



**NIPPON
PAINT**



ISO 12944-2019

Coating Selection Guide



Nippon Paint Singapore

An affiliate of Nippon Paint Japan and part of the Nipsea Group, Nippon Paint was established in Singapore in 1962. Today, it is one of the nation's leading paint manufacturers and enjoys an unsurpassed reputation for quality and innovation.

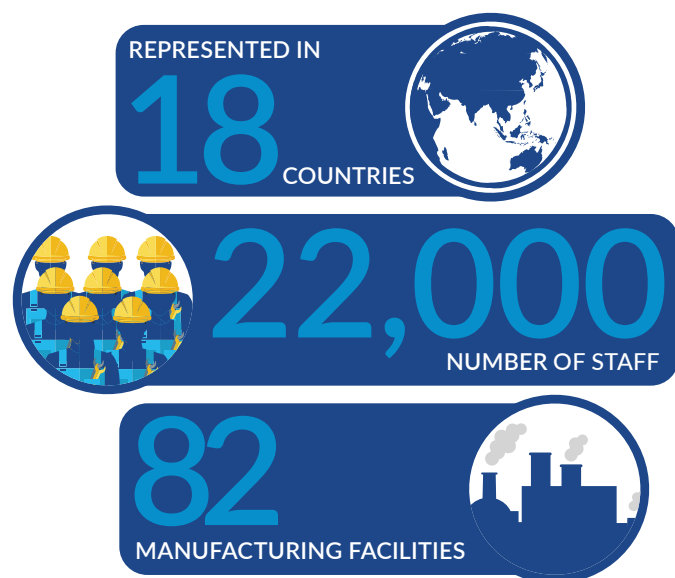
Nippon Paint Singapore combines in-depth local market knowledge with the global resources of the Nipsea Group. With 82 manufacturing facilities in 18 countries, the Group produces close to a billion litres of paints and coatings per annum.

In accordance with the Group's stringent quality control, Nippon Paint Singapore manufactures and markets a comprehensive range of paints that provide end-to-end solutions for virtually all painting needs, from residential interiors and exteriors to demanding industrial applications.

The company enforces a strict Quality, Environmental, Health and Safety Management System (QEHSMS) committed to the prevention of pollution, injury, ill health and exposure to hazards. Its policies protect all those who work directly or indirectly for the organisation.

Guided by core values of integrity, resourcefulness and the pursuit of excellence, Nippon Paint Singapore has blazed a trail for the painting industry with the launch of a series of first-in-Singapore functional painting products that not only beautify but protect the environment and the people in it.

An impressive portfolio of major projects, in infrastructure, oil and gas petrochemicals, attests the trust and confidence invested in the brand by leading project developers, architects and Government bodies.



Cert No. 97/0009
SS ISO 14001: 2004



Cert No. 92-2-0044
SS ISO 9001: 2000



Cert No. OHS-2005-0197
OHSAS 18001: 1999



Environmentally Friendly
No Lead Added
No Mercury Added



SGBC
LEADER

ISO 12944

A globally recognised standard for corrosion protection

The ISO 12944 standard aims to assist engineers and corrosion experts in adopting best practices in corrosion protection of structural steel in new constructions. It is a widely adopted and globally accepted industry standard, recognised by specifiers worldwide.

Whether in the open air, immersed in water or surrounded by soil, all unprotected steel is subject to corrosion which will eventually undermine its structural integrity. Corrosion protection will help optimise the performance and maximise the lifetime of the steel structure to which it is applied.

Selecting a coating system that complies with ISO 12944 provides you with the confidence that the corrosion protection you specify will fulfil your project and purpose.

To select the correct coating system for your project and purpose, first consider the environment and then the desired durability.

