



Jotun Protects Property



**ISO 12944 - 2018**  
Coating Selector

# A global provider of coatings



The Jotun Group is one of the world's leading manufacturers of paints, coatings and powder coatings. Jotun's operations ensure the very best in paint systems and products to protect and decorate surfaces in the residential, shipping and industrial markets. Everything we do, from development to production, marketing, sales and consultancy is to protect the property of our customers all over the world.



Jotun recognises the responsibility we have to the environment and have established our own GreenSteps programme. This programme allows us to address market demand for producing coatings solutions that are more sustainable. After all, for a more colourful world, we all need to be a little greener.

REPRESENTED IN MORE THAN



**100**  
COUNTRIES

ACROSS ALL CONTINENTS

**1000+**  
SKILLED COATING ADVISORS



UNIFORM STANDARD  
WORLDWIDE



**37**  
PRODUCTION  
FACILITIES



**64**  
COMPANIES

# ISO 12944

## the universally accepted standard for corrosion protection of structural steel

Whether in the atmosphere, water or soil, all un-protected steel is subject to corrosion which will eventually lead to failure. To avoid this, steel should be protected not only from the service environment but also for the proposed lifetime of a structure.

The ISO 12944 standard is designed as a guideline for architects, engineers, specifiers, contractors and applicators in choosing the correct systems to meet the demands of both environment and service life.

Atmospheric corrosivity categories and examples of typical environments are given in BS EN ISO 12944-2 (Table 1) and BS EN ISO 9226 (Table 2).

With vast experience and expertise globally in protecting on & offshore structures of all concepts of the protective market, Jotun has a coating system to meet the exact anticorrosive requirements for every situation.

**Choosing a coating system that complies with ISO 12944 can be achieved in three straightforward steps:**



\* Systems for CX and Im4 are not included in this brochure. For further information please contact your local Jotun office.



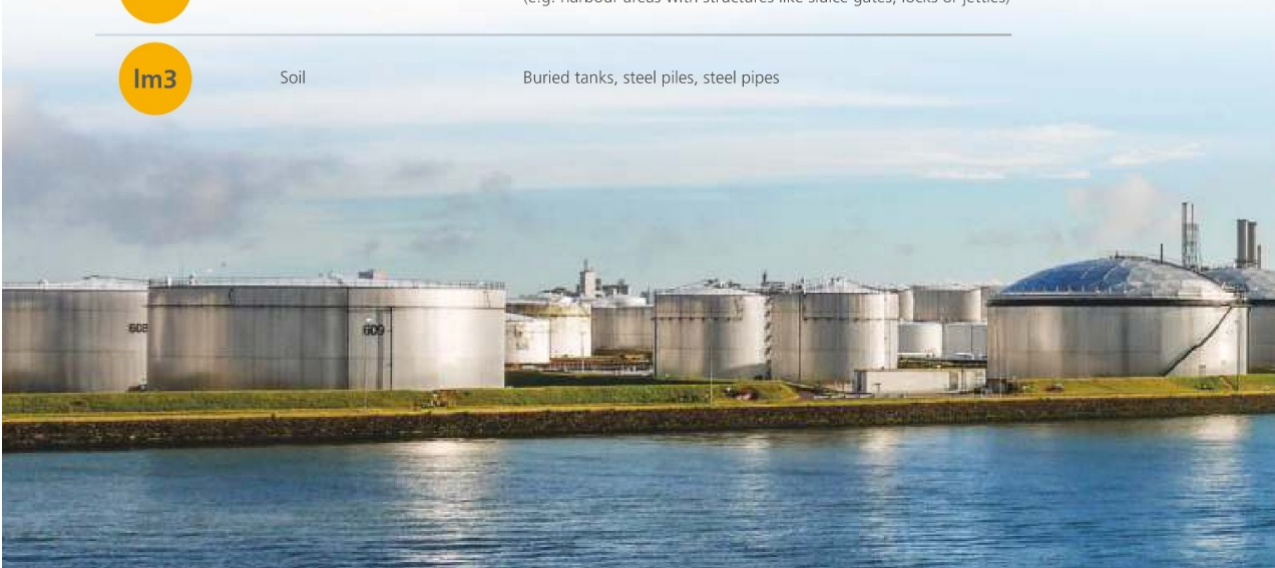


# 1 Select the corrosive environment most suited to your project

| Corrosion category  | Exterior   | Interior   |
|---------------------|--|--|
| <b>C1</b> Very Low  |  | Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels  |
| <b>C2</b> Low       | Atmospheres with low level of pollution; mostly rural areas  | Unheated buildings where condensation can occur, e.g. depots, sports halls   |
| <b>C3</b> 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 |
| <b>C4</b> High      | Industrial areas and coastal areas with moderate salinity  | Chemical plants, swimming pools, coastal ships and boatyards   |
| <b>C5</b> 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  |

