PPG coating systems ISO 12944

2018 global system selector



Protective and marine coatings

Primary markets

Marine

Oil, Gas & Chemical

Civil infrastructure

Power

Mining

Rail

Plants & Facilities

PPG is widely recognized as a world leader in protective and marine coatings. We develop innovative, cutting-edge products and services that deliver value and protect customers' assets.

Our coatings are found around the world, protecting assets in a wide range of applications that include highly specialized, complex industries and the most demanding environments.

We're known for our commitment to providing high-quality, durable products; our high ethical standards, and our commitment to provide a safe, healthy, and fulfilling work environment for employees.



Pioneering technologies

Innovation never rests. We take proven technology and develop it further.

In addition to our standard and proven anticorrosive systems, substantial research and development investment is directed toward the innovation of:

- Passive protection for hydrocarbon fire and cryogenic protection of chemical, petrochemical, and offshore facilities; and cellulosic fire protection for infrastructure projects
- Heat resistant system and spray-on insulation coatings
- Chemical resistant tank linings for land storage tanks and commercial shipping
- Fouling protection on seagoing vessels, which can be either biocidal antifouling or biocide-free fouling release coatings
- High performance topcoats that provide ease of use and unsurpassed durability



Products in the System Selector:

- PPG AMERLOCK® 2
- PPG DIMETCOTE® 9
- PPG PSX® 700
- PPG SIGMACOVER® 410
- PPG SIGMADUR® 550 SERIES
- PPG SIGMAFAST™ 278
- PPG SIGMASHIELD® 880
- PPG SIGMAZINC™ 68 SP



