

NANOTECH FOR AUTOMOTIVE COATINGS

by Ominent Sdn Bhd



*"Quality and
Perfection"*

INTRODUCTION

The development of smart or intelligent coatings is gathering pace globally as a growing number of new technologies emerge with the potential to considerably increase the functionalities of paint.

Nanotechnology, microencapsulation, conductive materials, self-healing and self-assembling systems are among a number of technologies which are expanding the capabilities of coatings well beyond the conventions of aesthetics and protection.

The widening functionality of coatings is already boosting paint sales for industrial applications. The introduction of smart technologies should expand industrial coatings demand even further.

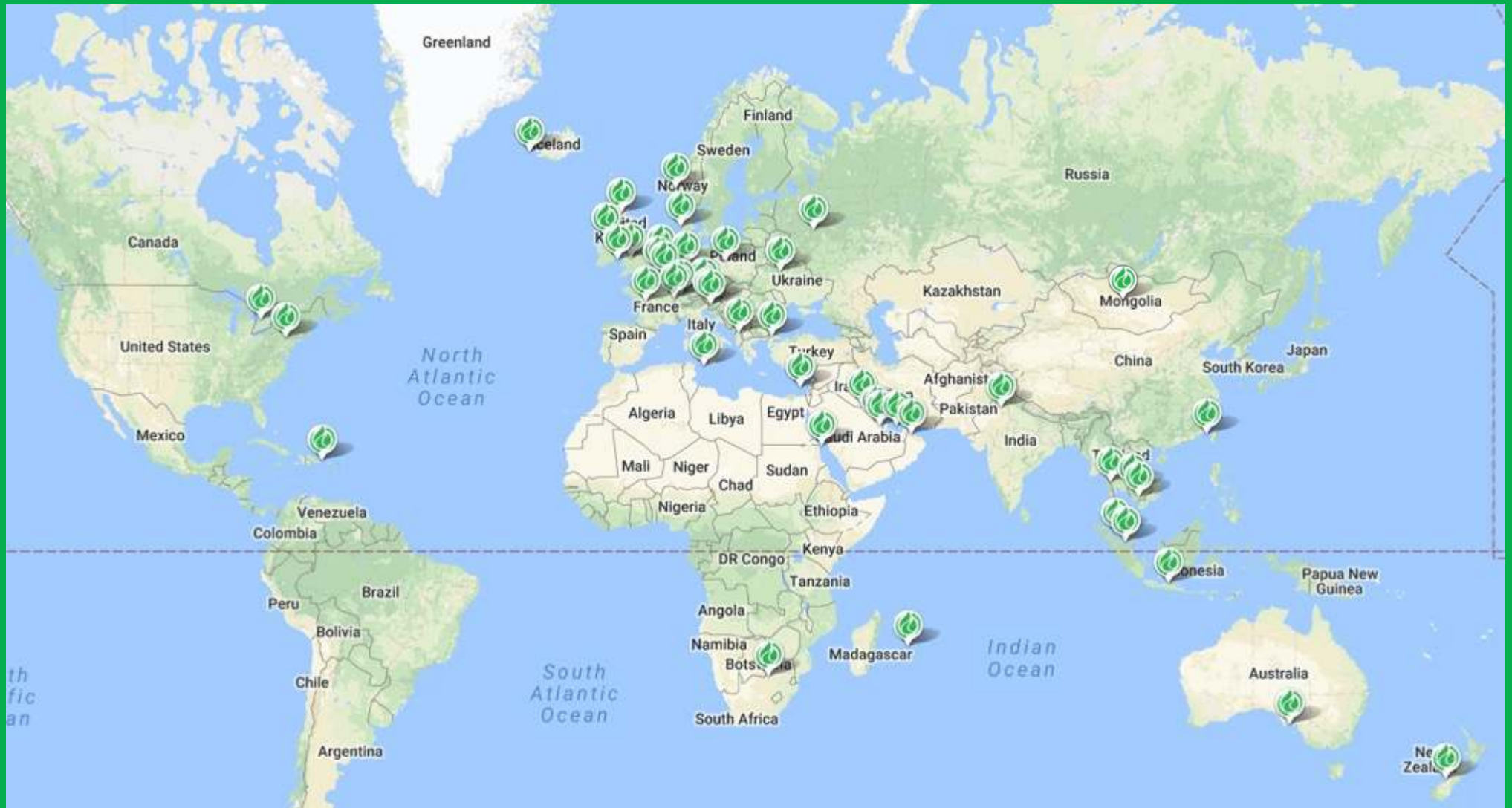


WHO WE ARE

We are a 4 years old startup based in Selangor, Malaysia developing high solid, low VOC nanotechnology coatings



GLOBAL PRESENCE



47 distributors

PARTNERS



WHAT WE DO

IGL Coatings formulates and manufactures eco-friendly surface coatings which are **safe** and **outperforms** existing products in the market in terms of **durability, quality and ease of application.**

