



PROTECTIVE COATINGS FOR

HEAVY

INDUSTRIES &  
INFRASTRUCTURES

# Steelworks for Atmospheric Exposure



## New Construction

### ■ Recommended Coating System

All of recommended coating system are based on ISO 12944 as a global standard for corrosion protection of steel by paint. It provides comprehensive instructions that provide guidance for engineers, contractors and consultants when dealing with the corrosion protection of steel structures at new construction.

Type	Coating System	Performance	Corrosivity Categories*
One Coat System	EPT-8900	Excellent	C1-C3
Two Coat System	EPP-20100 + PUT-50800	Excellent	C3-C5
Three Coat System	IOZ-70200 HQ / EPZ-20101/ EPZ-20121 + EPU-30200 + PUT-50800	Excellent	C4-C5

**PROGUARD PRIMER EPP-20100** is a two component epoxy primer that can be used for ferrous and non ferrous metal such aluminum, fiber, etc. It also has high mechanical and corrosion resistance.

**PROZINC RICH EPZ – 20101** is a two components polyamide cured zinc rich epoxy primer. This product has excellent corrosion resistance and used as a primer. This product complies with composition and performance requirements of SSPC Paint 29 and ASTM D520 type II zinc dust.

**PROZINC RICH EPZ – 20121** is a two components polyamide cured zinc rich epoxy primer. This product has excellent corrosion resistance and adhesion. This product complies with composition and performance requirements of SSPC Paint 20 type II level 2 and ASTM D520 type II zinc dust.

**PROMASTIC PRIMTOP EPT-89000** is a two component high build epoxy primer and top coat (2 in 1) with excellent corrosion resistance. Tendency to chalk and yellowing in outdoor exposure does not influence from protective properties

**PROGUARD MIO EPU – 30200** is a two component epoxy with MIO (micaceous iron oxide). This product has excellent corrosion resistance and excellent adhesion with extended recoatability.

**PROTHANE TOP PUT-50800** is a two-component aliphatic polyurethane enamel used as a top coat. It provides good resistance to mild chemicals, spillage water, impact, and abrasion. It has excellent weather resistance such as non-chalking, non-yellowing and good color / gloss retention properties.

## \* Corrosivity Categories

Corrosivity category can be classified for environment into six categories based on ISO12944.

Corrosivity Category	Exterior	Interior
<b>C1 Very Low</b>		Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels
<b>C2 Low</b>	Atmospheres with low level of pollution; mostly rural areas	Unheated buildings where condensation can occur, e.g. depots, sports halls
<b>C3 Medium</b>	Urban and industrial atmospheres, moderate sulfur dioxide pollution coastal areas with low salinity	Production rooms with high humidity and some air pollution e.g. food-processing plants, laundries, breweries, dairies
<b>C4 High</b>	Industrial areas and coastal areas with moderate salinity	Chemical plants, swimming pools, coastal ships and boatyards
<b>C5 Very High</b>	Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity	Buildings or area with almost permanent condensation and with high pollution
<b>CX Extreme</b>	Offshore areas with high salinity and industrial areas with extreme humidity and aggressive atmosphere and subtropical and tropical atmospheres	Industrial areas with extreme humidity and aggressive atmosphere

## ■ Designed Durability

We offered durability of corrosion protection with 4 ranges in accordance to ISO 12944, which durability refers to the level of coating failure prior to first major maintenance painting. Minor regular maintenance should be carried out in order to achieve the required life of the design system to first major maintenance.

Low (L)	: < 7 years
Medium (M)	: 7 years to 15 years
High (H)	: 15 years to 25 years
Very high (VH)	: > 25 years

\*For detail system specification please consult with Propan

## ■ Aesthetic Finish Paint

Many choices of finish paint with variant gloss level and colors not only protecting steel from corrosion but also give aesthetic performance.