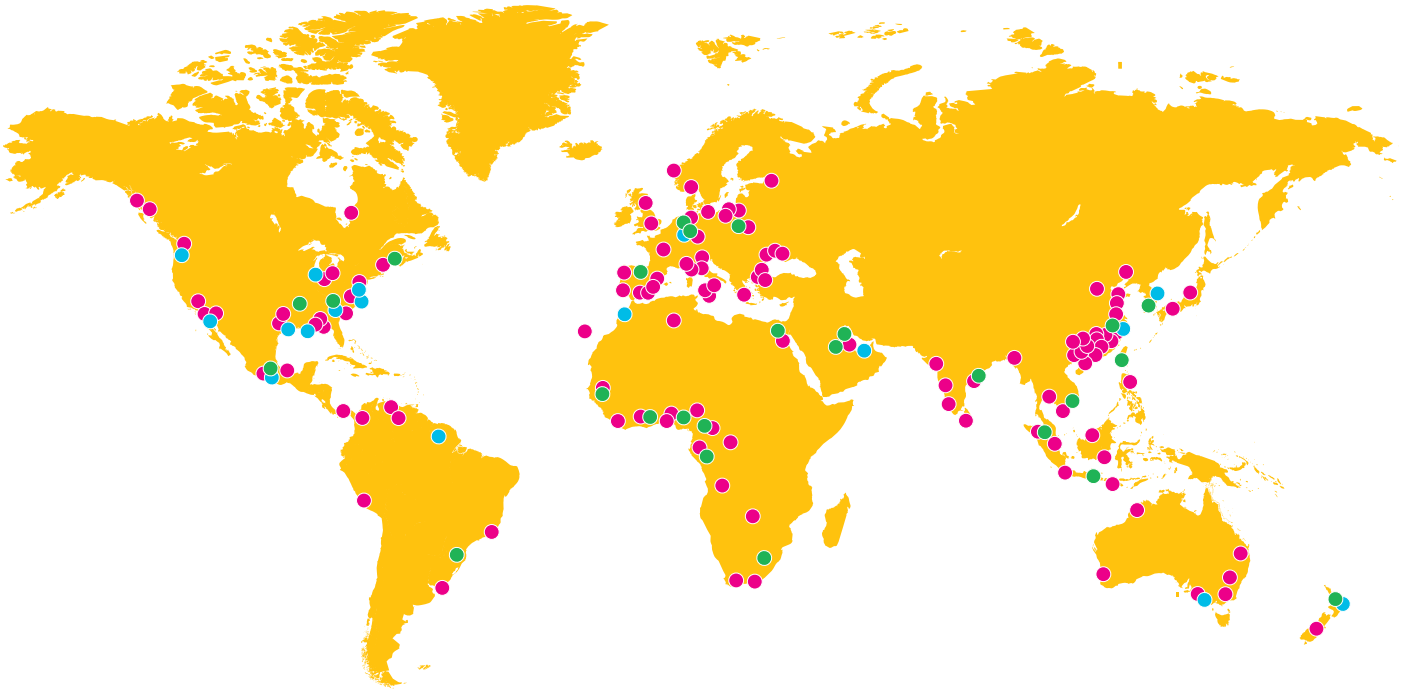
Worldwide locations

Global reach and local expertise

Although we do business in a global market, we serve our customers at a local level. Our account managers and customer service teams operate from locations in every part of the world, giving our customers complete support when and where they need it. Our strategically located storage depots and color network centers support this function to provide worldwide service that is second to none.



- Manufacturing
- Stock point
- Hub / distribution center



Supply and logistics

Quick deliveries

We have over 120 stock points, 15 hub and distribution centers, and 34 manufacturing facilities spread across all continents. This enables us to provide a worldwide delivery service that is both fast and reliable.

World-class manufacturing facilities

Our state-of-the-art manufacturing facilities and laboratories are regularly assessed to guarantee consistent product quality and performance worldwide.

Global technology centers

Our research and development is globally integrated, with laboratory locations and scientists in the primary regions where we operate. This model combines global technology centers with local business support.

Service and support

Delivering customer value every time

Customer value is a core principle that drives all our actions. You will find us easy to work with, friendly and professional, with a genuine desire to deliver improved value at all times.

Global support

We have account managers and customer service teams located throughout the world, so wherever you operate you will have access to local support and expertise.



Finding the correct ISO 12944 corrosion protection is as easy as 1,2,3.

Use the System Selector to find the correct PPG protection system for ISO 12944 compliance. There are three steps:

1. Define the corrosion environment category
2. Determine the ISO durability requirement
3. Select system based on project requirements

With these parameters, you can use the tables on pages 7-12 to choose the ISO 12944 corrosion protection system that's right for your job.

Importance of ISO 12944

ISO 12944 is an international standard on corrosion protection of steel structures by protective paint systems.

ISO 12944 is giving guidelines for the selection of paints available for different environments and different surface preparation grades, and the durability grade to be expected. It will avoid difficulties and misunderstandings between the parties concerned with the practical implementation of protection work.

Working with ISO 12944 will ensure the customer has:

- An effective corrosion protection
- An objective approach to select the coating system





Step 1: Define the corrosion category that matches your project's environment.

Corrosion category	Exterior	Interior
C1	Exterior conditions not applicable	Heated buildings with clean atmospheres, for example, offices, shops, schools, hotels
C2	Atmospheres with low level of pollution, mostly rural areas	Uncoated buildings where condensation can occur, for example, depots, sports halls
C3	Urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity	Production rooms with high humidity and some air pollution, for example, food processing plants, laundries, breweries, dairies
C4	Industrial areas and coastal areas with moderate salinity	Chemical plants, swimming pools, coastal ships and boatyards
C5	Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity	Buildings or areas with almost permanent condensation and with high pollution

Step 2: Determine your ISO durability requirement.

Durability

Main factors influencing durability choice:

- Atmospheric conditions
- Structure design
- Accessibility of asset
- Application conditions

Durability is a technical consideration and planning parameter that can help you set up a realistic maintenance program by determining the expected life of a protective paint system from application to the first major maintenance painting. ISO categories for durability (L, M, H and VH) are defined in the table.

Durability	Years to first major maintenance
Low (L)	Up to 7 years
Medium (M)	7 years to 15 years
High (H)	15 years to 25 years
Very High (VH)	More than 25 years



How to find the best PPG coating system.

This chart can help you decide which coating is best for your project needs; simply follow the steps outlined below.