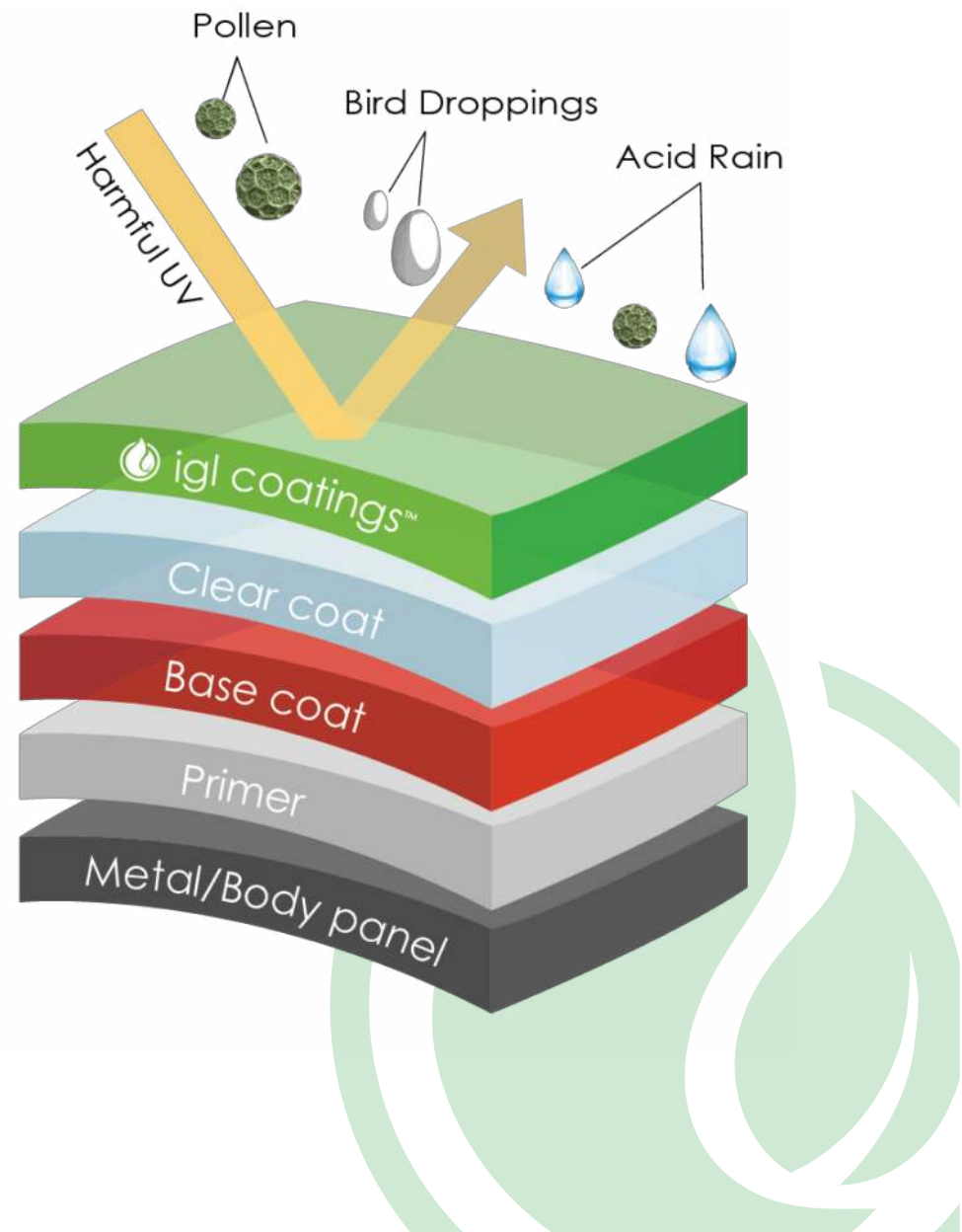


WHAT DOES OUR COATING DO

IGL Coatings is an organometallic coating that has both organic and inorganic components. Compared with traditional coatings that are inherently organic (polyurethane, acrylic, epoxy etc.) our hybrid coatings have some exceptional properties such as anti-weathering and anti-graffiti functionality.

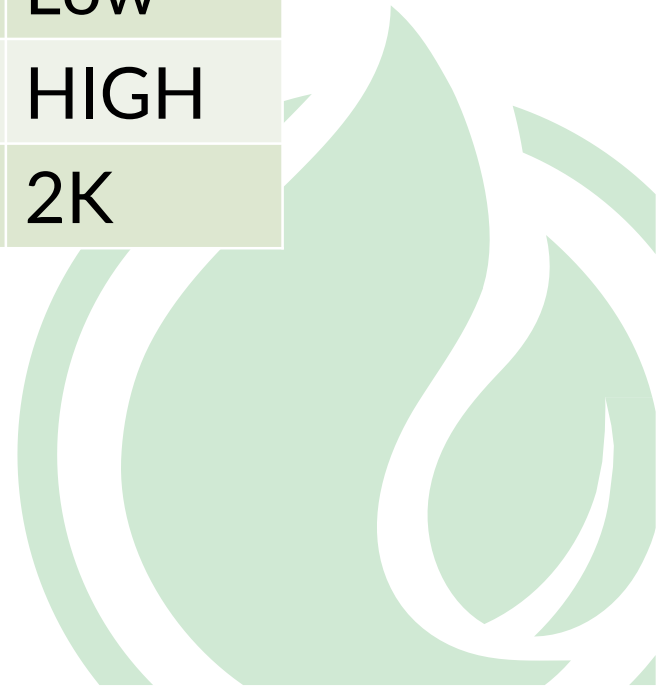
It creates a layer of transparent protection that :

- protects from UV damages;
- protects from chemical damages;
- improved stain resistance; and
- easier, faster and less chemical used when cleaning.



THERE IS NO BEST OF BOTH WORLDS

Resistance	Acrylic	Polyurethane	Epoxy
UV	High	High	Low
Chemical	Low	Medium	HIGH
Formulation	1K	2K	2K



SOLUTION

2014



IGL Coatings started R&D

2015



Commercialized with help from PLATCOM & Cradle Fund

2016



Created a range of REACH compliant nanotech based coatings for metal, plastic, paint glass and fabrics

2017



NANO Verified

2018



ISO9001:2015 certified

TRADEMARKED

Registered / filed in Malaysia, USA, Indonesia, China, Taiwan, EU, Australia, India & Vietnam