## Categories for water and soil

| Category   | Environment            | Examples of environments and structures  |
|------------|------------------------|--|
| <b>Im1</b> | Fresh water            | River installations, hydro-electric power plants   |
| <b>Im2</b> | Seas or brackish water | Immersed structures without cathodic protection (e.g. harbour areas with structures like sluice gates, locks or jetties) |
| <b>Im3</b> | Soil                   | Buried tanks, steel piles, steel pipes   |



# 2 Select

the required lifetime  
of the coating system

| 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               |



**Common durability considerations:**

- Design of a structure
- Conditions during application
- Time to first maintenance
- Accessibility for maintenance



# 3 Select

your coating system



Table C.2 Paint systems for carbon steel for corrosivity category C2

| System No   | PRIMER COAT                            |                 |             | SUBSEQUENT COAT |                       |             | PAINT SYSTEM    |     | DURABILITY   |                   |     |     |      |           |
|-------------|--|-----------------|-------------|-----------------|-----------------------|-------------|-----------------|-----|--------------|-------------------|-----|-----|------|-----------|
|             | Product                                | Type of product | No of Coats | DFT             | Product               | No of Coats | Type of product | DFT | Total DFT um | Total No of Coats | low | med | high | very high |
| C2.01       | Pilot QD                               | AK              | 1           | 40              | Pilot II or Ploner TC | 1           | AK / AY         | 40  | 80           | 2                 | ✓   |     |      |           |
| C2.02       | Pilot QD                               | AK              | 1           | 60              | Pilot II or Ploner TC | 1           | AK / AY         | 40  | 100          | 2                 | ✓   | ✓   |      |           |
| C2.03       | Pilot QD                               | AK              | 1           | 120             | Pilot II or Ploner TC | 1           | AK / AY         | 40  | 160          | 2                 | ✓   | ✓   | ✓    |           |
| C2.04       | Pilot QD                               | AK              | 2           | 80              | Pilot II or Ploner TC | 1           | AK / AY         | 40  | 200          | 3                 | ✓   | ✓   | ✓    | ✓         |
| C2.05       | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 70              | Hardtop AX or XP      | 1           | PUR             | 50  | 120          | 2                 | ✓   | ✓   | ✓    |           |
| Alternative | Barrier 80                             | ZnR             | 1           | 50              | Hardtop AX or XP      | 1           | PUR             | 70  | 120          | 2                 | ✓   | ✓   | ✓    |           |
| C2.06       | Barrier 80                             | ZnR             | 1           | 80              | Hardtop AX or XP      | 1           | PUR             | 100 | 180          | 2                 | ✓   | ✓   | ✓    | ✓         |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 120             | Hardtop AX or XP      | 1           | PUR             | 60  | 180          | 2                 | ✓   | ✓   | ✓    | ✓         |
| C2.07       | Barrier 80                             | ZnR             | 1           | 60              | N/A                   | N/A         | N/A             | N/A | 60           | 1                 | ✓   | ✓   | ✓    |           |
| C2.08       | Barrier 80                             | ZnR             | 1           | 60              | Hardtop AX or XP      | 1           | PUR             | 100 | 160          | 2                 | ✓   | ✓   | ✓    | ✓         |

