow to cure for 4-6 hours minimum (20°C/68°F).
3. Apply a 2nd coat at the same thickness.

PLEASE NOTE: On floors the product can be applied using a squeegee at a thickness of 3mm (up to 1/8"), it should then be spiked to remove any trapped air.

Render applications -

1. Skim the product onto the surface using a trowel to fill in any defects or unevenness.
2. Follow by applying the product with a trowel to a wet thickness of 6mm (up to ¼") over all required surfaces.

PLEASE NOTE: UPS 819 CS can be applied as a render at a maximum wet thickness of 6mm (up to ¼").

Technical Data & Performance

Coverage Rates

Brush/Thin film applications	25kg bag/ 4.25LTR water added	Yields 15.8LTR volume mixed
Render applications	25kg bag/ 2.5LTR water added	Yields 15LTR volume mixed

Wet Film Thickness	Render Applications	Brush Applications
1mm (1/32")	15m² (61ft²)	15.8m² (170ft²)
2mm (1/16")	7.5m² (80ft²)	7.9m² (85ft²)
6mm (15/64")	2.5m² (27ft²)	

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures.

Useable Life	30 minutes
Minimum overcoat	48 hours
Maximum overcoat	5 day

Appearance

Material Colour	Dark grey

Available Colours

Dark Grey

Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry (approx. 48hrs)
Maximum	The over coating time should not exceed 5 days

Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

TECHNICAL DATA SHEET
UPS 821 FFP FASTFILL PLUG

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 821 FFP FastFill Plug is a single component, fast curing engineering grade, polymer modified, reactive cementitious putty for arresting water seepage and infiltration under pressure through cracks, joints and voids in concrete and masonry.

Product Information

Product Features

- Resist 10 bar negative hydrostatic pressure.
- Stop live leaks under pressure in concrete substrates.
- Fast curing.

Product Applications

For applications where structures and process areas cannot be taken out of service for long periods and where pressurized water leaks need to be stopped prior to the application of UPS 820 FFS Fast Fill Screed or UPS 819 CS Concrete Seal.

Surface Preparation

1. Mechanically remove and damaged masonry and concrete to ensure the repair area is secure.
2. Square or Dovetail cut any joints or cracks to a depth of 20mm (3/4") minimum.
3. All debris, dust, loose material and contamination must be removed from the area.
4. Soak the surface with clean water thoroughly, removing any excess.

Surface Preparation Mechanical – Abrasive blast

Useable Life 2-3 minutes

Resist 10 bar negative hydrostatic pressure.

Cost Effective Solution

Mixing

1. UPS 821 FFP should be mixed by hand in a clean plastic container.
2. Ideally no more than 0.5KG (1lb) should be mixed at a time with clean water.
3. Pour 100ml (3.5 US Fl oz) of clean water into the plastic container and add the 0.5KG (1lb) of UPS 821 FFP.
4. Mix using a gloved hand. Always add powder to water, mix until the product is consistent and streak free.

Application

1. Form the mixture into a ball shape in a gloved hand until slightly stiffened.
2. Push the material into the void with as little working as possible.
3. Hold into place for 1-2 minutes.
4. Once the leak had been plugged make sure the repair area is kept wet for 15 minutes minimum.

Technical Data & Performance

Drying & Cure Times

At 20°C (68°F) allow the applied materials to harden for the times shown below before subjecting them to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures.

Useable Life	2-3 minutes
Minimum overcoat	30 minutes

Appearance

Material Colour	Dark Grey

Available Colours

Dark Grey

Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry (approx. 30 hrs)
Maximum	Indefinite

Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Pack Sizes

8KG

Shelf Life

2 years if unopened and store in normal dry conditions (15-30°C / 60-86°F)

Global Availability

UPS 821 FFP FastFill Plug is available from a network of Global Distributors for prompt delivery. For further details and the location of your local distributor, please contact Unique Polymer Systems on:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

Technical Service

Complete technical assistance is available. Please contact Unique Polymer Systems with your requirements:
+44(0) 1531 636300 I sales@uniquepolymersystems.com

The products that we supply are for professional use only, it is your responsibility to read the technical data sheets before you place an order and prior to application of the product.