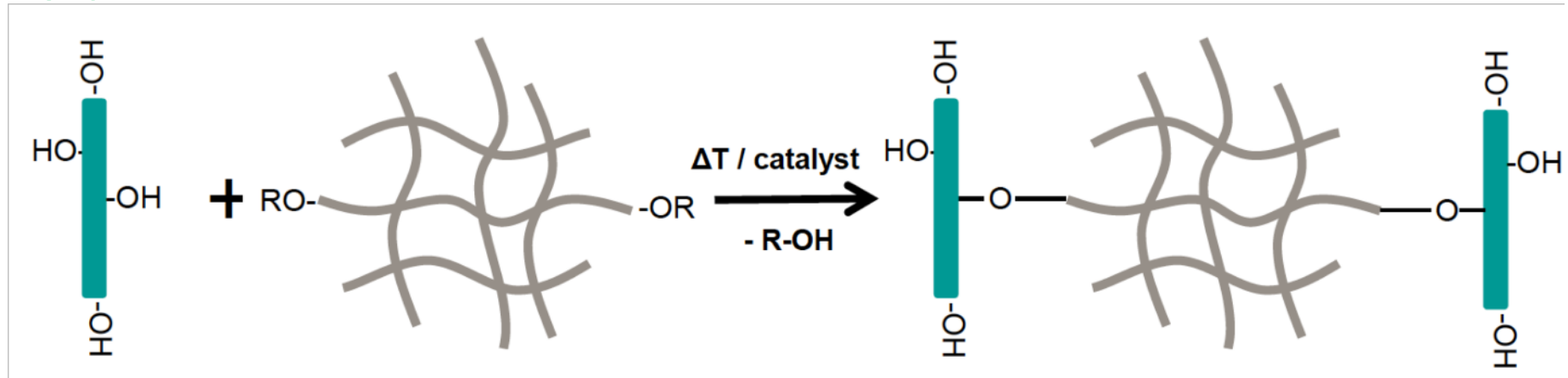


OUR FORMULATION

Aliphatic
polyester
polyol

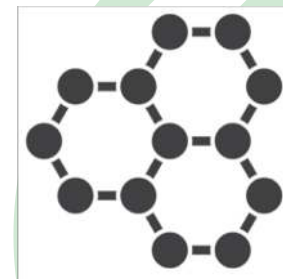
Silicone resin

Silicone aliphatic polyester resin



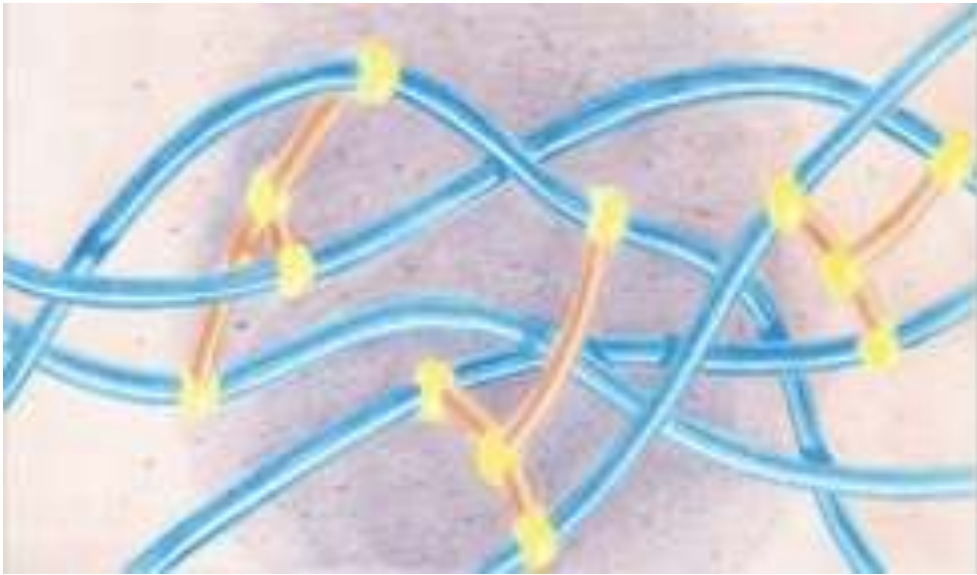
Silicone aliphatic polyester hybrid

Substrate

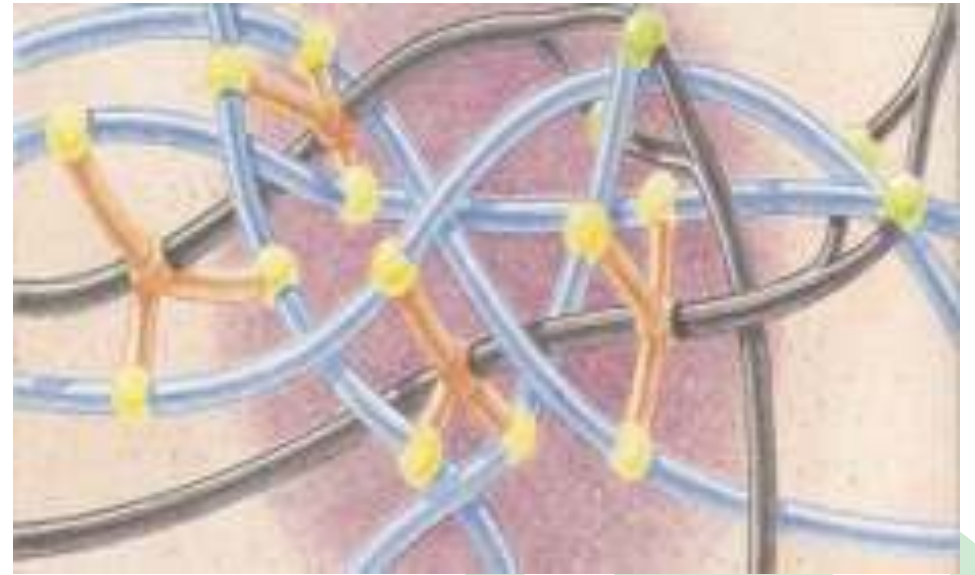


Nanomaterials

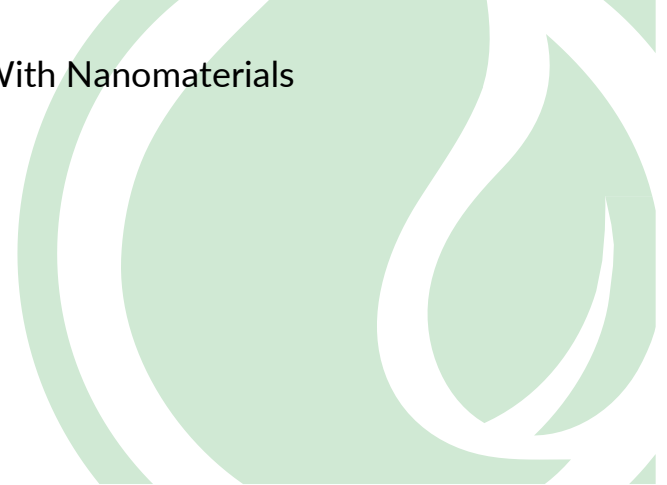
IMPROVED CROSSLINKING



Without Nanomaterials



With Nanomaterials



HYBRID ADVANTAGES

Aliphatic polyester part

Silicone resin

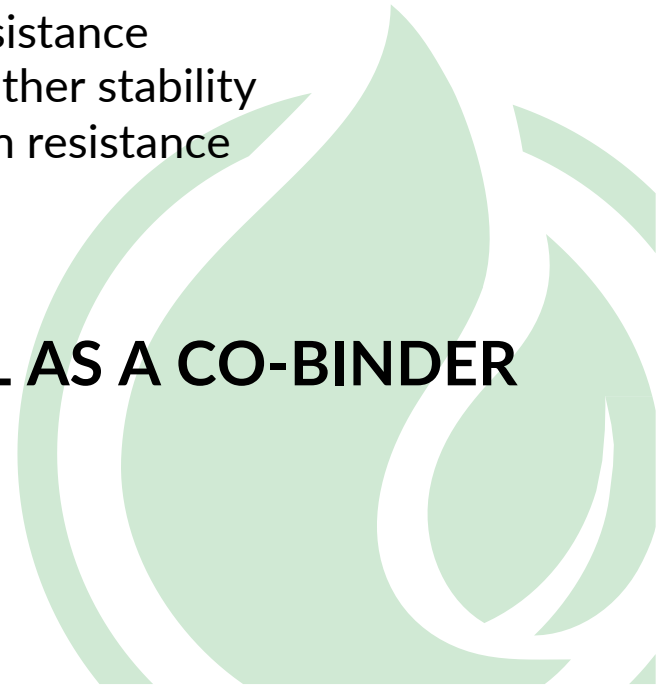
advantages

- high flexibility
- good mechanical properties
- good adhesion
- chemical resistance

advantages

- high solids content
- good chalk resistance
- increased weather stability
- increased stain resistance