Table C.3 Paint systems for carbon steel for corrosivity category C3

| System No   | PRIMER COAT                            |                 |             |     | INTERMEDIATE COATS                     |             |                 |     | SUBSEQUENT COAT       |             |                 |     | PAINT SYSTEM |                   | DURABILITY |     |      |           |
|-------------|--|-----------------|-------------|-----|--|-------------|-----------------|-----|-----------------------|-------------|-----------------|-----|--------------|-------------------|------------|-----|------|-----------|
|             | Product                                | Type of product | No of Coats | DFT | Product                                | No of Coats | Type of product | DFT | Product               | No of Coats | Type of product | DFT | Total DFT um | Total No of Coats | low        | med | high | very high |
| C3.01       | Pilot QD                               | AK              | 1           | 60  | N/A                                    | N/A         | N/A             | N/A | Pilot II or Pioner TC | 1           | AK / AY         | 40  | 100          | 2                 | ✓          |     |      |           |
| C3.02       | Pilot QD                               | AK              | 1           | 120 | N/A                                    | N/A         | N/A             | N/A | Pilot II or Pioner TC | 1           | AK / AY         | 40  | 160          | 2                 | ✓          | ✓   |      |           |
| C3.03       | Pilot QD                               | AK              | 2           | 80  | N/A                                    | N/A         | N/A             | N/A | Pilot II or Pioner TC | 1           | AK / AY         | 40  | 200          | 3                 | ✓          | ✓   | ✓    |           |
| C3.04       | Pilot QD                               | AK              | 2           | 100 | N/A                                    | N/A         | N/A             | N/A | Pilot II or Pioner TC | 1           | AK / AY         | 60  | 260          | 3                 | ✓          | ✓   | ✓    | ✓         |
| C3.05       | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 70  | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP      | 1           | PUR             | 50  | 120          | 2                 | ✓          | ✓   |      |           |
| Alternative | Barrier 80                             | ZnR             | 1           | 50  | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP      | 1           | PUR             | 70  | 120          | 2                 | ✓          | ✓   |      |           |
| C3.06       | Barrier 80                             | ZnR             | 1           | 80  | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP      | 1           | PUR             | 100 | 180          | 2                 | ✓          | ✓   | ✓    |           |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 120 | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP      | 1           | PUR             | 60  | 180          | 2                 | ✓          | ✓   | ✓    |           |
| C3.07       | Barrier 80                             | ZnR             | 1           | 60  | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 120 | Hardtop AX or XP      | 1           | PUR             | 60  | 240          | 3                 | ✓          | ✓   | ✓    | ✓         |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 180 | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP      | 1           | PUR             | 60  | 240          | 2                 | ✓          | ✓   | ✓    | ✓         |
| C3.08       | Barrier 80                             | ZnR             | 1           | 60  | N/A                                    | N/A         | N/A             | N/A | N/A                   | N/A         | N/A             | N/A | 60           | 1                 | ✓          | ✓   |      |           |
| C3.09       | Barrier 80                             | ZnR             | 1           | 60  | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP      | 1           | PUR             | 100 | 160          | 2                 | ✓          | ✓   | ✓    |           |
| C3.10       | Barrier 80                             | ZnR             | 1           | 60  | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 180 | Hardtop AX or XP      | 1           | PUR             | 60  | 200          | 3                 | ✓          | ✓   | ✓    | ✓         |

DFT = Dry Film Thickness per coat.  
Total DFT = Dry Film Thickness of complete system.

In a addition to Polyurethane Topcoats lotun can also offer various Top Coat technology.

Please refer to relevant technical data and Application guide for pre-treatment, recoating and curing conditions.

Specifications are sample specifications which comply with ISO 12944-5 2018. Please contact your local lotun office, who can advise on numerous compliant alternatives.