Quality: All Unique Polymer Systems Products are supplied under the scopes of the company's fully documented quality system.

Warranty: Unique Polymer Systems warrants that the performance of the product supplied will confirm to the typical descriptions quoted within this Technical Data Sheet provided the material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

Health & Safety: Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

Legal Notice: The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Unique Polymer Systems accepts no liability arising out of the use of this information or the product described herein.

USED ALL OVER THE WORLD

KEMENTERIAN KEUANGAN REPUBLIK INDONESIA
DIREKTORAT JENDERAL PAJAK
KANTOR WILAYAH DJP BENGKULU DAN LAMPUNG
KPP PRATAMA METRO
JL. A.R. PRAWIRANEGARA 66 KOTA METRO
TELEPON 0725-41541,41543 FAKSIMILE 0725-46020 SITUS www.pajak.go.id
LAYANAN INFORMASI DAN PENGADUAN KRING PAJAK (021) 1500200
EMAIL pengaduan@pajak.go.id, informasi@pajak.go.id

SURAT PENGUKUHAN PENGUSAHA KENA PAJAK

Nomor:S-25/PKP/KPP.280203/2023

Sesuai dengan Pasal 2 ayat (2) dan Pasal 2 ayat (4) Undang-Undang Nomor 6 Tahun 1983 tentang Ketentuan Umum dan Tata Cara Perpajakan dan perubahannya serta Peraturan Direktur Jenderal Pajak Nomor PER-04/PJ/2020 tentang Petunjuk Teknis Pelaksanaan Administrasi Nomor Pokok Wajib Pajak, Sertifikat Elektronik, dan Pengukuhan Pengusaha Kena Pajak, dengan ini diterangkan bahwa :

1. Nama : PT. ANUGERAH GEMILANG KAYATAMA
2. NPWP : 62.364.664.3-321.000

telah dikukuhkan sebagai Pengusaha Kena Pajak sejak 3 Maret 2023 dengan hak dan kewajiban perpajakan sesuai dengan ketentuan peraturan perundang-perundangan di bidang perpajakan.

Kota Metro, 3 Maret 2023
a.n. Kepala Kantor
Plh. Kepala Seksi Pelayanan,

KEMENTERIAN KEUANGAN REPUBLIK INDONESIA
KANTOR PELAYANAN PAJAK PRATAMA METRO
KANWIL DJP BENGKULU DAN LAMPUNG

Muchamad Djaelani

PEMERINTAH REPUBLIK INDONESIA

PERIZINAN BERUSAHA BERBASIS RISIKO
NOMOR INDUK BERUSAHA: 0901230063337

Berdasarkan Peraturan Pemerintah Pengganti Undang-Undang Republik Indonesia Nomor 2 Tahun 2022 tentang Cipta Kerja, Pemerintah Republik Indonesia menerbitkan Nomor Induk Berusaha (NIB) kepada:

1. Nama Pelaku Usaha	: PT ANUGERAH GEMILANG KAYATAMA
2. Alamat Kantor	: LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung, Kode Pos: 34163
No. Telepon	: 08117900272
Email	: anugerahgemilangkayatama@gmail.com
3. Status Penanaman Modal	: PMDN
4. Kode Klasifikasi Baku Lapangan Usaha Indonesia (KBLI)	: Lihat Lampiran
5. Skala Usaha	: Usaha Kecil

NIB ini berlaku di seluruh wilayah Republik Indonesia selama menjalankan kegiatan usaha dan berlaku sebagai hak akses kepabeanan, pendaftaran kepesertaan jaminan sosial kesehatan dan jaminan sosial ketenagakerjaan, serta bukti pemenuhan laporan pertama Wajib Lapor Ketenagakerjaan di Perusahaan (WLKP).

Pelaku Usaha dengan NIB tersebut di atas dapat melaksanakan kegiatan berusaha sebagaimana terlampir dengan tetap memperhatikan ketentuan peraturan perundang-undangan.