Process:	Example:
Select: **1 Corrosion category**	Industrial areas and coastal areas with moderate salinity
Select: **2 Durability**	20 years expected before first major maintenance
Select: **3 System**	Take into account the combination of dry times, gloss / color retention and number of coats that best match the needs of the project.

Step 3: Select system based on project requirements

Coatings and applications

Once you have defined the project's corrosion environment and durability requirements, reference the charts on pages 7-12 to select the best PPG coating system for ISO Sa 2½ grit blasted carbon steel based on your specific project requirements.





System Selection:

Selecting the most accurate parameters defines which paint system will fill your specific project needs and requirements.

C1 C2 C3 **C4** C5

+

Low Medium **High** Very High

+

Fast dry: ★★★
Aesthetic durability: ★★★

=



System Selection:
C4.06/3

PPG SIGMAFAST 278:
60 µm / 2.4 mils

PPG PSX 700:
125 µm / 5 mils

C2 coating systems

C2 Low corrosion

High durability

System	Layer 1			Layer 2			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C2.05/1*	EP	PPG SIGMAFAST 278	150	–	–	–	1	150	★★★	★	★★★
C2.05/2*	–	–	–	POL	PPG PSX 700	125	1	125	★★	★★★	★★
C2.05/3*	EP	PPG SIGMAFAST 278	100	PUR	PPG SIGMADUR 550H	50	2	150	★	★★	★★

Very high durability

System	Layer 1			Layer 2			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic Type	Finish coat	DFT (µm)					
C2.06/1	EP	PPG SIGMAFAST 278	150	–	–	–	1	150	★★★	★	★★★
C2.06/2	–	–	–	POL	PPG PSX 700	125	1	125	★★	★★★	★★
C2.06/3	EP	PPG SIGMAFAST 278	100	PUR	PPG SIGMADUR 550H	50	2	150	★	★★	★★
C2.06/4*	EP	PPG SIGMAFAST 278	60	POL	PPG PSX 700	125	2	185	★	★★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system: ★★★ : ≤ 4 hrs; ★★: ≤ 6 hrs; ★: > 8 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ POL; ★★: PUR; ★: EP

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 1 coat EP; ★★: 1 coat POL / 2 coat EP + PUR; ★: 2 coat EP + POL



DFT: Dry Film Thickness
EP: Epoxy primer / Buildcoat
ESI: Ethyl silicate zinc rich primer
MIO: Micaceaous Iron Oxide
POL: Polysiloxane topcoat
PUR: Polyurethane topcoat
ZnR: Zinc rich epoxy primer

C3 coating systems

C3 Medium corrosion

Medium durability

System	Layer 1			Layer 2			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C3.05/1*	EP	PPG SIGMAFAST 278	150	–	–	–	1	150	★★★	★	★★★
C3.05/2*	–	–	–	POL	PPG PSX 700	125	1	125	★★	★★★	★★
C3.05/3*	EP	PPG SIGMAFAST 278	100	PUR	PPG SIGMADUR 550H	50	2	150	★	★★	★★

High durability

System	Layer 1			Layer 2			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C3.06/1	EP	PPG SIGMAFAST 278	150	–	–	–	1	150	★★★	★	★★★
C3.06/2	–	–	–	POL	PPG PSX 700	125	1	125	★★	★★★	★★
C3.06/3	EP	PPG SIGMAFAST 278	100	PUR	PPG SIGMADUR 550H	50	2	150	★	★★	★★
C3.06/4*	EP	PPG SIGMAFAST 278	60	POL	PPG PSX 700	125	2	185	★	★★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system: ★★★ : ≤ 4 hrs; ★★: ≤ 6 hrs; ★: > 8 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ POL; ★★: PUR; ★: EP

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 1 coat EP; ★★: 1 coat POL / 2 coat EP + PUR; ★: 2 coat EP + POL