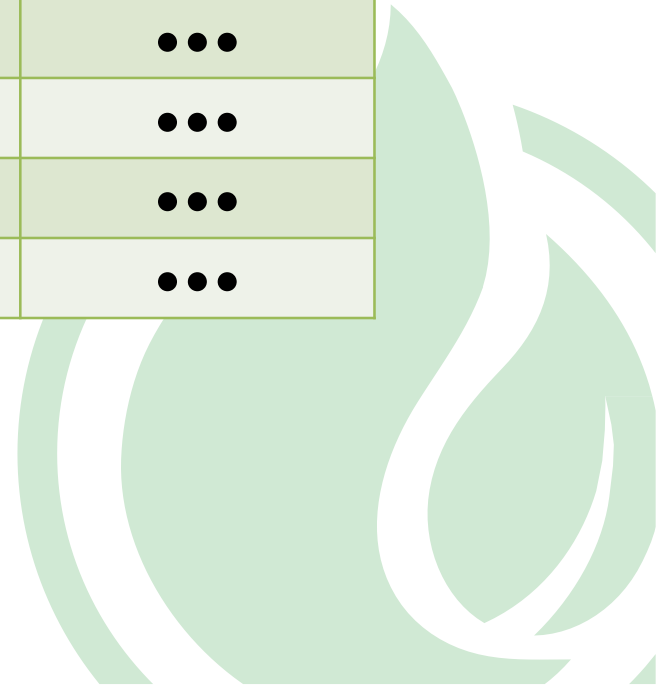
MADE POSSIBLE BY ADDING NANOMATERIAL AS A CO-BINDER



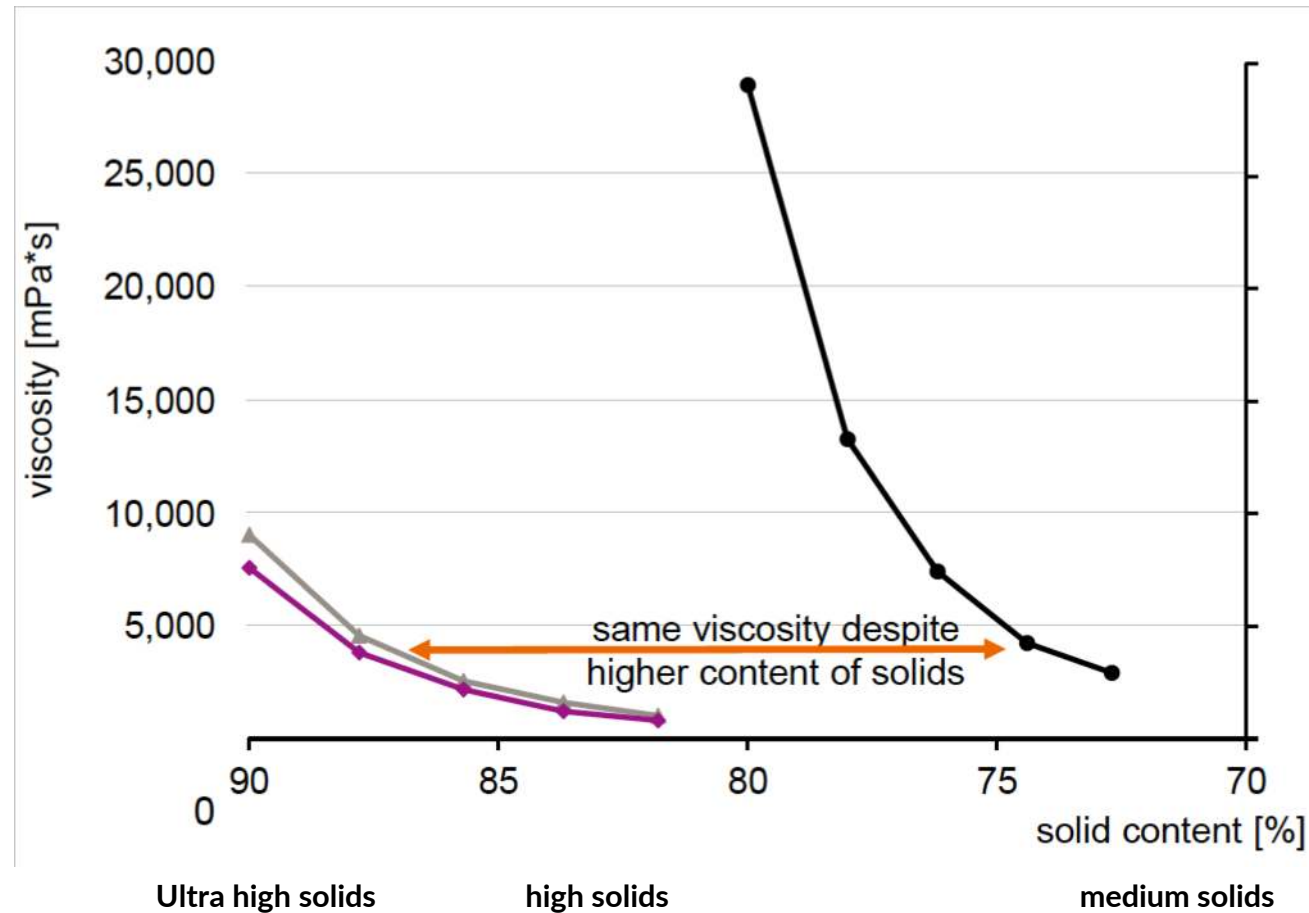
COATING PROPERTIES

Stone chip resistance	●●●	●
Flexibility (Impact Test [indirect])	●●●	●
Flexibility (ERICHSEN Cupping Test)	●●●	●●●
Drying Time (Drying recorder)	●●●	●●●
Dryness Degree	●	●●●
Chemical resistance	●●	●●●
Hardness (Pendulum)	●	●●●
Weather resistance	●●●	●●●
VOC (ready to use)	●●●	●●●

- especially recommended
- recommended



HIGH SOLIDS LOW VISCOSITY



Dilution 



ECOCOAT SERIES

KENZO

- Kenzo is a flagship REACH compliant coating
- Kenzo creates a thick layer of protection that radiates a rich and natural glow reminiscence of bespoke wax while providing unmatched protection and smoothness that lasts 12 times longer than wax
- Durability of up to 4 years



REDUCES
MICRO
MARRING



HARDNESS



ULTIMATE
GLOSS



DURABLE



100%
ACTIVE
MATERIAL



igl coatings
ecocoat BBQ
High gloss and heat resistance BBQ pit coating

BBQ is a premium coating for barbecue pit & oven.
It forms an interlocking glass-like finish with amazing protection.
Durable up to 1 year.

igl coatings
ecocoat BIKE
Extremes gloss easy cleaning multi surface ceramic coating

Bike is a user-friendly coating product for multiple types of painted surfaces.
It is weather resistant and provides an excellent finish.
Durable up to 1 year.

igl coatings
ecocoat ECLIPSE
Eco friendly high chemical resistance industrial surface coating

Eclipse is a coating formulated specifically for industrial equipment.
It is a high anti-fouling chemical, reducing the need for maintenance and cleaning.
Durable up to 2 years.

igl coatings
ecocoat EZ
Super easy to use high solid coating

EZ is a specially developed high solid coating for automotive use.
It increases paint's reflectivity as well as resistance against harsh chemicals, micro marring, and dullness.
Durable up to 1 year.