# 3 Select

## your coating system



Table C.4 Paint systems for carbon steel for corrosivity category C4

| System No   | PRIMER COAT                            |                 |             | INTERMEDIATE COATS                     |             |                 | SUBSEQUENT COAT |                       |             | PAINT SYSTEM    |     | DURABILITY   |                   |     |     |      |           |
|-------------|--|-----------------|-------------|--|-------------|-----------------|-----------------|-----------------------|-------------|-----------------|-----|--------------|-------------------|-----|-----|------|-----------|
|             | Product                                | Type of product | No of Coats | Product                                | No of Coats | Type of product | DFT             | Product               | No of Coats | Type of product | DFT | Total DFT um | Total No of Coats | low | med | high | very high |
| C4.01       | Pilot QD                               | AK              | 1           | N/A                                    | N/A         | N/A             | N/A             | Pilot II or Pioner TC | 1           | AK / AY         | 40  | 160          | 2                 | ✓   |     |      |           |
| C4.02       | Pilot QD                               | AK              | 2           | N/A                                    | N/A         | N/A             | N/A             | Pilot II or Pioner TC | 1           | AK / AY         | 40  | 200          | 3                 | ✓   | ✓   |      |           |
| C4.03       | Pilot QD                               | AK              | 2           | N/A                                    | N/A         | N/A             | N/A             | Pilot II or Pioner TC | 1           | AK / AY         | 60  | 260          | 3                 | ✓   | ✓   | ✓    |           |
| C4.04       | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | N/A                                    | N/A         | N/A             | N/A             | Hardtop AX or XP      | 1           | PUR             | 50  | 120          | 2                 | ✓   |     |      |           |
| Alternative | Barrier 80                             | ZnR             | 1           | N/A                                    | N/A         | N/A             | N/A             | Hardtop AX or XP      | 1           | PUR             | 70  | 120          | 2                 | ✓   |     |      |           |
| C4.05       | Barrier 80                             | ZnR             | 1           | N/A                                    | N/A         | N/A             | N/A             | Hardtop AX or XP      | 1           | PUR             | 100 | 180          | 2                 | ✓   | ✓   |      |           |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | N/A                                    | N/A         | N/A             | N/A             | Hardtop AX or XP      | 1           | PUR             | 60  | 180          | 2                 | ✓   | ✓   |      |           |
| C4.06       | Barrier 80                             | ZnR             | 1           | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 120             | Hardtop AX or XP      | 1           | PUR             | 60  | 240          | 3                 | ✓   | ✓   | ✓    |           |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | N/A                                    | N/A         | N/A             | N/A             | Hardtop AX or XP      | 1           | PUR             | 60  | 240          | 2                 | ✓   | ✓   | ✓    |           |
| C4.07       | Barrier 80                             | ZnR             | 1           | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 180             | Hardtop AX or XP      | 1           | PUR             | 60  | 300          | 3                 | ✓   | ✓   | ✓    | ✓         |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 120             | Hardtop AX or XP      | 1           | PUR             | 60  | 300          | 3                 | ✓   | ✓   | ✓    | ✓         |
| C4.08       | Barrier 80                             | ZnR             | 1           | N/A                                    | N/A         | N/A             | N/A             | N/A                   | N/A         | N/A             | N/A | 60           | 1                 | ✓   |     |      |           |
| C4.09       | Barrier 80                             | ZnR             | 1           | N/A                                    | N/A         | N/A             | N/A             | Hardtop AX or XP      | 1           | PUR             | 100 | 160          | 2                 | ✓   | ✓   |      |           |
| C4.10       | Barrier 80                             | ZnR             | 1           | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 80              | Hardtop AX or XP      | 1           | PUR             | 60  | 200          | 3                 | ✓   | ✓   | ✓    |           |
| C4.11       | Barrier 80                             | ZnR             | 1           | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 140             | Hardtop AX or XP      | 1           | PUR             | 60  | 260          | 3                 | ✓   | ✓   | ✓    | ✓         |



Table C.5 Paint systems for carbon steel for corrosivity category C5

| System No   | PRIMER COAT                            |                 |             | INTERMEDIATE COATS |  |             | SUBSEQUENT COAT |     |                  | PAINT SYSTEM |                 | DURABILITY |              |                   |     |     |      |           |
|-------------|--|-----------------|-------------|--------------------|--|-------------|-----------------|-----|------------------|--------------|-----------------|------------|--------------|-------------------|-----|-----|------|-----------|
|             | Product                                | Type of product | No of Coats | DFT                | Product                                | No of Coats | Type of product | DFT | Product          | No of Coats  | Type of product | DFT        | Total DFT um | Total No of Coats | low | med | high | very high |
| C5.01       | Barrier 80                             | ZnR             | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | N/A              | 1            | PUR             | 100        | 180          | 2                 | ✓   |     |      |           |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 120                | N/A                                    | N/A         | N/A             | N/A | N/A              | 1            | PUR             | 60         | 180          | 2                 | ✓   |     |      |           |
| C5.02       | Barrier 80                             | ZnR             | 1           | 60                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 120 | Hardtop AX or XP | 1            | PUR             | 60         | 240          | 3                 | ✓   | ✓   |      |           |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 180                | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP | 1            | PUR             | 60         | 240          | 2                 | ✓   | ✓   |      |           |
| C5.03       | Barrier 80                             | ZnR             | 1           | 60                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 180 | Hardtop AX or XP | 1            | PUR             | 60         | 300          | 3                 | ✓   | ✓   | ✓    |           |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 120                | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 120 | Hardtop AX or XP | 1            | PUR             | 60         | 300          | 3                 | ✓   | ✓   | ✓    |           |
| C5.04       | Barrier 80                             | ZnR             | 1           | 80                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 200 | Hardtop AX or XP | 1            | PUR             | 80         | 360          | 3                 | ✓   | ✓   | ✓    | ✓         |
| Alternative | Penguard HSP ZP or Penguard Express ZP | EP              | 1           | 150                | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 150 | Hardtop AX or XP | 1            | PUR             | 60         | 360          | 3                 | ✓   | ✓   | ✓    | ✓         |
| C5.05       | Barrier 80                             | ZnR             | 1           | 60                 | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP | 1            | PUR             | 100        | 160          | 2                 | ✓   |     |      |           |
| C5.06       | Barrier 80                             | ZnR             | 1           | 60                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 80  | Hardtop AX or XP | 1            | PUR             | 60         | 200          | 3                 | ✓   | ✓   |      |           |
| C5.07       | Barrier 80                             | ZnR             | 1           | 60                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 140 | Hardtop AX or XP | 1            | PUR             | 60         | 260          | 3                 | ✓   | ✓   | ✓    |           |
| C5.08       | Barrier 80                             | ZnR             | 1           | 60                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 200 | Hardtop AX or XP | 1            | PUR             | 60         | 320          | 3                 | ✓   | ✓   | ✓    | ✓         |

DFT = Dry Film Thickness per coat.  
Total DFT = Dry Film Thickness of complete system.

