

CorroCell®

Quality,

Performance,

Values



**Designed for Ecosystem of Performance, Economy and Environmental Protection
Engineered for Quality, Performance, and Values**

Introduction

The mission is to achieve the best combination of Performance, Economy and Regulatory Compliance, and to provide specific solutions to demand applications from industrial sectors like airplanes, trains, automobile, power plants, refineries, and etc. We therefore engineered materials from major three blocks: inorganic base, high solid to solvent-free based and water-based designs. The inorganic materials including silicate, metal oxides, and mineral compounds are originally from earth while these “geo-polymers” have good mechanical properties and high temperature resistance. The designed high solid to solvent-free polymer resins are to obtain products with good performance and aesthetic appearance within environmental regulatory compliances. Our water-based polymer resins are an upgrade version from traditional urethane resins and water-based urethane dispersion (PUD) with respect to the weathering resistance, abrasion resistance, and temperature resistance.

High Performance Resins

1. Inorganic Resins

The most important field, where heat resistant ceramic paint has been used in the automotive and aircraft industries, is to meet exceptionally high standards. These coatings are used for exhaust systems, mufflers and parts close to the engine. Xsail resins, XR011 and XR012, are mainly used to formulate coatings for protecting and decorating exhaust systems of motor vehicles and engine components.

XR011

A silicone resin has a little smoke generation at heating and shows a superior abrasion resistance and temperature resistance.

Features of slow ambient cure and bake cure coatings systems, strong chemical resistance, and temperature resistance up to 650 °C for formulated coatings.

Product Data

- Silica Content (SiO₂): > 75%
- PH: 6.5 – 7.0
- Specific Gravity: 1.12 g/cm³
- Viscosity at 25°C LVT2/ 28-35cp)
- Appearance: water clear/colorless liquid
- Resins temperature tolerance 400-500°C

XR012

A hybrid metal oxide silicone resins shows a superior abrasion resistance and temperature resistance.

Features of slow ambient cure and bake cure coatings systems, strong chemical resistance, and temperature resistance up to 860 °C for formulated coatings

Product Data

- Solid Content: > 70% in alcohol/propylene glycol/water system
- PH: 5.5 – 6.0
- Specific Gravity: 1.08 g/cm³
- Viscosity at 23°C LVT2/ 3000cp)
- Appearance: milky liquid
- Resins temperature tolerance 550-600°C

Packaging

- 5KG, 20KG, 200KG package
- 200g samples are available

2. High Solid Polymers Resins

The most important field, where hybrid functional TPU (hybrid thermal tolerant polyurethane coatings) have been used in the automotive and aircraft industries, is to meet exceptionally high requirements for superior chemical resistance, weather resistance, and aesthetical appearance. Xsail resins, XR021 and XR022, are mainly used to formulate clear and colored exterior surface coatings used in the transport industry and industrial heavy duty machinery.

XR021

Hybrid functional TPU resins can be formulated single part and two-part coatings or sealants. It exhibits good exterior durability, good build and suitable for general purpose protection.

Features of solvent resistance, UV resistance, temperature resistance, high gloss and temperature tolerance up to 140 °C for formulated coatings

Product Data

- Delivery form: 75 % in n-butyl acetate
- PH: 6.5 – 7.0
- Specific Gravity: 1.05 g/cm³
- Viscosity at 25°C LVT2/ 8000 – 10000 cp)
- Appearance: clean, clear and free from extraneous matter

XR022

Hybrid functional TPU resins, which are used as single part and two-part surface coatings or sealants formulations, exhibits good exterior durability, good build and suitable for heavy duty protection.