igl coatings
ecocoat FABRIC
Liquid repellent for fabric

Fabric is a 100% breathable, water based, zero VOC coating.
It can be applied on virtually any porous surface.
Durable up to 1 year.

igl coatings
ecocoat HEADLIGHT
High gloss UV absorber lamp coating

Headlight is a coating which acts as a UV absorber and glossenhancer for polycarbonate headlights.
It adheres to the headlight on a molecular level and crosslinks to create a glass like layer.
Durable up to 1 year.

igl coatings
ecocoat POLY
Fast dry high solid & gloss paint coating

Poly is our original REACH compliant coating.
It increases paint's reflectivity and resistance against harsh chemicals, micro marring and dullness.
Durable up to 1 year.

igl coatings
ecocoat PREMIER
Water based polyurethane sealant

Premier is a zero VOC coating and can be applied on all non-absorbent surfaces of the vehicle.
It is highly efficient and produces immediate impactful result on the coated surface.
Durable up to 6 months.

igl coatings
ecocoat MARINE
Eco friendly high chemical resistance marine surface coating

Marine is an anti-fouling coating developed specifically for high UV, salt and water immersion resistance.
It can be applied on the area above or below the water line.
Durable up to 2 years.

igl coatings
ecocoat QUARTZ
Eco friendly high solid & gloss paint coating

Quartz is our pioneer REACH compliant, low VOC, high solid coating.
It is formulated with our proprietary modified active materials and carrier to be free from any carcinogenic chemicals.
Durable up to 2 years.

igl coatings
ecocoat QUARTZ+
2-component hydrophobic glass coating

Quartz+ is a hybrid coating.
It merges 2 different coatings with different properties to create the ultimate layer of protection.
Durable up to 2 years.

igl coatings
ecocoat TRIM
Colorless impregnation plastic coating

Trim is a coating to protect trim, rubber and plastic surfaces.
It is a coating that instantly impregnates, coats and restores the faded colour in plastic surfaces.
Durable up to 2 years.

igl coatings
ecocoat WHEEL
High gloss & heat resistance wheel coating

Wheel is a coating for wheels. It forms an interlocking glass-like finish on a molecular level with amazing protection.
Durable up to 1 year.

igl coatings
ecocoat WINDOW
2-component hydrophobic glass coating

Window is a coating for glass surfaces (windows).
Window creates a super water repellent surface that prevents water spots and is resistant to high wiper wear.
Durable up to 1 year.

Ecocoat Kenzo

ECOCOAT KENZO is our flagship signature REACH compliant coating which pioneered the 100% active material formulation for coatings. ECOCOAT KENZO creates a thick layer but lasting 10x longer.



FEATURES & BENEFITS

REACH
COMPLIANT
(ECO-FRIENDLY)

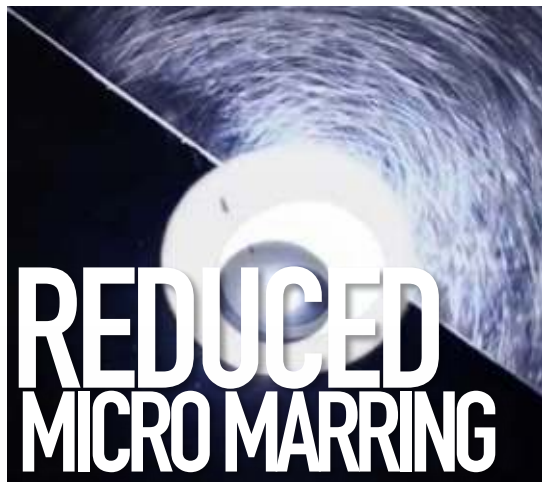
EXTREME
HYDRO-
PHOBICITY

ULTIMATE
GLOSS &
SHINE

DURABLE
UP TO
4 YEARS

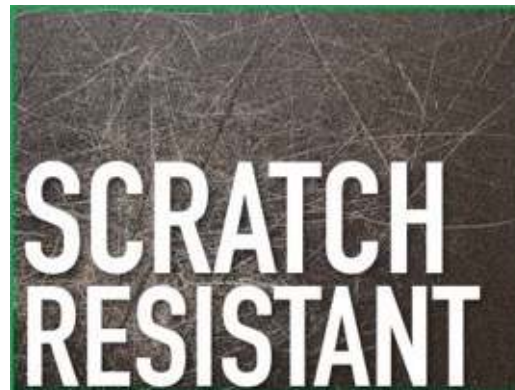
100%
ACTIVE
MATERIAL

FULL CURE
TO 10H
HARDNESS



Ecocoat Trim

ECOCOAT TRIM is a technologically advanced REACH compliant coating to protect the trim, rubber and plastic surfaces. It is a highly reactive coating that instantly impregnates and forms a chemical bond which crosslinks the coated surface and restores the faded colour in the plastic surface.



FEATURES & BENEFITS

REACH
COMPLIANT
(ECO-FRIENDLY)

COLOUR
RETENTION
UP TO 2
YEARS

RESTORE
FADED
PLASTIC

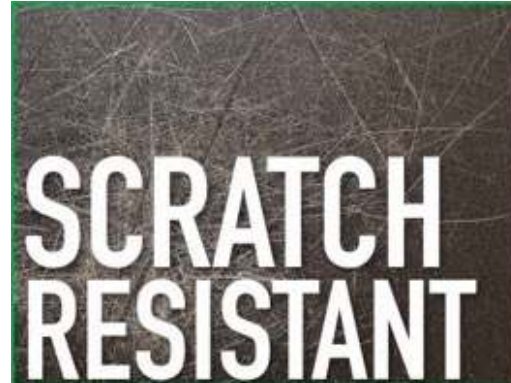
HIGH UV
RESISTANCE

FULL
CURE TO
6H
HARDNESS

EASY TO
APPLY

Ecocoat Headlight

ECOCOAT HEADLIGHT is a highly effective REACH compliant UV absorber and gloss enhancer for polycarbonate headlights. It adheres to the headlight on the molecular level and crosslinks to create a glass like layer.



FEATURES & BENEFITS

REACH
COMPLIANT
(ECO-FRIENDLY)

PREVENTS
OXIDIS-
ATION

RENEW &
PROTECT

HIGH UV
RESISTANCE

GLASS
LIKE
FINISH

EASY TO
APPLY

Ecocoat Wheel

ECOCOAT WHEEL is a premium REACH compliant coating for wheels which contains a more than 90% of active material in its formula. It forms an interlocking glass-like finish on a molecular level with amazing protection.