Type	Product	Color	UV Resistant	Chemical Resistant
Alkyd	PROLAC FINISH AKC-50600	Wide color selection in accordance to many international color code (e.g. RAL Standart, JIS, etc)	Good	-
Acrylic	PROCRYLIC ARC-50700		Very Good	-
Epoxy	PROGUARD TOP EPC-50100		-	Excellent
Polyurethane	PROTHANE PUT-50800		Excellent	Excellent

# Maintenance & Repair (Partial Refurbishment)

Many steel structures will degrade naturally due to environmental factors over the time if the steel is not protected properly. Maintenance and repair are needed to restore steel quality. In certain conditions, surface tolerant coatings are needed for maintenance / partial refurbishment.

## ■ PROMASTIC EPM-60110

PROMASTIC EPM-60110 is a two component modified epoxy surface tolerant paint for primer and finish. This product is used as anti corrosion paint for steel, tank externals, pipe line, piperack & support, bridges, etc.

## ■ PROMASTIC X-MOIST EPM-60300

PROMASTIC X-MOIST EPM-60300 is a two component modified epoxy surface and moisture tolerant paint. Suitable for primer coat to surface prepared by wet/slurry blasting or high pressure hydroblasting, may be applied slightly damp surface. This product is used as a rust inhibiting epoxy maintenance coating. It has excellent resistance for petroleum products, water, salt water, and selected chemicals.

# Special Primer

## Coating

### ■ Propan Etch Primer PEP-20900

One component Modified Epoxy Etch Primer with special corrosion inhibitor and phosphoric acid designed as a primer with high corrosion resistance at low thickness. It is suitable for properly prepared galvanized steel, stainless steel, aluminium substrates etc.



### ■ Propan Cold Galvanize Primer PGF-20580

Special one component phenoxy resin with Aluminium and Zinc content with good corrosion resistance for all irons, steel structures, pipe works, steel tanks and general marine applications. It can be used a repair system in the hot dip galvanizing.



### ■ PROSHOP EPP-20112

Epoxy based quick drying primer which has good temporary corrosion protection. Used as pre-construction primer on blast cleaned steel surfaces in automatic shop priming plants to protect steel during transport, storage and production.



### ■ PROSIL SP IOZ-70200 HQ

Self curing high build inorganic zinc silicate primer for the protection against corrosion with high zinc content (complies to SSPC Paint 20 Level 1), excellent solvent, abrasion resistance and can be used in atmospheric environments.

\*Inorganic Zinc Silicate Shop Primer also available (Prosil SP IOZ-70100).



# Heat Resistant Coating

Heat resistant coatings are designed to protect the surfaces in extreme temperature conditions from corrosion and breakage. Suitable for both new construction and as maintenance coating for petrochemical plants, power stations, off shore structures etc. We classified our product into two types, exposed to temperature up to 300 °C and up to 600 °C.



chimney

## PROTHERM PRIMER SCP-20300

PROTHERM PRIMER SCP-20300 is silicone based primer paint with resistance up to 600°C (non immersion).

This product used as primer conjunction with PROTHERM HR SCT-33000 or PROTHERM SCT-66000 coating on steel substrates in a wide range of industrial applications.

- Good anti-corrosion properties and overall durability.
- Air dries tack-free at room temperature.
- Achieves fully cured state on subsequent baking, normally achieved when coated component is brought in to services.

primer

## PROTHERM SCT-33000

PROTHERM SCT-33000 is silicone based heat resistance paint with resistance up to 300°C (non immersion).

Excellent weathering properties and overall durability.

Easy handling as dry / tack free in the room temperature.

Achieves fully cured state on subsequent baking during the operation. Room temperature cure version of Silicone Heat Resistant Paint is also available.

## PROTHERM SCT-66000

PROTHERM SCT-66000 is silicone based heat resistance paint with resistance up to 600°C (non immersion).

top coat

**Available colors : Alumunium, White, Red Oxide, Yellow Oxide, Green, Brown, Dark Brown & Black**



# Subsea, Splashzone, Abrasion Resistant Coating



## PROMASTIC X-FORCE EPM-60200

PROMASTIC X-FORCE EPM-60200 is a two component modified epoxy surface tolerant paint with an excellent abrasive resistance and cures fast. This product has excellent anti corrosion properties paint for any steel substrate with good scratch resistant.