1

SELECT
ENVIRONMENT



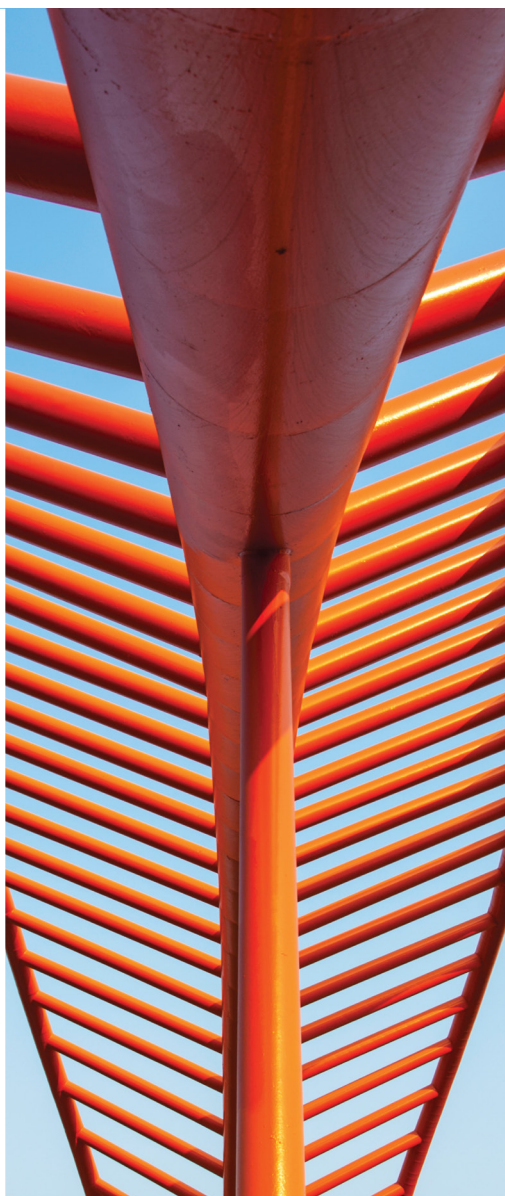
2

SELECT
DURABILITY



3

SELECT
COATING SYSTEM



1 Select the Environment



Environment can be classified into the following atmospheric and immersed categories.

The examples listed are informative and might occasionally be misleading. Only actual measurement of mass or thickness loss will give the correct classification.

TABLE 1: ATMOSPHERIC CORROSIVITY CATEGORIES AND EXAMPLES OF TYPICAL ENVIRONMENTS

Corrosivity Category	EXTERIOR	INTERIOR
C1 VERY LOW	—	Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels
C2 LOW	Atmospheres with low level of pollution: mostly rural areas	Unheated buildings where condensation can occur, e.g. depots, sports halls
C3 MEDIUM	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
C4 HIGH	Industrial areas and coastal areas with moderate salinity	Chemical plants, swimming pools, coastal ships and boatyards
C5 VERY HIGH	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
CX EXTREME	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

Note: Corrosivity categories can also be estimated by considering the combined effect of the following environment factors: yearly time of wetness, yearly mean concentration of sulfur dioxide and yearly mean deposition of chloride (see ISO 9223). The loss values used for the corrosivity categories are identical to those given in ISO 9223.



For structures immersed in water or buried in soil, corrosion is normally local in nature and corrosivity categories are difficult to define. However, for the purpose of this document, various environments can be described. In Table 2, four different environments are given together with their designations.

TABLE 2: CATEGORIES FOR WATER AND SOIL

Category	ENVIRONMENT	EXAMPLES OF ENVIRONMENT AND STRUCTURES
IM1	Fresh water	River installations, hydro-electronic power plants
IM2	Sea or brackish water	Immersed structures without cathodic protection (e.g. harbour areas with structures like sluice gates, locks or jetties)
IM3	Soil	Buried tanks, steel piles, steel pipes
IM4	Sea or brackish water	Immersed structures with cathodic protection (e.g. offshore structures)

Note: For corrosivity category IM1 and IM3, cathodic protection can be used with a paint system tested accordingly.

2 Select the Durability



Durability relates to the performance of the coating system before first major maintenance. Minor regular maintenance should be carried out in order to achieve the required life of the design system to first major maintenance (note that durability does not equate to a guarantee time).