Features of fast dry, excellent mechanical property, good weathering performance, slow cured to scratch proof, high gloss, mirror effect and temperature tolerance up to 180 °C for formulated coatings

Product Data

- Delivery form: 70-75 % in n-butyl acetate
- PH: 6.5 – 7.0
- Specific Gravity: 1.08 g/cm³
- Viscosity at 25°C LVT2/ 6000 – 8000 cp)
- Appearance: clean, clear and free from extraneous matter

Packaging

- 5KG, 20KG, 200KG package
- 200g samples are available

3. Water-based hydroxyl functional acrylic dispersions

Our water-based polymer resins, XHR011 and XHR012, are an upgrade version from traditional urethane resins and water-based urethane dispersion (PUD) with respect to the weathering resistance, abrasion resistance, and temperature resistance.

XHR011

Specialty aqueous polyacrylic dispersions show a superior temperature resistance and chemical resistance. The resistance can be enhanced by Xsail proprietary hardeners, XH01.

Features of slow ambient or low bake cured to stone hard yet tough and flexible, solvent resistance, temperature resistance up to 180 °C.

Product Data

- Delivery form: 48wt % in propylene butyl n-butyl ether-water emulsion
- PH: 7.5 – 8.0
- Specific Gravity: 1.05 g/cm³
- Viscosity at 23°C LVT2/ 2500 – 3000cp)
- Appearance: milky liquid
- Hydroxyl content: 5wt% OH

XHR012

Specialty aqueous polyacrylic dispersions show a superior temperature resistance and chemical resistance. The property performance can be enhanced by Xsail proprietary hardeners, XH01.

Features of slow ambient or low temperature cured to scratch proof yet tough, solvent resistance, high gloss, mirror effect, and temperature resistance up to 140 °C.

Product Data

- Delivery form: 45wt % in propylene butyl n-butyl ether-water emulsion
- PH: 7.5 – 8.0

- Specific Gravity: 1.02 g/cm³
- Viscosity at 23°C LVT2/ 2500 – 3000cp)
- Appearance: milky liquid
- Hydroxyl content: 4wt% OH

Xsail Specialty Coatings

Specialty Coatings have fine ceramic coatings, nano ceramic coatings, and high performance industrial coatings.

Fine Ceramic Coatings

850M

An advanced fine ceramic coating was designed mainly for metal protection against corrosion and wear at extreme high temperature up to 860 °C. The coatings have strong abrasion resistance, corrosion protection with certain thermal barriers effect. Products colors include Silver, Black, and limited customs colors. Appearance finishes has satin, matte, and semi-gloss.

Features of ambient curable, high abrasion resistance, corrosion protection, highly hydrophobic, and high temperature tolerance to 860°C

850M is mainly designed for protection of Automobile and Motorcycles exhaust systems and engine components. It is also used in energy infrastructure and equipment including heat exchangers, boilers, heaters, reactors, storage containers. The product system includes 850 M and Clear M [optional] as top coat



Limited colors are available

Therm400

An advanced specialty ceramic coating, which is designed and developed for corrosion protection, solvent resistance, stain resistance, and thermal barrier effect, is used for industrial machines and equipments operated in oily, corrosive and high temperature conditions or immersed hot water condition

Features of PTFE effect for its hydrophobic, oleophobic, strong chemical resistance, and ambient curing, high temperature tolerance up to 720 °C



Hydrophobic and oleophobic display on this coatings surface

Nano Ceramic Coatings

Xsail nano ceramic coatings are widely used in industry and home appliance. CorroCell nano coatings series are used in automobile, mold release, plastics surface modification, and marine section. NatureCell nano coatings series are applied for home appliance and kitchen utensils.

ClearH01

A multi-purpose Alumina-Silica transparent coating has high mirror effect after being buffed. It is of high hardness (9H, firm), heat resistance (750°C) and scratch proof providing paint with scratch protection, metal structures with corrosion protections, stain resistance and easy-cleaning.

Features of super hydrophobic (water-beading effects), non-stick (anti graffiti) and high scratch protections, and color fading protection

A premier coating imparts glassy and glossy appearances for cars, motorcycles, rejuvenating finish appearance. It was designed particularly for protecting metallic structural parts, equipments, and machines operated in high temperature, oily, corrosive environments, offering corrosion protection, fire proof, water proof, anti-graffiti, and easy clean effects.