Diterbitkan di Jakarta, tanggal: 9 Januari 2023
Perubahan ke-1, tanggal: 25 Januari 2023

Menteri Investasi/
Kepala Badan Koordinasi Penanaman Modal,

Ditandatangani secara elektronik

Dicetak tanggal: 23 Februari 2023

PEMERINTAH REPUBLIK INDONESIA

PERIZINAN BERUSAHA BERBASIS RISIKO
LAMPIRAN
NOMOR INDUK BERUSAHA: 0901230063337

Lampiran berikut ini memuat daftar bidang usaha untuk:

No.	Kode KBLI	Judul KBLI	Lokasi Usaha	Tingkat Risiko	Perizinan Berusaha		
					Jenis	Status	Keterangan
1	46638	Perdagangan Besar Berbagai Macam Material Bangunan	LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34162	Rendah	NIB	Terbit	-
2	46637	Perdagangan Besar Cat	LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34162	Rendah	NIB	Terbit	-
3	46599	Perdagangan Besar Mesin, Peralatan Dan Perlengkapan Lainnya	LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34162	Rendah	NIB	Terbit	-
4	46610	Perdagangan Besar Bahan Bakar Padat, Cair Dan Gas Dan Produk YBDI	Jalan Lintas Sumatera, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34163	Rendah	NIB	Terbit	-
5	43302	Pengerjaan Lantai, Dinding, Peralatan Saniter Dan Plafon	LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34162	Menengah Tinggi	NIB	Terbit	
					Sertifikat Standar	- Belum Terverifikasi - Lakukan pemenuhan persyaratan melalui oss.go.id	Lakukan pemenuhan standar melalui oss.go.id paling lambat 90 (sembilan puluh) hari kerja sebelum waktu perkiraan mulai beroperasi/produksi
6	46620	Perdagangan Besar Logam Dan Bijih Logam	LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34162	Tinggi	NIB	Terbit	-
					Izin	- Belum Terbit - Lakukan pemenuhan persyaratan melalui oss.go.id	Lakukan pemenuhan persyaratan izin melalui oss.go.id paling lambat 90 (sembilan puluh) hari kerja sebelum waktu perkiraan mulai beroperasi/produksi
7	46610	Perdagangan Besar Bahan Bakar Padat, Cair Dan Gas Dan Produk YBDI	LINGKUNGAN VB, Desa/Kelurahan Yukum Jaya, Kec. Terbanggi Besar, Kab. Lampung Tengah, Provinsi Lampung Kode Pos: 34162	Tinggi	NIB	Terbit	-
					Izin	- Belum Terbit - Lakukan pemenuhan persyaratan melalui oss.go.id	Lakukan pemenuhan persyaratan izin melalui oss.go.id paling lambat 90 (sembilan puluh) hari kerja sebelum waktu perkiraan mulai beroperasi/produksi

1. Dengan ketentuan bahwa NIB tersebut hanya berlaku untuk Kode dan Judul KBLI yang tercantum dalam lampiran ini.
2. Pelaku Usaha wajib memenuhi persyaratan dan/atau kewajiban sesuai Norma, Standar, Prosedur, dan Kriteria (NSPK) Kementerian/Lembaga (K/L).
3. Verifikasi dan/atau pengawasan pemenuhan persyaratan dan/atau kewajiban Pelaku Usaha dilakukan oleh Kementerian/Lembaga/Pemerintah Daerah terkait.
4. Lampiran ini merupakan bagian tidak terpisahkan dari dokumen NIB tersebut.

LET'S CONNECT WITH US!

PT. ANUGERAH GEMILANG KAYATAMA

Ruko Riscon Business Center Jl. Proklamator Raya No. 4 Yukum Jaya - Terbanggi Besar, Lampung Tengah 34163

Telp : 0725-5261177
Director Marketing : 0882 - 8679 - 8080 (Kurniawan)

anugerahgemilangkayatama@gmail.com