FEATURES & BENEFITS

REACH
COMPLIANT
(ECO-FRIENDLY)

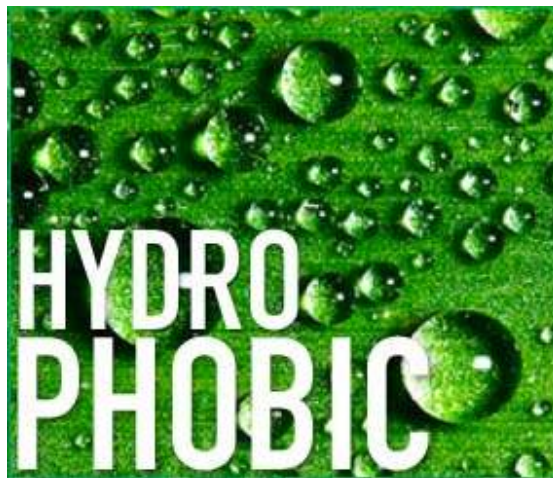
FULL CURE
TO 9H
HARDNESS

CHEMICAL
& BRAKE
DUST
RESISTANT

IMPROVED
SLICK &
PROTECTION

GLASS
LIKE
FINISH

EASY TO
APPLY



Ecocoat Leather

ECOCOAT LEATHER is a REACH compliant 100% breathable, low VOC, non etching coating. It crosslinks with the surface of the leather to create an invisible layer that repels undesirable liquid, dirt, dye and UV-radiation.

It can be applied on virtually any leather.

FEATURES & BENEFITS

REACH
COMPLIANT
(ECO-FRIENDLY)

MAINTAINS
LOOK &
TEXTURE

INCREASED
GLOSS

PREVENTS
COLOUR
TRANSFERS

PROTECTS
AGAINST
LIQUIDS,
DYE & UV

EASY TO
APPLY



Ecocoat Window

ECOCOAT WINDOW is a REACH compliant coating for glass surfaces (windows). It creates a super water repellent surface and prevents water spots and is resistant to high wiper wear. The result is safe driving condition during heavy rain, as the rainwater will roll off at the speed of 50km/h.

FEATURES & BENEFITS



REACH
COMPLIANT
(ECO-FRIENDLY)

DURABLE
AGAINST
WIPER
WEAR

PREVENTS
WATER-
SPOTS

INCREASED
VISIBILITY
DURING
RAIN

CHEMICAL
RESISTANT

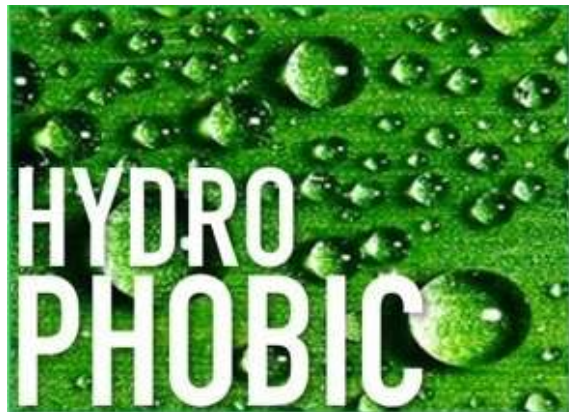
EASY TO
APPLY



Ecocoat Fabric

ECOCOAT FABRIC is a REACH compliant 100% breathable, water based, zero VOC coating. It creates an invisible layer which covers each individual fibre of the textile or leather to repels undesirable liquid, dirt and UV-radiation.

It can be applied on virtually any porous surfaces.



FEATURES & BENEFITS

REACH
COMPLIANT
(ECO-FRIENDLY)