DURABILITY	YEARS TO FIRST MAJOR MAINTENANCE
LOW (L)	Up to 7 years
MEDIUM (M)	7 to 15 years
HIGH (H)	15 to 25 years
VERY HIGH (VH)	More than 25 years

COMMON DURABILITY CONSIDERATIONS



3 Select the ISO 12944 Compliant System

ABBREVIATED TERMS AND DESCRIPTIONS

Type of Primer	ABBREVIATED TERM	DESCRIPTION		
	Zn(R)	Zinc Rich Primer The usual nominal dry film thickness varies from 40 µm up to 80 µm		
Binder Base for Primers and Subsequent Coats		Main Binder	Type	Water-borne Possible
	AK	Alkyd	Single Pack	X
	AY	Acrylic	Single Pack	X
	EP	Epoxy	Two Pack	X
	PUR	Polyurethane	Single or Two Pack	X
	ESI	Ethyl Silicate	Single or Two Pack	

TABLE 1: PAINT SYSTEMS ON CARBON STEEL FOR CORROSIVITY CATEGORY C2

System No		PRIMER COAT				SUBSEQUENT COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
C2.01	#1	HI-ALKYD 1401	AK	1	80	-	-	-	-	1	80	•			
	#2	HI-ALKYD 1406	AK	1	40	HI-ALYKD 1501	AK	1	40	2	80	•			
C2.02	#1	HI-ALKYD 1401	AK	1	60	HI-ALYKD 1501	AK	1	40	2	100	•	•		
	#2	HI-ALKYD 1402	AK	1	60	HI-ACRYL 1901	AY	1	40	2	100	•	•		
C2.03	#1	HI-ALKYD 1401	AK	1	100	HI-ALYKD 1501	AK	1	60	2	160	•	•	•	
	#2	HI-ALKYD 1402	AK	1	100	HI-ACRYL 1901	AY	1	60	2	160	•	•	•	
C2.04	#1	HI-ALKYD 1401	AK	2	80	HI-ALYKD 1501	AK	1	40	3	200	•	•	•	•
	#2	HI-ALKYD 1402	AK	2	80	HI-ACRYL 1901	AY	1	40	3	200	•	•	•	•
C2.05	#1	HI-PON 20-03	EP	1	60	HI-PON 50-01	PUR	1	60	2	120	•	•	•	
	#2	HI-PON 20-10	EP	1	60	HI-PON 40-04	EP	1	60	2	120	•	•	•	
C2.06	#1	HI-PON 20-04	EP	1	120	HI-PON 50-01	PUR	1	60	2	180	•	•	•	•
	#2	HI-PON 20-07	EP	1	120	HI-PON 40-04	EP	1	60	2	180	•	•	•	•
C2.07	#1	ZINKY-13	ESI - Zn(R)	1	60	-	-	-	-	1	60	•	•	•	
C2.08	#1	ZINKY-22	EP - Zn(R)	1	80	HI-PON 50-01	PUR	1	80	2	160	•	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs.
Other top coats are available such as Hi-Pon 50-07 (Polysiloxane) and Hi-Floro 6738/Hi-Floro 6740 (Fluorocarbon).

LEGEND

AK	Alkyd	AY	Acrylic	EP	Epoxy	ESI	Ethyl Silicate	PUR	Polyurethane	Zn(R)	Zinc Rich
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3 Select the ISO 12944 Compliant System