In a addition to Polyurethane Topcoats Jotun can also offer various Top Coat technology.

Please refer to relevant technical data and Application guide for pre-treatment, recoating and curing conditions.

Specifications are sample specifications which comply with ISO 12944-5 2018. Please contact your local Jotun office, who can advise on numerous compliant alternatives.

# 3 Select

## your coating system



Table C.6 Paint systems for carbon steel for immersion categories Im 1 Im2 Im3

| System No | PRIMER COAT  |                 |             | INTERMEDIATE COATS |                 |             | SUBSEQUENT COAT |                 |             | PAINT SYSTEM |              |                   | DURABILITY |     |      |           |   |
|-----------|--------------|-----------------|-------------|--------------------|-----------------|-------------|-----------------|-----------------|-------------|--------------|--------------|-------------------|------------|-----|------|-----------|---|
|           | Product      | Type of product | No of Coats | Product            | Type of product | No of Coats | Product         | Type of product | No of Coats | DFT          | Total DFT um | Total No of Coats | low        | med | high | very high |   |
| I.03      | Penguard Pro | EP              | 1           | N/A                | N/A             | N/A         | N/A             | Penguard Pro    | 1           | EP           | 190          | 380               | 2          | ✓   | ✓    | ✓         |   |
| I.04      | Penguard Pro | EP              | 1           | N/A                | N/A             | N/A         | N/A             | Penguard Pro    | 1           | EP           | 270          | 540               | 2          | ✓   | ✓    | ✓         | ✓ |
| I.05      | Penguard Pro | EP              | 1           | N/A                | N/A             | N/A         | N/A             | Penguard Pro    | 1           | EP           | 200          | 400               | 2          | ✓   | ✓    | ✓         | ✓ |
| I.06      | Penguard Pro | EP              | 1           | N/A                | N/A             | N/A         | N/A             | Penguard Pro    | 1           | EP           | 300          | 600               | 2          | ✓   | ✓    | ✓         | ✓ |

Jotun do not recommend Zinc primers for under water thus the exclusion of systems 1.01 and 1.02

Table E.1 Paint systems on Thermal Sprayed metallic coating for corrosivity categories C4 and C5

| System No | Corrosivity category | SEALER COAT |             |     | SUBSEQUENT COAT                        |             |                 | SUBSEQUENT COAT |                  |             | PAINT SYSTEM    |     |              | DURABILITY        |      |           |
|-----------|----------------------|-------------|-------------|-----|--|-------------|-----------------|-----------------|------------------|-------------|-----------------|-----|--------------|-------------------|------|-----------|
|           |                      | Binder Type | No of Coats | DFT | Product                                | No of Coats | Type of product | DFT             | Product          | No of Coats | Type of product | DFT | Total DFT um | Total No of Coats | high | very high |
| TSM 4.01  | C4                   | EP, PUR     | 1           | N/A | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 100             | Hardtop AX or XP | 1           | PUR             | 60  | 160          | 2                 | ✓    |           |
| TSM 4.02  |                      | EP, PUR     | 1           | N/A | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 140             | Hardtop AX or XP | 1           | PUR             | 60  | 200          | 2                 | ✓    | ✓         |
| TSM 5.01  | C5                   | EP, PUR     | 1           | N/A | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 140             | Hardtop AX or XP | 1           | PUR             | 60  | 200          | 2                 | ✓    |           |
| TSM 5.02  |                      | EP, PUR     | 1           | N/A | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 160             | Hardtop AX or XP | 1           | PUR             | 80  | 240          | 2                 | ✓    | ✓         |

Sealer coat not included in NDFT or Number of coats. For systems with Thermal Spray Aluminium (TSA) please contact your local Jotun office.