CLEAR &
ODORLESS

EASY TO
CLEAN

HYDRO-
PHOBIC

BREATH-
EABLE

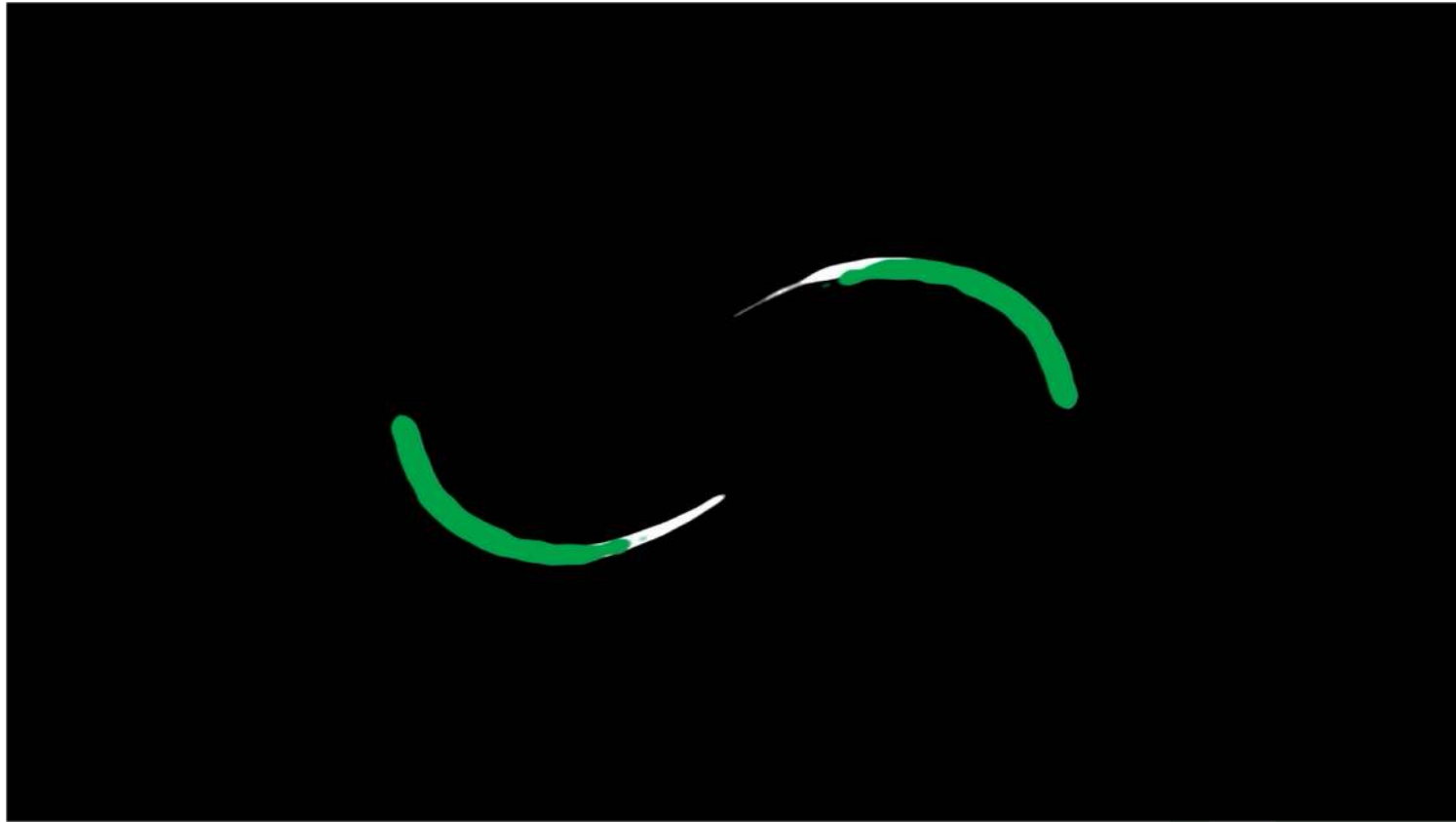
EASY TO
APPLY

VIDEO DEMO

The white car is treated on the right side, while the left side is untreated



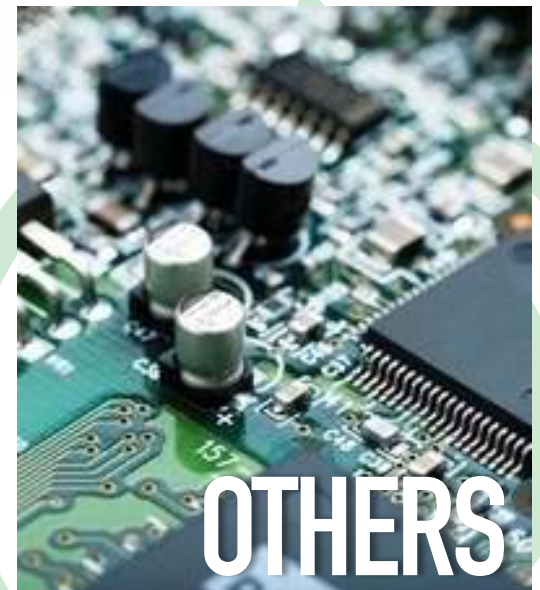
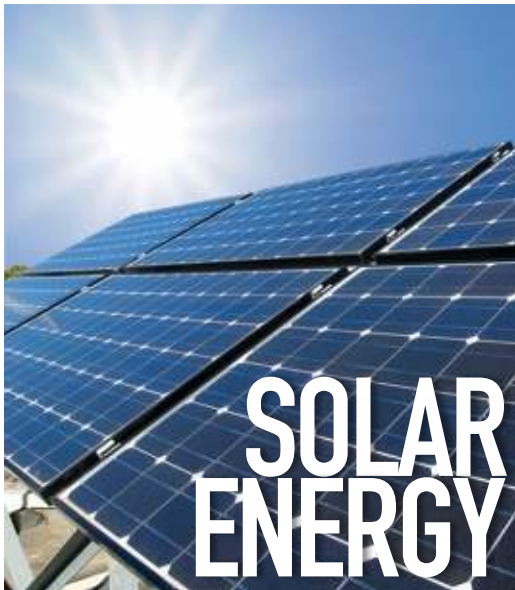
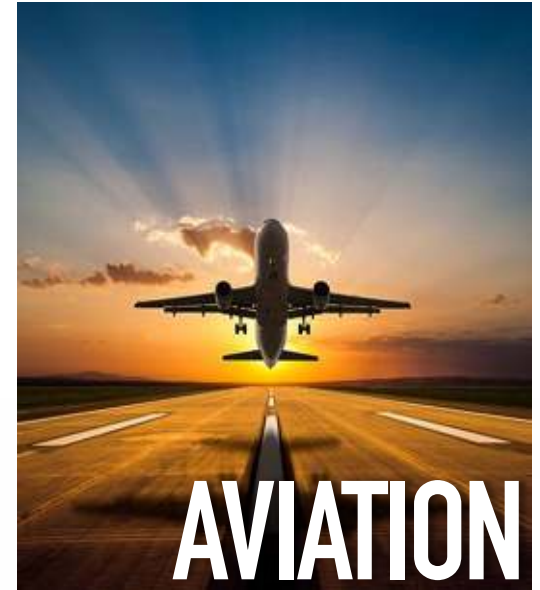
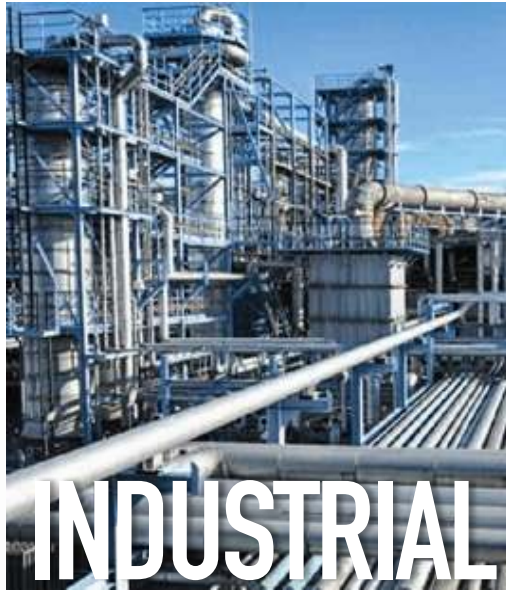
VIDEO DEMO



VIDEO DEMO



INDUSTRIES



SOLVENT RESISTANCE



good resistance against xylene after air drying



CORROSION PROTECTION ON A SAND BLASTED STEEL SURFACE

Substrate:

- Sand blasted steel

Pretreatment:

- IGL Anti Corrosion



CORROSION PROTECTION ON A HDG STEEL SURFACE

Substrate:

- HDG steel

Pretreatment:

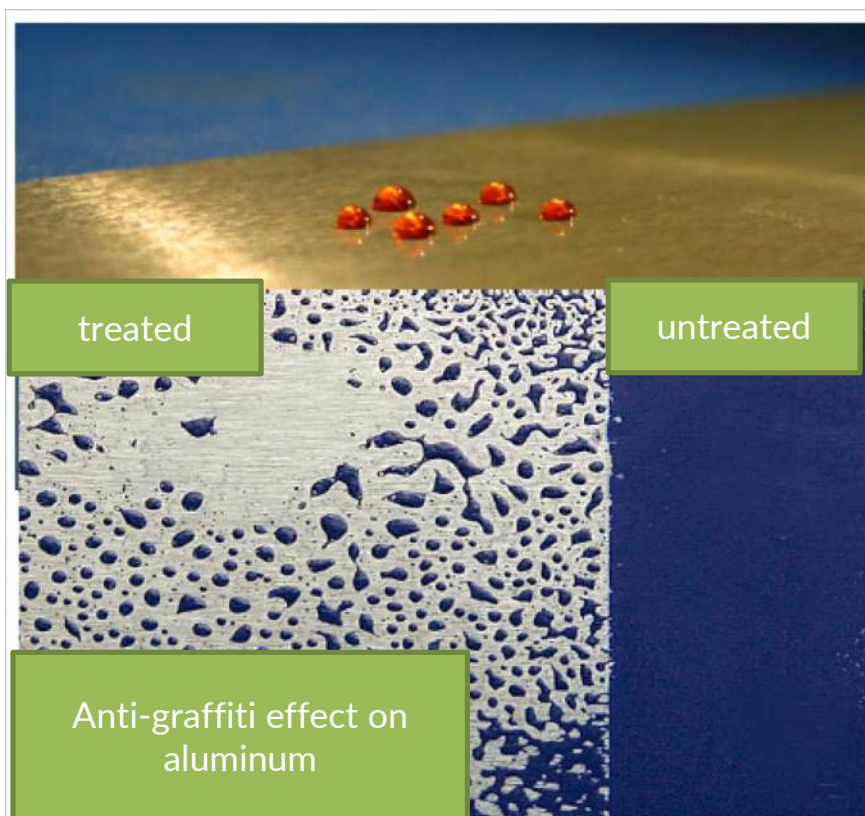
- IGL Anti Corrosion



EASY TO CLEAN SURFACE

IGL Anti Corrosion system is based on fluoroalkylsilanes to decrease surface tension