Very high durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C3.07/1	EP	PPG SIGMAFAST 278	100	EP	PPG SIGMAFAST 278	100	–	–	–	2	200	★★★	★	★★★
C3.07/2	EP	PPG SIGMAFAST 278	170	–	–	–	PUR	PPG SIGMADUR 550H	50	2	220	★★	★★	★★
C3.07/3	EP	PPG SIGMAFAST 278	60	–	–	–	POL	PPG PSX 700	125	2	185	★★★	★★★	★★
C3.07/4*	EP	PPG AMERLOCK 2	175	–	–	–	PUR	PPG SIGMADUR 550US	75	2	250	★★	★★	★★
C3.07/5*	EP	PPG AMERLOCK 2	175	–	–	–	POL	PPG PSX 700	75	2	250	★★	★★★	★★
C3.10/1	ZnR	PPG SIGMAZINC 68 SP	50	–	–	–	POL	PPG PSX 700	100	2	150	★★★	★★★	★★
C3.10/2	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMAFAST 278	80	PUR	PPG SIGMADUR 550H	50	3	180	★	★★	★
C3.10/3*	ZnR	PPG SIGMAZINC 68 SP	60	EP MIO	PPG SIGMACOVER 410 MIO	100	PUR	PPG SIGMADUR 550H	60	3	220	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 12 hrs; ★★: ≤ 16 hrs; ★: > 20 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 2 coat EP; ★★: 1 coat EP + PUR or POL; ★: 3 coat system

C4 coating systems

C4 High corrosion

Low durability

System	Layer 1			Layer 2			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Finish coat	DFT (µm)			~	👁	💵
C4.04/1*	EP	PPG SIGMAFAST 278	150	–	–	–	1	150	★★★	★	★★★
C4.04/2*	–	–	–	POL	PPG PSX 700	125	1	125	★★	★★★	★★
C4.04/3*	EP	PPG SIGMAFAST 278	100	PUR	PPG SIGMADUR 550H	50	2	150	★	★★	★★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

~ **Fast dry:** dry to handle times for full system: ★★★ : ≤ 4 hrs; ★★: ≤ 6 hrs; ★: > 8 hrs @ 20 °C (68 °F)

👁 **Aesthetic durability:** gloss and color retention that can be expected for the technology of the final coat: ★★★ *PPG PSX*; ★★: PUR; ★: EP

💵 **Economical:** based on Number of Coats and cost effectiveness of the products: ★★★: 1 coat EP; ★★: 1 coat *PPG PSX* / 2 coat EP + PUR; ★: 2 coat EP + *PPG PSX*

Medium durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)			~	👁	💵
C4.05/1	EP	PPG SIGMAFAST 278	150	–	–	–	–	–	–	1	150	★★★	★	★★★
C4.05/2	–	–	–	–	–	–	POL	PPG PSX 700	125	1	125	★★★	★★★	★★★
C4.05/3	EP	PPG SIGMAFAST 278	100	–	–	–	PUR	PPG SIGMADUR 550H	50	1	150	★	★★	★★
C4.05/4*	EP	PPG SIGMAFAST 278	60	–	–	–	POL	PPG PSX 700	125	1	185	★★	★★★	★★
C4.09/1	ZnR	PPG SIGMAZINC 68 SP	50	–	–	–	POL	PPG PSX 700	100	1	150	★★	★★★	★
C4.09/2*	ZnR	PPG SIGMAZINC 68 SP	50	–	PPG SIGMAFAST 278	80	PUR	PPG SIGMADUR 550H	50	2	180	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number Of Coats requirements

~ **Fast dry:** dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 6 hrs; ★★: ≤ 12 hrs; ★: > 16 hrs @ 20 °C (68 °F)

👁 **Aesthetic durability:** gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

💵 **Economical:** based on number of coats and cost effectiveness of the products: ★★★ 1 coat system; ★★: 2 coat EP system; ★: ZnR systems



DFT: Dry Film Thickness
EP: Epoxy primer / Buildcoat
ESI: Ethyl silicate zinc rich primer
MIO: Micaceaous Iron Oxide
POL: Polysiloxane topcoat
PUR: Polyurethane topcoat
ZnR: Zinc rich epoxy primer