## PROMASTIC X-SWEAT EPM-60500

PROMASTIC X-SWEAT EPM-60500 is a two component modified epoxy, applicable over damp or sweating substrate. It has excellent resistance for water, salt water, and selected chemicals. Excellent physical properties such as toughness, impact and abrasion resistant. It maybe used for structures in splashzone areas, chiller water pipe, water pressure pipes, pumps and others without stop of cargo or the operations.



## PROMASTIC GF EPM - 60400 / HB EPM - 60410

PROMASTIC GF EPM - 60400 / HB EPM - 60410 is a two component epoxy reinforced with glass flake, has excellent toughness, abrasion resistance, and impact resistance. It has excellent resistance for petroleum products, water, salt water and selected chemicals. As a rust inhibiting glass flake reinforced epoxy lining for splash zone, submerged area of offshore structures, inside of piping, floodgates, dam gates, etc.

Product	Sag Resistance
PROMASTIC GF EPM-60400	Up to 500 micron
PROMASTIC GF HB EPM-604100	Up to 1000 micron

# Tank Linings



## Benefit using Tank Linings:



**Asset Protection**  
Prolonging life of vessel



**Ecological**  
Preventing environmental damage due to tank leakage



**Cargo Protection**  
Steel corrosion products may affect the specification of stored products.

## Important Considerations for Tank Linings System Selection :

### • Steel condition

New Construction or Major Refurbishment

Steel Condition	Thin Film Condition	Heavy Duty Coating	Glass Reinforced Coating
 New Steel / Zero Pitting	✓	✓	✓
 Light Pitting	✓	✓	✓
 Moderate Pitting	✗	✓	✓
 Severe Pitting (structurally sound)	✗	✗	✓

### • Stored material (Cargo)

Chemical Composition\* (Type of Chemical & Concentration %)  
Acid Level (pH)  
Operating Temperature & Pressure

### • Life expectancy

Time to next major maintenance

### • Physical considerations

Type of storage tank (e.g Cone Roof, Floating Roof, Bullet Tank, etc)  
Size of tank  
Access to the site

\*for more details, please refer to latest Propan Chemical Resistance List

## Our Protank Series

- ✓ **PROTANK EPC-20500** is a epoxy holding primer for internal fresh water tank coating system
- ✓ **PROTANK FG EPC-50500** is a two-component phenolic/novolac epoxy coating with high resistance to a wide range of chemicals and solvents.
- ✓ **PROTANK EPC-50510** is a two-component of epoxy phenolic coating with anticorrosive protection and excellent physical properties such as adhesion, abrasion resistance. It is suitable for protection of tank interiors with high resistance to a wide range of chemicals, solvents as well as resistance to petroleum products, crude oil and weak acids.
- ✓ **PROTANK EPC-50510 GF** is a two-component of epoxy phenolic glass flake reinforced coating with anticorrosive protection and excellent physical properties such as adhesion, abrasion resistance. It is suitable for protection of tank interiors with high resistance to a wide range of chemicals, solvents as well as resistance to petroleum products, crude oil and weak acids.
- ✓ **PROTANK SF EPC-50520** is a two component, solvent free chemically resistant heavy duty epoxy tank linings. To provide corrosion protection to the internals of steel storage tanks containing a range of products, including crude oil, unleaded gasoline blends, MTBE, aviation fuels, and a selected range of aromatic and aliphatic solvents.
- ✓ **PROTANK DW EPC-50530** is a two component epoxy solvent free paint which can be applied to drinking water tanks. Excellent safety and hygiene, as it contain no heavy metals. This product has excellent toughness, glossy and smooth.