Table D.1 Paint systems on hot dip galvanised steel for corrosivity categories C2 to C5

| System No | Corrosivity Category | PRIMER COAT |                 |             | INTERMEDIATE COATS |  |             | SUBSEQUENT COAT |     |                  | PAINT SYSTEM |                 |     | DURABILITY   |                   |     |     |      |           |
|-----------|----------------------|-------------|-----------------|-------------|--------------------|--|-------------|-----------------|-----|------------------|--------------|-----------------|-----|--------------|-------------------|-----|-----|------|-----------|
|           |                      | Product     | Type of product | No of Coats | DFT                | Product                                | No of Coats | Type of product | DFT | Product          | No of Coats  | Type of product | DFT | Total DFT µm | Total No of Coats | low | med | high | very high |
| G2.01     | C2                   | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 80  | 1            | ✓                 | ✓   | ✓   |      |           |
| G2.03     |                      | Penguard HB | EP              | 1           | 120                | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 120 | 1            | ✓                 | ✓   | ✓   | ✓    |           |
| G3.01     |                      | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 80  | 1            | ✓                 | ✓   | ✓   |      |           |
| G3.02     | C3                   | Penguard HB | EP              | 1           | 120                | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 120 | 1            | ✓                 | ✓   | ✓   | ✓    |           |
| G3.04     |                      | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP | 1            | PUR             | 80  | 2            | ✓                 | ✓   | ✓   | ✓    | ✓         |
| G4.01     | C4                   | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 80  | 1            | ✓                 |     |     |      |           |
| G4.02     |                      | Penguard HB | EP              | 1           | 120                | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 120 | 1            | ✓                 | ✓   | ✓   |      |           |
| G4.03     |                      | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 80  | 1            | ✓                 | ✓   | ✓   |      |           |
| G4.04     |                      | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP | 1            | PUR             | 80  | 2            | ✓                 | ✓   | ✓   | ✓    | ✓         |
| G4.06     | C5                   | Penguard HB | EP              | 1           | 80                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 60  | Hardtop AX or XP | 1            | PUR             | 60  | 3            | ✓                 | ✓   | ✓   | ✓    | ✓         |
| G5.01     |                      | Penguard HB | EP              | 1           | 120                | N/A                                    | N/A         | N/A             | N/A | N/A              | N/A          | N/A             | 120 | 1            | ✓                 | ✓   | ✓   |      |           |
| G5.02     |                      | Penguard HB | EP              | 1           | 80                 | N/A                                    | N/A         | N/A             | N/A | Hardtop AX or XP | 1            | PUR             | 80  | 2            | ✓                 | ✓   | ✓   |      |           |
| G5.04     | C5                   | Penguard HB | EP              | 1           | 80                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 70  | Hardtop AX or XP | 1            | PUR             | 50  | 3            | ✓                 | ✓   | ✓   | ✓    | ✓         |
| G5.05     |                      | Penguard HB | EP              | 1           | 80                 | Penguard HSP ZP or Penguard Express ZP | 1           | EP              | 110 | Hardtop AX or XP | 1            | PUR             | 50  | 3            | ✓                 | ✓   | ✓   | ✓    | ✓         |

Jotun do not recommend an Alkyd system for Galvanized Steel

DFT = Dry Film Thickness per coat.  
Total DFT = Dry Film Thickness of complete system.

In a addition to Polyurethane Topcoats Jotun can also offer various Top Coat Technology.

Please refer to relevant technical data and Application guide for pre-treatment, recoating and curing conditions.

Specifications are sample specifications which comply with ISO 12944-5 2018. Please contact your local Jotun office, who can advise on numerous compliant alternatives.

# Jotun Marine Coatings and Jotun Protective Coatings offices worldwide

Legal Jotun entities worldwide are listed. For details of Branch offices and Jotun representation in countries not listed, please visit [jotun.com](http://jotun.com)

## AUSTRALIA

Jotun Australia Pty. Ltd.,  
P.O. Box 105, Altona North,  
9 Cawley Road,  
BROOKLYN, VIC 3025  
Tel: +61 3 9314 0722  
Fax: +61 3 9314 0423

## BRAZIL

Jotun Brasil Ltda.  
Estrada Ademir Ferreira Torres 250  
Caluge - Itaboraí (RJ) CEP 24808-520  
RIO DE JANEIRO  
Tel: +55 21 3147 3850  
Fax: +55 21 3147 3861

## CYPRUS

Jotun Cyprus Ltd.  
56 Theodorou Potamianou  
Aphrodite Court, 1st Floor  
4155, Kato Polemidia  
LIMASSOL  
Tel: +357 25 374455 / 374440 / 374477  
Fax: +357 25 374400

## P.R. of CHINA

Jotun Coatings (Zhangjiagang) Co. Ltd.  
Jotun COSCO Marine Coatings  
(Qingdao) Co. Ltd.  
Floor 20, Jiu Shi Mansions,  
No. 28 Zhong Shan Road (South)  
SHANGHAI 200010  
Tel: +86 21 6333 080 0  
Fax: +86 21 6326 968 6