C4 coating systems

C4 High corrosion

High durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C4.06/1	EP	PPG SIGMAFAST 278	100	EP	SIGMAFAST 278	100	–	–	–	2	200	★★★	★	★★★
C4.06/2*	EP	PPG SIGMAFAST 278	170	–	–	–	PUR	PPG SIGMADUR 550H	50	2	220	★★	★★	★★
C4.06/3	EP	PPG SIGMAFAST 278	60	–	–	–	POL	PPG PSX 700	125	2	185	★★★	★★★	★★
C4.06/4*	EP	PPG AMERLOCK 2	175	–	–	–	PUR	PPG SIGMADUR 550US	75	2	250	★★	★★	★★
C4.06/5*	EP	PPG AMERLOCK 2	175	–	–	–	POL	PPG PSX 700	75	2	250	★★	★★★	★★
C4.10/1	ZnR	PPG SIGMAZINC 68 SP	50	–	–	–	POL	PPG PSX 700	100	2	150	★★★	★★★	★★
C4.10/2*	ZnR	PPG SIGMAZINC 68 SP	75	–	–	–	POL	PPG PSX 700	125	2	200	★★★	★★★	★★
C4.10/3	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMAFAST 278	80	PUR	PPG SIGMADUR 550H	50	3	180	★	★★	★
C4.10/4*	ZnR	PPG SIGMAZINC 68 SP	60	EP MIO	PPG SIGMACOVER 410 MIO	100	PUR	PPG SIGMADUR 550H	60	3	220	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 12 hrs; ★★: ≤ 16 hrs; ★: > 20 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 2 coat EP; ★★: 1 coat (ZnR) EP + PUR or POL; ★: 3 coat system

Very high durability

System	Layer 1			Layer 2			Layer 2			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C4.07/1	EP	PPG SIGMAFAST 278	125	EP	PPG SIGMAFAST 278	125	–	–	–	2	250	★★★	★	★★★
C4.07/2	EP	PPG SIGMAFAST 278	200	–	–	–	PUR	PPG SIGMADUR 550H	80	2	280	★★	★★	★★
C4.07/3*	EP	PPG SIGMAFAST 278	120	EP	PPG SIGMAFAST 278	120	PUR	PPG SIGMADUR 550H	80	3	320	★	★★	★
C4.07/4	EP	PPG SIGMASHIELD 880	300	–	–	–	–	–	–	1	300	★★★	★	★★★
C4.11/1	ZnR	PPG SIGMAZINC 68 SP	75	–	–	–	POL	PPG PSX 700	125	2	200	★★	★★★	★★
C4.11/2*	ZnR	PPG SIGMAZINC 68 SP	60	EP	PPG SIGMAFAST 278	160	PUR	PPG SIGMADUR 550H	50	3	270	★	★★	★
C4.11/3*	ZnR	PPG SIGMAZINC 68 SP	60	EP MIO	PPG SIGMACOVER 410 MIO	180	PUR	PPG SIGMADUR 550H	80	3	320	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 8 hrs; ★★: ≤ 16 hrs; ★: > 20 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 1 or 2 coat EP; ★★: 1 coat (ZnR) EP + PUR or POL; ★: 3 coat system

C5 coating systems

C5 Very high corrosion

Low durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C5.01/1	EP	PPG SIGMAFAST 278	150	–	–	–	–	–	–	1	150	★★★	★	★★★
C5.01/2	–	–	–	–	–	–	POL	PPG PSX 700	125	1	125	★★★	★★★	★★★
C5.01/3	EP	PPG SIGMAFAST 278	100	–	–	–	PUR	PPG SIGMADUR 550H	50	2	150	★	★★	★★
C5.01/4*	EP	PPG SIGMAFAST 278	60	–	–	–	POL	PPG PSX 700	125	2	185	★★	★★★	★★
C5.05/1	ZnR	PPG SIGMAZINC 68 SP	50	–	–	–	POL	PPG PSX 700	100	2	150	★★	★★★	★
C5.05/2*	ZnR	PPG SIGMAZINC 68 SP	50	–	PPG SIGMAFAST 278	80	PUR	PPG SIGMADUR 550H	50	3	180	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 6 hrs; ★★: ≤ 12 hrs; ★: > 16 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 1 coat system; ★★: 2 coat EP system; ★: ZnR systems