Strong oleophobic properties result in easy to clean surface



CORROSION PROTECTION ON ALUMINIUM WITH EPOXY POWDER COATING

Substrate:

- Aluminium (AlMg)

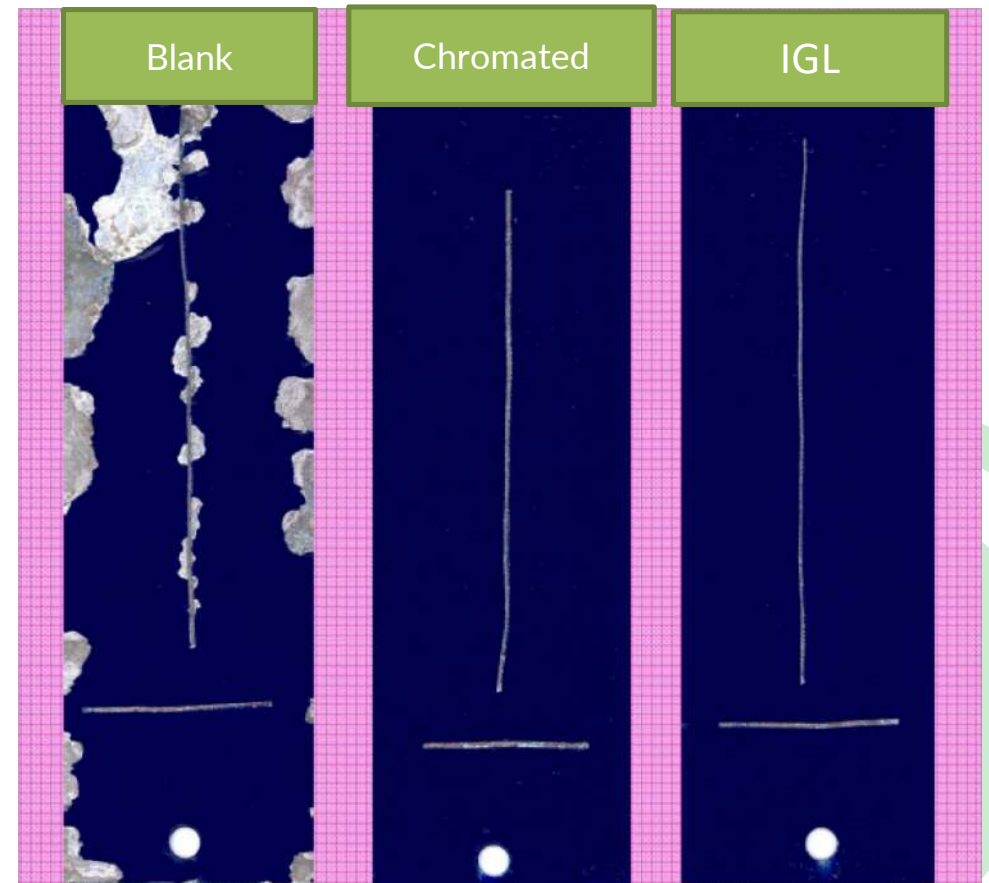
Cleaning:

- Alkaline degreasing
- Alkaline etching (0.5 g/m²)
- Acid picking

Pretreatment:

- IGL Anti Corrosion

500h CASS



CORROSION PROTECTION ON MAGNESIUM WITH POLYESTER POWDER COATING

Substrate:

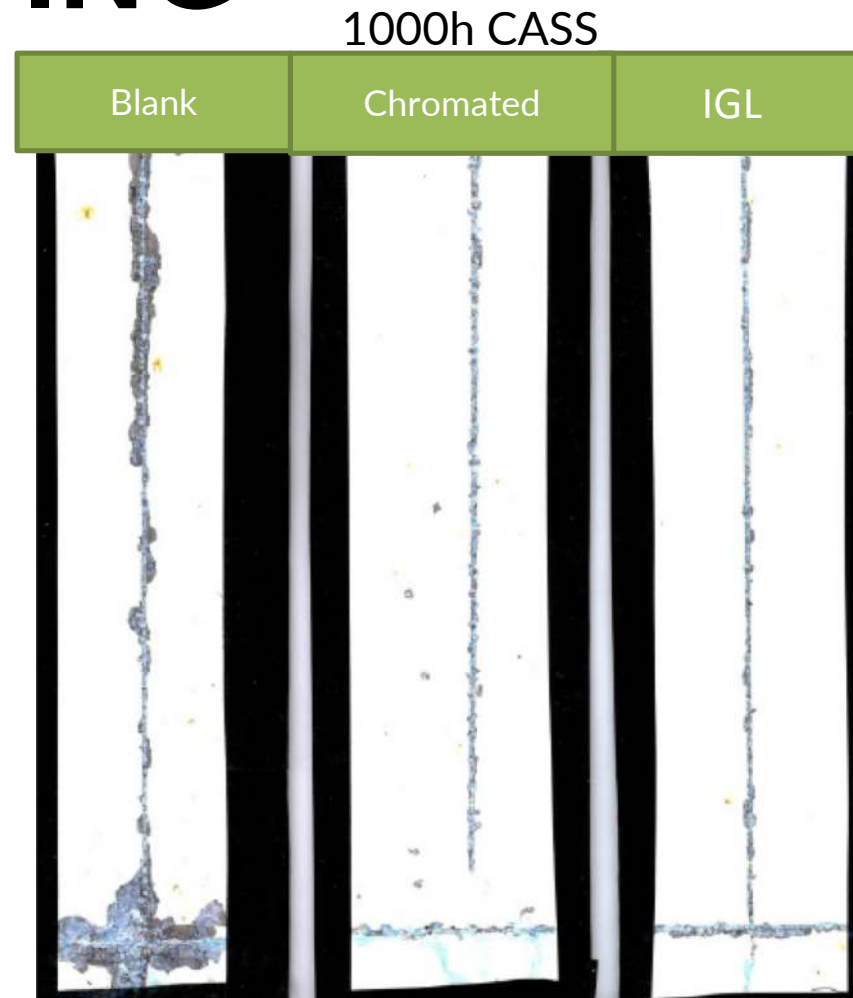
- Magnesium (AZ31B)

Cleaning:

- Alkaline degreasing

Pretreatment:

- IGL Anti Corrosion





Thank you

www.iglcoatings.com