Jotun Coatings (Zhangjiagang) Co. Ltd.  
Jotun COSCO Marine Coatings  
(Qingdao) Co. Ltd.  
Room 709-12, Goldlion Digital Network  
Centre, 138 Tiyu Road East,  
GUANGZHOU, 510620  
Tel: +86 20 38 78 07 49  
Fax: +86 20 38 78 19 66

## HONG KONG

Jotun COSCO Marine Coatings (H.K.) Ltd  
Room 902, 9/F,  
101 King's Road, North Point  
HONG KONG  
Tel: +852 2527 6466  
Fax: +852 2861 1307

## DENMARK

Jotun Danmark A/S Jotun Coatings  
Columbusvej 5, 2860 Søborg,  
COPENHAGEN  
Tel: +45 4492 9400  
Fax: +45 4492 9401

## EGYPT

El Mohandes Jotun S.A.E.  
Plot 193, Second District,  
City Center, Fifth Settlement,  
NEW CAIRO  
Tel: +202 2614 9999  
Fax: +202 2614 9998

## FINLAND

Nor-Maali OY  
Vanhatie 20, 15240 LAHTI  
Tel: +358 3 874 650  
Fax: +358 3 874 6550

## FRANCE

Jotun France S.A.  
22/24 Rue du President Wilson, Bat.A  
92300 LEVALLOIS PERRET  
Tel: +33 1 4519 3882  
Fax: +33 1 4519 3894

## Jotun A/S

P.O. Box 2021,  
N-3202 Sandefjord, Norway  
Tel: +47 33 45 70 00  
[jotun.com](http://jotun.com)

## GERMANY

Jotun (Deutschland) GmbH  
Haferweg 38  
22769 HAMBURG  
Tel: +49 40 851 960  
Fax: +49 40 856 234

## GREAT BRITAIN

Jotun Paints (Europe) Ltd.  
Stather Road, Flixborough,  
SCUNTHORPE DN15 8RR  
Tel: +44 1724 400 000  
Fax: +44 1724 400 100

## GREECE

Jotun Hellas Ltd.  
33, Zeppou Street,  
Glyfada  
ATHENS 16675  
Tel: +30 210 42 85 980-82  
+30 210 42 86 035-37  
Fax: +30 210 42 85 983/  
+30 210 42 87 237

## INDIA

Jotun India Pvt Ltd.  
502, 5th Floor,  
Boston House,  
Suren Road,  
Behind Cinemax Theatre,  
Andheri East,  
Mumbai – 400 093  
Tel: +91 22 2822 4600  
+91 22 2820 5900 (+fax)  
Fax: +91 22 2820 5900

## INDONESIA

P.T. Jotun Indonesia  
Kawasan Industri MM2100  
Blok KK-1, Cikarang Barat  
Bekasi 17520  
Tel: +62 21 8998 2657  
Fax: +62 21 8998 2658

## IRELAND

Jotun (Ireland) Ltd.,  
Unit K7, Marina Commercial Park,  
Centre Park Road, CORK  
Tel: +353 214 965955  
Fax: +353 214 965992

## ITALY

Jotun Italia S.P.A.  
Via Petronio, 8, Zona Ind. Noghère  
34147 - MUGGIA (TRIESTE)  
Tel: +39 040 23 98204  
Fax: +39 040 23 98222

## JAPAN

NKM Coatings Co., Ltd.  
12-1, Minamirokugo 3-chome,  
Ota-ku,  
TOKYO 144-0045  
Tel: +81 3 6758 2212  
Fax: +81 3 6758 2213

## KOREA (SOUTH)

Chokwang-Jotun Ltd.  
30th Block Jisa Science Park,  
1205 Jisa-dong, Gangseo-gu,  
BUSAN 618-230  
Tel: +82 517 976 000  
Fax: +82 517 117 735

## LIBYA

Jotun Libya J.S.Co  
Almumtaz Co. S.A. (Jotun).  
Alseka Street  
P.O. Box 6850  
TRIPOLI  
Tel: +218 214777811  
Fax: +218 214780718

## MALAYSIA

Jotun Paints (Malaysia) Sdn. Bhd.  
Lot 7 Persiaran Perusahaan,  
Section 23, P.O. Box 7050  
40700 SHAH ALAM  
Tel: +60 351 235 500  
Fax: +60 351 235 632