**propan**  
The Paint Specialist



Certificate ID03/0111



Certificate ID11/1102954057

Untuk informasi lebih lanjut, hubungi :  
For further information, please contact us :

**PROPAN INSPIRATION CENTER** : ■ **JAKARTA** : ■ **Satria** : Phone : (+62 21) 5680081, 5680082, Fax.: (+62 21) 5680153 | **PROPAN SANDIMAS HOME CENTER** : ■ **DENPASAR** : Phone : (+62 361) 8495080, Fax.: (+62 361) 419247 | **PROPAN SERVICE CENTER** : ■ **BANDUNG** : ■ **Soekarno Hatta** : Phone : (+62 22) 7507776, Fax.: (+62 22) 7500775 ■ **BALIKPAPAN** : Phone : (+62 542) 7212410, 7212411, Fax.: (+62 542) 7212064 ■ **BANJARMASIN** : Phone : (+62 511) 4229655, Fax.: (+62 511) 4229559 ■ **BATAM** : Telp.: (+62 778) 466438, Fax.: (+62 778) 7418769 ■ **BEKASI** : Phone : (+62 21) 88851727, 88851728, Fax.: (+62 21) 8842070 ■ **BOGOR** : Phone : (+62 251) 8652599, Fax.: (+62 251) 8653079 ■ **CIREBON** : Phone : (+62 231) 231825, Fax.: (+62 231) 237616 ■ **DENPASAR** : Phone/Fax.: (+62 361) 8495088 ■ **JAKARTA** : ■ **Kelapa Gading** : Phone : (+62 21) 4516377, 4516379, Fax.: (+62 21) 4517007 ■ **Fatmawati** : Phone : (+62 21) 7237851, 7237854, Fax.: (+62 21) 7237855 ■ **JEPARA** : Phone : (+62 291) 594372, 3319372, Fax.: (+62 291) 594372 ■ **LAMPUNG** : Phone : (+62 721) 704491, Fax.: (+62 721) 771001 ■ **MAKASSAR** : Phone : (+62 411) 8111036, Fax.: (+62 411) 8111037 ■ **MANADO** : Phone/Fax.: (+62 431) 8880585 ■ **MEDAN** : Phone : (061) 6620746, Fax.: (061) 6620748 ■ **PALEMBANG** : Phone : (+62 711) 715360, 715361, 5480083, Fax.: (+62 711) 715362 ■ **PONTIANAK** : Phone : (+62 561) 6598896, Fax.: (+62 561) 6598894 ■ **SAMARINDA** : Phone : (+62 541) 7074750, Fax.: (+62 541) 744293 ■ **SEMARANG** : Phone/Fax.: (+62 24) 3581023 ■ **SURABAYA** : ■ **Darmo** : Phone : (+62 31) 5684855, 5616828, Fax.: (+62 31) 5623622 ■ **RMI** : Phone : (+62 31) 5043536, 5041237, Fax.: (+62 31) 5055071 ■ **YOGYAKARTA** : Phone : (+62 274) 871044 ■ **E-mail** : info@propanraya.com ■ **website**: www.propanraya.com ■ @PropanRayaCC ■ propanraya

**DISTRIBUTOR** : ■ **BRUNEI DARUSSALAM, HIAP GUAN Sdn. Bhd** : Phone: +673-2429020 / 2427266, Fax.: +673-242 1653 ■ **MALAYSIA, SYN TAI HUNG TRADING Sdn. Bhd** : Phone: +603-2287 9221 / 2287 5218, Fax.: +603-22879225 ■ **MALAYSIA, ALKANA MALAYSIA. Sdn. Bhd** : Phone: +603-5162 5789 / 91 / 63, Fax.: +603-5162 5742 ■ **PHILIPPINES, SPURWAY ENTERPRISES** : Phone: +632-413 7124 / 26, Fax.: +632-7274128 ■ **MALDIVES, MAZIYA SERVICE Pvt Ltd** : Phone: +960-3336729 / 3326169, Fax.: +960-3336728 ■ **THAILAND, ADISAK TRADING Co. Ltd.** : Phone : +66-76-261 420-6, Fax.: +66-76-261 427 ■ **SINGAPORE, PAINTMART Pte. Ltd** : Phone : +65-6848 0746, Fax.: +65 6841 4172 ■ **VIETNAM, ALKANA, Thu Dau Mot City** : Phone : +084-0650 3635 330, Fax.: +84-0650 3635 339

BOOKLET/HEAVYINDUSTRY/ADT