Medium durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C5.02/1	EP	PPG SIGMAFAST 278	100	EP	PPG SIGMAFAST 278	100	–	–	–	2	200	★★★	★	★★★
C5.02/2*	EP	PPG SIGMAFAST 278	125	EP	PPG SIGMAFAST 278	125	–	–	–	2	250	★★★	★	★★★
C5.02/3	EP	PPG SIGMAFAST 278	170	–	–	–	PUR	PPG SIGMADUR 550H	50	2	220	★★	★★	★★
C5.02/4*	EP	PPG SIGMAFAST 278	200	–	–	–	PUR	PPG SIGMADUR 550H	80	2	280	★★	★★	★★
C5.02/5	EP	PPG SIGMAFAST 278	60	–	–	–	POL	PPG PSX 700	125	2	185	★★★	★★★	★★
C5.02/6*	EP	PPG AMERLOCK 2	175	–	–	–	PUR	PPG SIGMADUR 550US	75	2	250	★★	★★	★★
C5.02/7*	EP	PPG AMERLOCK 2	175	–	–	–	POL	PPG PSX 700	75	2	250	★★	★★★	★★
C5.06/1	ZnR	PPG SIGMAZINC 68 SP	50	–	–	–	POL	PPG PSX 700	100	2	150	★★★	★★★	★★
C5.06/2*	ZnR	PPG SIGMAZINC 68 SP	75	–	–		POL	PPG PSX 700	125	2	200	★★★	★★★	★★
C5.06/3	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMAFAST 278	80	PUR	PPG SIGMADUR 550H	50	3	180	★	★★	★
C5.06/4*	ZnR	PPG SIGMAZINC 68 SP	60	EP MIO	PPG SIGMACOVER 410 MIO	100	PUR	PPG SIGMADUR 550H	60	3	220	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 12 hrs; ★★: ≤ 16 hrs; ★: > 20 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 2 coat EP; ★★: 1 coat (ZnR) EP + PUR or POL; ★: 3 coat system

DFT: Dry Film Thickness
EP: Epoxy primer / Buildcoat
ESI: Ethyl silicate zinc rich primer
MIO: Micaceaous Iron Oxide
POL: Polysiloxane topcoat
PUR: Polyurethane topcoat
ZnR: Zinc rich epoxy primer

C5 coating systems

C5 Very high corrosion

High durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C5.03/1	EP	PPG SIGMAFAST 278	125	EP	PPG SIGMAFAST 278	125	–	–	–	1	250	★★★	★	★★★
C5.03/2	EP	PPG SIGMAFAST 278	200	–	–	–	PUR	PPG SIGMADUR 550H	80	1	280	★★	★★	★★
C5.03/3*	EP	PPG SIGMAFAST 278	120	EP	PPG SIGMAFAST 278	120	PUR	PPG SIGMADUR 550H	80	1	320	★	★★	★
C5.03/5	EP	PPG SIGMASHIELD 880	300	–	–	–	–	–	–	1	300	★★★	★	★★★
C5.07/1	ZnR	PPG SIGMAZINC 68 SP	75	–	–	–	POL	PPG PSX 700	125	1	200	★★	★★★	★★
C5.07/2*	ZnR	PPG SIGMAZINC 68 SP	60	EP	PPG SIGMAFAST 278	160	PUR	PPG SIGMADUR 550H	50	3	270	★	★★	★
C5.07/3*	ZnR	PPG SIGMAZINC 68 SP	60	EP MIO	PPG SIGMACOVER 410 MIO	180	PUR	PPG SIGMADUR 550H	80	3	320	★	★★	★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 8 hrs; ★★: ≤ 16 hrs; ★: > 20 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: 1 or 2 coat EP; ★★: 1 coat (ZnR) EP + PUR or *PPG PSX*; ★: 3 coat system