TABLE 2: PAINT SYSTEMS ON CARBON STEEL FOR CORROSIVITY CATEGORY C3

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
C3.01	#1	HI-ALKYD 1401	AK	1	60	-	-	-	-	HI-ALYKD 1501	AK	1	40	2	100	•			
	#2	HI-ALKYD 1402	AK	1	60	-	-	-	-	HI-ACRYL 1901	AY	1	40	2	100	•			
C3.02	#1	HI-ALKYD 1401	AK	1	100	-	-	-	-	HI-ALYKD 1501	AK	1	60	2	160	•	•		
	#2	HI-ALKYD 1402	AK	1	100	-	-	-	-	HI-ACRYL 1901	AY	1	60	2	160	•	•		
C3.03	#1	HI-ALKYD 1401	AK	2	80	-	-	-	-	HI-ALYKD 1501	AK	1	40	3	200	•	•	•	
	#2	HI-ALKYD 1402	AK	2	80	-	-	-	-	HI-ACRYL 1901	AY	1	40	3	200	•	•	•	
C3.04	#1	HI-ALKYD 1401	AK	2	80	-	-	-	-	HI-ALYKD 1501	AK	2	50	4	260	•	•	•	•
	#2	HI-ALKYD 1402	AK	2	80	-	-	-	-	HI-ACRYL 1901	AY	2	50	4	260	•	•	•	•
C3.05	#1	HI-PON 20-03	EP	1	60	-	-	-	-	HI-PON 50-01	PUR	1	60	2	120	•	•		
	#2	HI-PON 20-10	EP	1	60	-	-	-	-	HI-PON 40-04	EP	1	60	2	120	•	•		
	#3	HI-DRO 63-01	EP	1	60	-	-	-	-	HI-DRO 65-01	PUR	1	60	2	120	•	•		
C3.06	#1	HI-PON 20-04	EP	1	120	-	-	-	-	HI-PON 50-01	PUR	1	60	2	180	•	•	•	
	#2	HI-PON 20-07	EP	1	120	-	-	-	-	HI-PON 40-04	EP	1	60	2	180	•	•	•	
	#3	HI-DRO 63-01	EP	1	120	-	-	-	-	HI-DRO 65-01	PUR	1	60	2	180	•	•	•	
C3.07	#1	HI-PON 20-04	EP	1	180	-	-	-	-	HI-PON 50-01	PUR	1	60	2	240	•	•	•	•
	#2	HI-PON 20-07	EP	1	180	-	-	-	-	HI-PON 40-04	EP	1	60	2	240	•	•	•	•
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 63-02	EP	1	100	HI-DRO 65-01	PUR	1	60	3	240	•	•	•	•
C3.08	#1	ZINKY-13	ESI - Zn(R)	1	60	-	-	-	-	-	-	-	-	1	60	•	•		
C3.09	#1	ZINKY-22	EP - Zn(R)	1	80	-	-	-	-	HI-PON 50-01	PUR	1	80	2	160	•	•	•	
C3.10	#1	ZINKY-22	EP - Zn(R)	1	60	HI-PON 30-03	EP	1	80	HI-PON 50-01	PUR	1	60	3	200	•	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs.
Other top coats are available such as Hi-Pon 50-07 (Polysiloxane) and Hi-Floro 6738/Hi-Floro 6740 (Fluorocarbon).
Water-based protective coatings are highlighted in blue.

LEGEND

AK	Alkyd	AY	Acrylic	EP	Epoxy	ESI	Ethyl Silicate	PUR	Polyurethane	Zn(R)	Zinc Rich
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3 Select the ISO 12944 Compliant System