## THE NETHERLANDS

Jotun B.V.  
Postbus 208  
3200 AE SPIJKENISSE  
Visiting address:  
Curieweg 11b, 3208 KJ Spijkenisse  
ROTTERDAM  
Tel: +31 181 678 300  
Fax: +31 181 617 899

## NORWAY

Jotun A/S  
P.O. Box 2021,  
3202 SANDEFJORD  
Visiting address:  
Hystadveien 167, 3209 Sandefjord  
Tel: +47 33 45 70 00  
Fax: +47 33 45 79 00

## OMAN

Jotun Paints Co. LLC  
Rusayl Ind. Estate, Road No.10  
P.O. Box 672 Code 111, MUSCAT  
Tel: +968 2444 6100  
Fax: +968 2444 6105

## PAKISTAN

Jotun Pakistan (Pvt.) Ltd.  
2KM Defence Road, Off 9KM Raiwind  
Road, Adjacent Valencia Homes Gate  
LAHORE 544770  
Tel: +92 423 532 350 0-3  
Fax: +92 423 532 1387

## PHILIPPINES

Jotun (Philippines) Inc.  
846 West Service Road, Km.18  
South Super Highway  
Paranaque City,  
METRO MANILA 1714  
Tel: +63 2239 1032-34  
Fax: +63 2822 0760

## POLAND

Jotun Polska Sp.zo.o.  
ul. Magnacka 15,  
80-180 GDAŃSK KOWALE  
Tel: +48 58 555 1515  
Fax: +48 58 781 9692

## RUSSIA

Jotun Paints O.O.O.  
Varshavskaya Str., 23/2, Office 75  
196128 ST. PETERSBURG  
Tel: +7 812 640 00 80  
Fax: +7 812 640 00 81

## SAUDI ARABIA

Jotun Saudia Co. Ltd.  
Jeddah Industrial City, Phase 3,  
P.O. Box 34698, JEDDAH 21478  
Tel: +966 2635 0535 / 2636 1271  
Fax: +966 2636 2483

## SINGAPORE

Jotun (Singapore) Pte. Ltd.  
37 Tuas View Crescent  
Singapore 637236  
Tel: +65 650 882 88  
Fax: +65 6265 7484

## SOUTH AFRICA

Jotun Paints South Africa (PTY) Ltd.  
Wimbledon Road, P.O.Box 187  
BLACKHEATH 7581  
Tel: +27 21 905 1070  
Fax: +27 21 905 1652

## SPAIN

Jotun Iberica S.A.  
Poligon Santa Rita,  
Calle Estatica no. 3,  
08755 Castellbisbal,  
BARCELONA  
Tel: +34 937 711 800  
Fax: +34 937 711 801

## SWEDEN

Jotun Sverige AB  
P.O. Box 151, Klangfärgsgatan 13,  
421 22 VÄSTRA FRÖLUNDA  
Tel: +46 3169 6300  
Fax: +46 3169 6397

## THAILAND

Jotun Thailand Ltd  
Amata Nakorn Ind. Estate (BIP11)  
700/353 Moo 6 Tumbol  
Donhualoh, Amphur Muang  
CHONBURI 2000  
Tel: +66 2 022 9888  
Fax: +66 38 214 373/375

## TURKEY

Jotun Boya San. ve Ticaret. A.S.  
Balabandere Caddesi Hilpark Suites Sitesi No.10,  
Istinye 34460 Sariyer  
ISTANBUL  
Tel: +90 21 2279 7878  
Fax: +90 21 2279 2549

## U. A. E.

Abu Dhabi  
Jotun Abu Dhabi (LLC)  
P.O. Box 3714, Mussafah  
ABU DHABI  
Tel: +971 2691 0700  
Fax: +971 2551 0232

## Dubai

Jotun U.A.E. Ltd. (LLC)  
P.O. Box 3671,  
Al Quoz Industrial Area  
DUBAI  
Tel: +971 4339 5000  
Fax: +971 4338 0666

## USA

Jotun Paints Inc.  
9203 Highway 23, P.O. Box 159,  
Belle Chasse, LA 70037  
Tel: +1 713 860 8241  
Fax: +1 713 860 8242

## VIETNAM

Jotun Paints (Vietnam) Co. Ltd.  
Song Than Industrial. Zone,  
No.1 Street 10,  
Di An District, Binh Duong Province  
Tel: +84 650 3742206  
Fax: +84 650 374 2205

## YEMEN

Jotun Yemen Paints Co. Ltd  
P.O. Box 70183, Al Alam  
ADEN  
Tel: +967 2820 546-9  
Fax: +967 2249 362



Jotun Protects Property