Very high durability

System	Layer 1			Layer 2			Layer 3			Number of coats	Total system DFT (µm)	Advantages		
	Generic type	Primer coat	DFT (µm)	Generic type	Intermediate coat	DFT (µm)	Generic type	Finish coat	DFT (µm)					
C5.08/1*	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMAFAST 278	220	PUR	PPG SIGMADUR 550	50	3	320	★★★	★★	★★★
C5.08/2*	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMACOVER 410	200	PUR	PPG SIGMADUR 550H	70	3	320	★★	★★	★★★
C5.08/3*	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMAFAST 278	195	POL	PPG PSX 700	75	3	320	★★★	★★★	★★
C5.08/4*	ZnR	PPG SIGMAZINC 68 SP	50	EP	PPG SIGMACOVER 410	195	POL	PPG PSX 700	75	3	320	★★	★★★	★★
C5.08/5*	ESI	PPG DIMETCOTE 9	50	EP	PPG SIGMAFAST 278	220	PUR	PPG SIGMADUR 550	50	3	320	★	★★	★★
C5.08/6*	ESI	PPG DIMETCOTE 9	50	EP	PPG SIGMACOVER 410	200	PUR	PPG SIGMADUR 550H	70	3	320	★	★★	★★

* Also complies with ISO 12944-5:2018 min. Dry Film Thickness and Minimum Number of Coats requirements

Fast dry: dry to handle times for full system (calculated with 2 hrs application between layers): ★★★ : ≤ 16 hrs; ★★: ≤ 26 hrs; ★: > 30 hrs @ 20 °C (68 °F)

Aesthetic durability: gloss and color retention that can be expected for the technology of the final coat: ★★★ Polysiloxane; ★★: Polyurethane; ★: Epoxy

Economical: based on Number of Coats and cost effectiveness of the products: ★★★: system with PUR; ★★: system with ESI primer or POL topcoat ★: system with ESI and *PPG PSX* topcoat



PPG products for ISO 12944 coating systems

Zinc primers

PPG DIMETCOTE® 9
Two-component, moisture-curing zinc (ethyl) silicate coating

- Complies with the compositional requirements of SSPC-Paint 20, Level 1
- Suitable as a system primer in various paint systems based on unsaponifiable binders
- When suitably topcoated provides excellent corrosion protection for steel substrates up to 540°C (1000°F)

PPG SIGMAZINC™ 68 SP
Two-component, high solids, polyamine adduct-cured, zinc rich epoxy primer

- Designed as a system primer in various paint systems for aggressive environments
- Quick-drying, can be overcoated after a short interval
- Complies with the compositional requirements of ISO 12944–5

Primers and intermediate coats

PPG AMERLOCK® 2
Two-component, high solids epoxy coating

- Low-temperature curing down to 0°C (32°F)
- High performance self-priming universal epoxy
- Surface tolerant and abrasion resistant

PPG SIGMACOVER® 410
Two-component, high solids, high-build, polyamide cured epoxy coating

- General-purpose epoxy buildcoat in protective coating systems, for steel and concrete structures exposed to atmospheric land or marine conditions
- Can be recoated with various two-component and conventional coatings, even after long weathering periods
- Easy application by airless spray

PPG SIGMAFAST™ 278
Two-component, high solids, zinc phosphate epoxy primer and buildcoat

- Excellent corrosion resistance in atmospheric exposure
- Cures at temperatures down to -5°C (23°F)
- Speed curing in steel fabrication

PPG SIGMASHIELD® 880
Two-component, high-build, polyamine adduct-cured epoxy coating

- Primarily designed for use in offshore splash zone maintenance
- Excellent corrosion resistance
- Long-term protection in a single-coat application

Finishes

PPG SIGMADUR® 550 SERIES
Two-component, aliphatic acrylic polyurethane finish

- Excellent resistance to atmospheric exposure conditions
- Non-chalking, non-yellowing
- Cures at temperatures down to -5°C (23°F)

PPG PSX® 700
Two-component, engineered siloxane coating

- Unique, high gloss, isocyanate-free solution
- Excellent color and gloss retention
- Applied by brush, roller or spray, without thinning
- Good resistance to splash and spillage of chemicals



DFT: Dry Film Thickness
EP: Epoxy primer / Buildcoat
ESI: Ethyl silicate zinc rich primer
MIO: Micaceaous Iron Oxide
POL: Polysiloxane topcoat
PUR: Polyurethane topcoat
ZnR: Zinc rich epoxy primer