TABLE 3: PAINT SYSTEMS ON CARBON STEEL FOR CORROSIVITY CATEGORY C4

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
C4.01	#1	HI-ALKYD 1401	AK	1	100	-	-	-	-	HI-ALYKD 1501	AK	1	60	2	160	•			
	#2	HI-ALKYD 1402	AK	1	100	-	-	-	-	HI-ACRYL 1901	AY	1	60	2	160	•			
C4.02	#1	HI-ALKYD 1401	AK	2	80	-	-	-	-	HI-ALYKD 1501	AK	1	40	3	200	•	•		
	#2	HI-ALKYD 1402	AK	2	80	-	-	-	-	HI-ACRYL 1901	AY	1	40	3	200	•	•		
C4.03	#1	HI-ALKYD 1401	AK	2	80	-	-	-	-	HI-ALYKD 1501	AK	2	50	4	260	•	•	•	
	#2	HI-ALKYD 1402	AK	2	80	-	-	-	-	HI-ACRYL 1901	AY	2	50	4	260	•	•	•	
C4.04	#1	HI-PON 20-03	EP	1	60	-	-	-	-	HI-PON 50-01	PUR	1	60	2	120	•			
	#2	HI-PON 20-10	EP	1	60	-	-	-	-	HI-PON 40-04	EP	1	60	2	120	•			
	#3	HI-DRO 63-01	EP	1	60	-	-	-	-	HI-DRO 65-01	PUR	1	60	2	120	•			
C4.05	#1	HI-PON 20-04	EP	1	120	-	-	-	-	HI-PON 50-01	PUR	1	60	2	180	•	•		
	#2	HI-PON 20-07	EP	1	120	-	-	-	-	HI-PON 40-04	EP	1	60	2	180	•	•		
	#3	HI-DRO 63-01	EP	1	120	-	-	-	-	HI-DRO 65-01	PUR	1	60	2	180	•	•		
C4.06	#1	HI-PON 20-04	EP	1	180	-	-	-	-	HI-PON 50-01	PUR	1	60	2	240	•	•	•	
	#2	HI-PON 20-07	EP	1	180	-	-	-	-	HI-PON 40-04	EP	1	60	2	240	•	•	•	
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 63-02	EP	1	100	HI-DRO 65-01	PUR	1	60	3	240	•	•	•	
C4.07	#1	HI-PON 20-16	EP	1	240	-	-	-	-	HI-PON 50-01	PUR	1	60	2	300	•	•	•	
	#2	HI-PON 20-04	EP	1	80	HI-PON 30-03	EP	1	160	HI-PON 50-01	PUR	1	60	3	300	•	•	•	•
	#3	HI-PON 20-10	EP	1	80	HI-PON 30-03	EP	1	160	HI-PON 40-04	EP	1	60	3	300	•	•	•	•
C4.08	#1	ZINKY-13	ESI - Zn(R)	1	60	-	-	-	-	-	-	-	-	1	60	•			
C4.09	#1	ZINKY-22	EP - Zn(R)	1	80	-	-	-	-	HI-PON 50-01	PUR	1	80	2	160	•	•		
C4.10	#1	ZINKY-22	EP - Zn(R)	1	60	HI-PON 30-03	EP	1	80	HI-PON 50-01	PUR	1	60	3	200	•	•	•	
C4.11	#1	ZINKY-22	EP - Zn(R)	1	75	HI-PON 30-02	EP	1	125	HI-PON 50-01	PUR	1	60	3	260	•	•	•	•
	#2	ZINKY-41	EP - Zn(R)	1	75	HI-DRO 63-02	EP	1	125	HI-DRO 65-01	PUR	1	60	3	260	•	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs.
Other top coats are available such as Hi-Pon 50-07 (Polysiloxane) and Hi-Floro 6738/Hi-Floro 6740 (Fluorocarbon).
Water-based protective coatings are highlighted in blue.

LEGEND

AK	Alkyd	AY	Acrylic	EP	Epoxy	ESI	Ethyl Silicate	PUR	Polyurethane	Zn(R)	Zinc Rich
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3 Select the ISO 12944 Compliant System