H01V2 used on furniture and automobile surfaces

Clear M

A nano transparent ceramic coating with semi-gloss, high hardness and high heat resistance (750°C) provides corrosion and wear resistance, stain resistance and easy-cleaning functions. It is more suitable for heavy duty machineries protection against dirt, stain, corrosion, and providing color protection and easy clean functions.

Special Features of Super-oleophobic and super hydrophobic, corrosion and high scratch protections

Clear M has been widely used as a clear top coat or used alone for exhaust systems of automobile, motor vehicle components and other polished metal and plastic surfaces, for providing corrosion, wearing, oil, solvent and fire resistances. It is also suitable for this ClearM to be applied onto industrial equipments and machines under oily, corrosive, and high temperature conditions.

NatureCell Nano Ceramic Coatings

750n

An inorganic hybrid nano ceramic coating was designed for food contact home appliance and utensils. It is highly abrasion resistant and has strong adhesion to metal and plastics. The available colors are black, silver, creamy, signal red and limited custom colors.

Special Features of high hydrophobic (water beading effects), corrosion protection, fire proof, ambient cure, and nonstick



NatureCell Clear

It is a natural stone compositional nano ceramic coating cured to stone hard. Unlike PTFE or Teflon and ordinary ceramic coatings, NatureCell nano ceramic coating has no potential toxicity release or coating chipped off. It is transparent, semi-gloss, high hardness, and high heat resistance (750°C), providing anti-corrosion, stain resistance, easy-cleaning, and non-stick functions.

Special Features of semi-gloss, ambient curable, highly hydrophobic (water-beading effect), non-toxic heavy metal elements, Pb, Cd, Cr, and Hg

NatureCell® Clear was designed to re-in force NatureCell colored coatings for protecting and finishing by increasing wear resistance and scratch resistance, stain resistance, and non-stick effect as a topcoat. It has been widely used in bake ware as food release coatings.

High Performance Industrial Coatings

The high performance industrial coatings, Xpp series, were designed for applications above waterline and below waterline.

Xpp02C

Xpp02C is a hybrid TPU industrial coating formulated to withstand color fading, UV resistance, abrasion resistance, and temperature tolerance. It has clear and colored version with matte, semi-gloss, and high glassy appearances.

Features of slow cured to stone-hard yet tough, scratch proof, color fading protection, temperature tolerance up to 140 °C-180 °C

Xpp02C are widely used as solid color coatings and clear coatings in transport, such as Auto coatings, above waterline marine coatings and heavy duty equipments protections. It is also used as architectural coatings for concrete top finishes.



Xpp02CC

This is a new and advanced 2k-auto or marine fine ceramic finish coating. The coatings are of UV resistance, abrasion resistance, solvent and staining resistance, and temperature tolerance up to 720 °C. It has excellent chemical resistance in hot continuous immerse environment.

Features of strong chemical resistance, excellent smooth, low friction, glass appearance required for antifouling effect

These coatings are used as heavy duty industrial protective coatings and one of the best suited for antifouling marine coatings below waterline for being ceramic nature with fungicide effect, smooth, nonstick, low friction, strong chemical resistant, and temperature resistant in immersed condition.



Xsail Specialty

XS01-Solvent-free Alumina-Silica Colloid; XS02-Water-based Alumina Colloid

XS01 and XS02 are widely used in plastics, coatings, adhesive, and polymeric composites for property enhancements

More products information can be found on our website (www.xsailcorro.com), and we welcome your discussion for your specific applications.

About Xsail,

Xsail Pty Ltd, trading as CorroCell, started in Nov 2010 at Brisbane, Australia. The company mainly works on high end polymeric resins and specialty coatings. Specialty Coatings include fine ceramic coatings, nano ceramic coatings, hybrid ceramic coatings, and premier industrial coatings. Resins are high temperature resins, water-based high performance resins, and high solid performance resins.

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