Product specifications

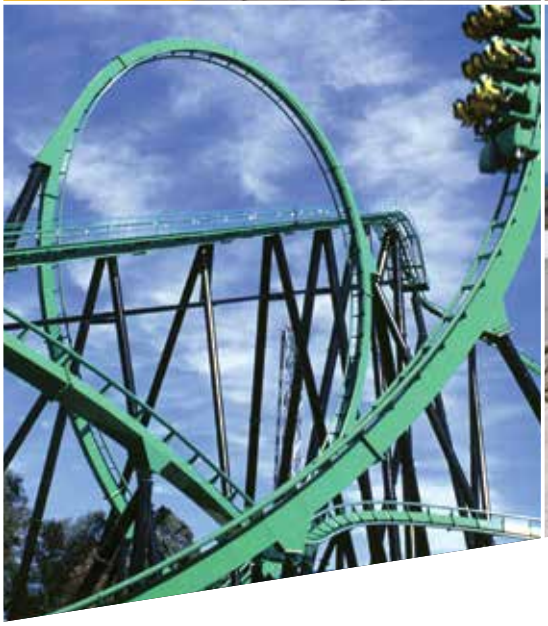
Product	Generic type	Volume solids	VOC (SED) g/kg	VOC (EPA) g/l	VOC (EPA) lb/US gal
PPG DIMETCOTE 9	ESI	63 ± 3 %	221	480	4.0
PPG SIGMAZINC 68 SP	ZnR	70 ± 2 %	106	310	2.5
PPG AMERLOCK 2	EP	85 ± 2 %	114	180	1.5
PPG SIGMACOVER 410	EP MIO	80 ± 2 %	126	240	2.0
PPG SIGMAFAST 278	EP	80 ± 2 %	153	220	1.8
PPG SIGMASHIELD 880	EP	85 ± 2 %	122	200	1.7
PPG SIGMADUR 550	PUR	55 ± 2 %	334	–	–
PPG SIGMADUR 550 H	PUR	70 ± 2 %	220	–	–
PPG SIGMADUR 550 US	PUR	67 ± 2 %	–	312	2.6
PPG PSX 700	POL	90 ± 2 %	119	84	0.7



Contains free isocynate	Min. substrate Temp	Min. overcoating time with Epoxy @ 20 °C (68 °F)	Min. overcoating time with PUR and POL @ 20 °C (68 °F)	Max. overcoating time @ 20 °C (68 °F)	Dry to handle time @ 20 °C (68 °F)	Pot life @ 20 °C (68 °F)	DFT range (µm)	DFT range (mils)
No	- 18 °C (0 °F)	24 hrs	24 hrs	Unlimited	30 min	8 hrs	50 - 100	2.0 - 4.0
No	0 °C (32 °F)	3 hrs	3 hrs	3 months	4 hrs	8 hrs	50 - 100	2.0 - 4.0
No	0 °C (32 °F)	6 hrs	6 hrs	1 month	5 hrs	1 hr	100 - 200	4.0 - 8.0
No	5 °C (41 °F)	8 hrs	8 hrs	Extended	8 hrs	6 hrs	75 - 200	3.0 - 8.0
No	- 5 °C (23 °F)	2 hrs	2 hrs	Unlimited	4 hrs	1 hr	75 - 250	3.0 - 10.0
No	- 5 °C (23 °F)	3.5 hrs	10 hrs	14 days	8 hrs	2 hrs	200 - 1000	8.0 - 40.0
Yes	- 5 °C (23 °F)	–	6 hrs	Unlimited	6 hrs	5 hrs	50 - 60	2.0 - 2.4
Yes	- 5 °C (23 °F)	–	8 hrs	Unlimited	12 hrs	2.5 hrs	50 - 150	2.0 - 6.0
Yes	- 7 °C (20 °F)	–	4 hrs	Unlimited	8 hrs	4 hrs	50 - 75	2.0 - 3.0
No	0 °C (32 °F)	–	4.5 hrs	Unlimited	6 hrs	4 hrs	75 - 175	3.0 - 7.0








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