TABLE 4: PAINT SYSTEMS ON CARBON STEEL FOR CORROSIVITY CATEGORY C5

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
C5.01	#1	HI-PON 20-04	EP	1	120	-	-	-	-	HI-PON 50-01	PUR	1	60	2	180	•			
	#2	HI-PON 20-07	EP	1	120	-	-	-	-	HI-PON 40-04	EP	1	60	2	180	•			
C5.02	#1	HI-PON 20-04	EP	1	180	-	-	-	-	HI-PON 50-01	PUR	1	60	2	240	•	•		
	#2	HI-PON 20-07	EP	1	180	-	-	-	-	HI-PON 40-04	EP	1	60	2	240	•	•		
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 63-02	EP	1	100	HI-DRO 65-01	PUR	1	60	3	240	•	•		
C5.03	#1	HI-PON 20-16	EP	1	240	-	-	-	-	HI-PON 50-01	PUR	1	60	2	300	•	•	•	
	#2	HI-PON 20-04	EP	1	80	HI-PON 30-03	EP	1	160	HI-PON 50-01	PUR	1	60	3	300	•	•	•	
	#3	HI-PON 20-10	EP	1	80	HI-PON 30-03	EP	1	160	HI-PON 40-04	EP	1	60	3	300	•	•	•	
C5.04	#1	HI-PON 20-04	EP	1	120	HI-PON 30-03	EP	1	180	HI-PON 50-01	PUR	1	60	3	360	•	•	•	•
	#2	HI-PON 20-07	EP	1	120	HI-PON 30-02	EP	1	180	HI-PON 40-04	EP	1	60	3	360	•	•	•	•
	#3	HI-PON 20-16	EP	1	120	HI-PON 30-02	EP	1	180	HI-PON 50-01	PUR	1	60	3	360	•	•	•	•
C5.05	#1	ZINKY-22	EP - Zn(R)	1	80	-	-	-	-	HI-PON 50-01	PUR	1	80	2	160	•			
C5.06	#1	ZINKY-22	EP - Zn(R)	1	60	HI-PON 30-03	EP	1	80	HI-PON 50-01	PUR	1	60	3	200	•	•		
C5.07	#1	ZINKY-22	EP - Zn(R)	1	75	HI-PON 30-02	EP	1	125	HI-PON 50-01	PUR	1	60	3	260	•	•	•	
	#2	ZINKY-41	EP - Zn(R)	1	75	HI-DRO 63-02	EP	1	125	HI-DRO 65-01	PUR	1	60	3	260	•	•	•	
C5.08	#1	ZINKY-13	ESI - Zn(R)	1	60	HI-PON 30-02	EP	1	200	HI-PON 50-01	PUR	1	60	3	320	•	•	•	•
	#2	ZINKY-22	EP - Zn(R)	1	60	HI-PON 30-02	EP	1	200	HI-PON 50-01	PUR	1	60	3	320	•	•	•	•
	#3	ZINKY-41	EP - Zn(R)	1	90	HI-DRO 63-02	EP	1	150	HI-DRO 65-01	PUR	1	80	3	320	•	•	•	•

TABLE 5: PAINT SYSTEMS ON CARBON STEEL FOR IMMERSION CATEGORIES IM1, IM2 AND IM3

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
I.03	#1	HI-PON 20-04 STE IM 80	EP	1	80	HI-PON 20-04 STE IM 80	EP	1	200	HI-PON 40-02	EP	1	100	3	380	•	•	•	
I.04	#1	HI-PON 20-04 STE IM 80	EP	1	80	-	-	-	-	HI-PON 90-05	EP	1	460	2	540	•	•	•	•
I.05	#1	HI-PON 20-04 STE IM 80	EP	1	200	-	-	-	-	HI-PON 20-04 STE IM 80	EP	1	200	2	400	•	•	•	
	#2	HI-PON 90-05	EP	1	200	-	-	-	-	HI-PON 90-05	EP	1	200	2	400	•	•	•	
	#3	HI-PON 90-11	EP	1	200	-	-	-	-	HI-PON 90-11	EP	1	200	2	400	•	•	•	
I.06	#1	HI-PON 80-16	EP	1	300	-	-	-	-	HI-PON 80-16	EP	1	300	2	600	•	•	•	•
	#2	HI-PON 90-01	EP	1	300	-	-	-	-	HI-PON 90-01	EP	1	300	2	600	•	•	•	•
	#3	HI-PON 90-05	EP	1	300	-	-	-	-	HI-PON 90-05	EP	1	300	2	600	•	•	•	•
	#4	-	-	-	-	-	-	-	-	HI-PON 90-07	EP	1	600	1	600	•	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs.
Other top coats are available such as HI-Pon 50-07 (Polysiloxane) and HI-Floro 6738/Hi-Floro 6740 (Fluorocarbon).
Water-based protective coatings are highlighted in blue.

LEGEND

EP	Epoxy	ESI	Ethyl Silicate	PUR	Polyurethane	Zn(R)	Zinc Rich
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3 Select the ISO 12944 Compliant System

TABLE 6: PAINT SYSTEMS ON HOT-DIP GALVANISED STEEL FOR CORROSIVITY CATEGORIES C2 TO C5

System No		PRIMER COAT				TOP COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
G2.01	#1	HI-VINYL 1102	-	1	20	HI-ACRYL 1901	AY	1	60	2	80	•	•	•	
G2.02	#1	HI-PON 20-10	EP	1	120	-	-	-	-	1	120	•	•	•	•
	#2	HI-PON 20-03	EP	1	80	HI-PON 50-01	PUR	1	40	2	120	•	•	•	•
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 65-01	PUR	1	40	2	120	•	•	•	•
G3.01	#1	HI-VINYL 1102	-	1	20	HI-ACRYL 1901	AY	1	60	2	80	•	•		
G3.02	#1	HI-PON 20-10	EP	1	120	-	-	-	-	1	120	•	•	•	
	#2	HI-PON 20-03	EP	1	80	HI-PON 50-01	PUR	1	40	2	120	•	•	•	
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 65-01	PUR	1	40	2	120	•	•	•	
G3.04	#1	HI-PON 20-04	EP	1	100	HI-PON 50-01	PUR	1	60	2	160	•	•	•	•
	#2	HI-DRO 63-01	EP	1	100	HI-DRO 65-01	PUR	1	60	2	160	•	•	•	•
G4.01	#1	HI-VINYL 1102	-	1	20	HI-ACRYL 1901	AY	1	60	2	80	•			
G4.02	#1	HI-PON 20-10	EP	1	120	-	-	-	-	1	120	•	•		
	#2	HI-PON 20-03	EP	1	80	HI-PON 50-01	PUR	1	40	2	120	•	•		
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 65-01	PUR	1	40	2	120	•	•		
G4.04	#1	HI-PON 20-04	EP	1	100	HI-PON 50-01	PUR	1	60	2	160	•	•	•	
	#2	HI-DRO 63-01	EP	1	100	HI-DRO 65-01	PUR	1	60	2	160	•	•	•	
G4.06	#1	HI-PON 20-04	EP	1	140	HI-PON 50-01	PUR	1	60	2	200	•	•	•	•
	#2	HI-DRO 63-01	EP	2	80	HI-DRO 65-01	PUR	1	40	3	200	•	•	•	•
G5.01	#1	HI-PON 20-10	EP	1	120	-	-	-	-	1	120	•			
	#2	HI-PON 20-03	EP	1	80	HI-PON 50-01	PUR	1	40	2	120	•			
	#3	HI-DRO 63-01	EP	1	80	HI-DRO 65-01	PUR	1	40	2	120	•			
G5.02	#1	HI-PON 20-04	EP	1	100	HI-PON 50-01	PUR	1	60	2	160	•	•		
	#2	HI-DRO 63-01	EP	1	100	HI-DRO 65-01	PUR	1	60	2	160	•	•		
G5.04	#1	HI-PON 20-04	EP	1	140	HI-PON 50-01	PUR	1	60	2	200	•	•	•	
	#2	HI-DRO 63-01	EP	2	80	HI-DRO 65-01	PUR	1	40	3	200	•	•	•	
G5.05	#1	HI-PON 20-04	EP	1	180	HI-PON 50-01	PUR	1	60	2	240	•	•	•	•
	#2	HI-DRO 63-01	EP	2	90	HI-DRO 65-01	PUR	1	60	3	240	•	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs.
Other top coats are available such as Hi-Pon 50-07 (Polysiloxane) and Hi-Floro 6738/Hi-Floro 6740 (Fluorocarbon).
Water-based protective coatings are highlighted in blue.

LEGEND

AY	Acrylic	EP	Epoxy	PUR	Polyurethane
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3 Select

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TABLE 7: PAINT SYSTEMS ON THERMAL-SPRAYED METALLIC COATINGS FOR CORROSIVITY CATEGORIES C4 AND C5

System No		SEALER COAT				TOP COAT				PAINT SYSTEM		DURABILITY			
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)	very high (vh)
TSM 4.01	#1	HI-PON 20-03	EP	1	80	HI-PON 50-01	PUR	1	80	2	160	•	•	•	
TSM 4.02	#1	HI-PLUS 1011	EP	1	15	HI-PON 20-16	EP	1	185	2	200	•	•	•	•
TSM 5.01	#1	HI-PLUS 1011	EP	1	15	HI-PON 20-16	EP	1	185	2	200	•	•	•	
TSM 5.02	#1	HI-PON 20-16	EP	1	180	HI-PON 50-01	PUR	1	60	2	240	•	•	•	•

TABLE 8: PAINT SYSTEMS ON CARBON STEEL FOR CORROSIVITY CATEGORY CX

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY		
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)
CX	#1	ZINKY-13	ESI - Zn(R)	1	60	HI-PON 30-02	EP	1	160	HI-PON 50-01	PUR	1	60	3	280	•	•	•
	#2	ZINKY-22	EP - Zn(R)	1	60	HI-PON 30-02	EP	1	160	HI-PON 50-01	PUR	1	60	3	280	•	•	•

TABLE 9: PAINT SYSTEMS ON CARBON STEEL FOR CORROSIVITY CATEGORIES CX AND IM4 (SPLASH AND TIDAL ZONES)

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY		
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)
CX & IM4	#1	HI-PON 90-01	EP	2	300	-	-	-	-	-	-	-	-	2	600	•	•	•
	#2	HI-PON 90-05	EP	2	300	-	-	-	-	HI-PON 50-01 (optional)	PUR	1	60	2	660	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs. Other top coats are available such as Hi-Pon 50-07 (Polysiloxane) and Hi-Floro 6738/Hi-Floro 6740 (Fluorocarbon).

LEGEND

EP	Epoxy	ESI	Ethyl Silicate	PUR	Polyurethane	Zn(R)	Zinc Rich
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3 Select

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TABLE 10: PAINT SYSTEMS ON CARBON STEEL FOR IMMERSION CATEGORY IM4

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY		
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)
IM4.01	#1	HI-PON 90-07	EP	1	800	-	-	-	-	-	-	-	-	1	800	•	•	•
	#2	HI-PON 90-08	EP	1	1000	-	-	-	-	-	-	-	-	1	1000	•	•	•
IM4.02	#1	HI-PON 20-04 STE IM 80	EP	2	200	-	-	-	-	-	-	-	-	2	400	•	•	•
	#2	HI-PON 90-05	EP	2	175	-	-	-	-	-	-	-	-	2	350	•	•	•
	#3	HI-PON 90-11	EP	2	175	-	-	-	-	-	-	-	-	2	350	•	•	•

TABLE 11: PAINT SYSTEMS ON HOT-DIP GALVANISED STEEL OR STEEL WITH THERMAL-SPRAYED ZINC FOR CORROSIVITY CATEGORY CX

System No		PRIMER COAT				INTERMEDIATE COAT				TOP COAT				PAINT SYSTEM		DURABILITY		
		Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Product	Type of Product	No of Coats	NDFT (µm)	Total No of Coats	Total NDFT (µm)	low (l)	med (m)	high (h)
GX	#1	HI-PON 20-16	EP	1	125	-	-	-	-	HI-PON 50-01	PUR	1	75	2	200	•	•	•
	#2	HI-PON 30-02	EP	1	125	-	-	-	-	HI-PON 50-01	PUR	1	75	2	200	•	•	•
	#3	HI-PON 20-04	EP	2	100	-	-	-	-	-	-	-	-	2	200	•	•	•

Systems above are standard recommendations. Kindly seek the advice of a Nippon Paint Representative for alternative systems to meet your needs.
Other top coats are available such as Hi-Pon 50-07 (Polysiloxane) and Hi-Floro 6738/Hi-Floro 6740 (Fluorocarbon).
Water-based protective coatings are highlighted in blue.

LEGEND

EP	Epoxy	PUR	Polyurethane
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