

# Hardtop TOPCOATS

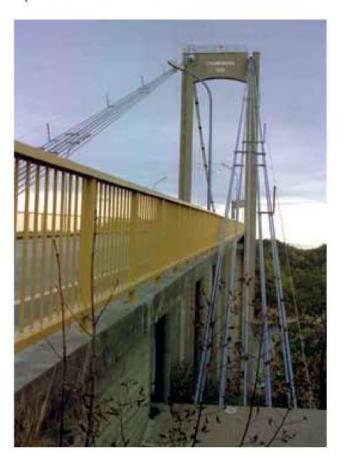
## Superior finishes for all structures

### The premium topcoat brand

Jotun has supplied premium topcoats for heavy corrosion systems all over the world for decades. To make selection easier, Jotun has gathered all two component topcoats under the following umbrella brand - Hardtop. The number one selling technology platform today is polyurethanes, but we see increased interest for other technologies such as polysiloxanes and two component acrylics. All these technologies may be found under the Hardtop brand today.

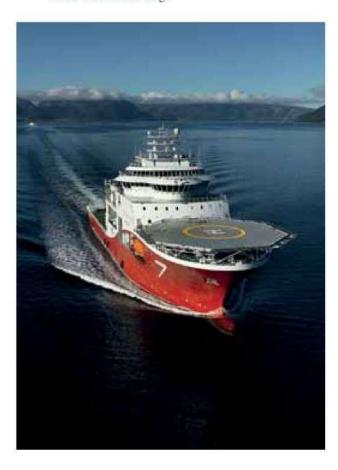
Jotun customers today demand more than just good colour stability. Elements like abrasive resistance, flexibility, VOC levels and gloss retention are just as important. Jotun has thus taken these complex customer demands into consideration, and now offer different products and technologies to fill individual needs. We are certain that you will find products that cover your topcoat needs in this brochure.





### Core products in the Hardtop range

- Hardtop XP: high solid polyurethane with excellent application properties
- Hardtop Flexi: flexible and impact resistant polyurethane
- Hardtop AS: high gloss polyurethane with excellent chemical resistant properties
- Hardtop HB: low gloss polyurethane
- Hardtop Optima: polysiloxane topcoat with excellent finish and gloss retention
- Hardtop CA: two-component isocyanate free acrylic with a wide colour range



### Topcoat in a coating system

The topcoat must also be compatible with the anticorrosive primer system. Jotun is taking good care to secure good adhesion and appearance in the finished system. To ensure the success of the paint system it is important to use recommended primers and application data given in technical data sheets.





# **Hardtop** XP

The Number 1 selling polyurethane topcoat, retaining its gloss level over extended periods



Hardtop XP is one of the most popular polyurethane topcoats – protecting millions of square metres every year. It is available worldwide and is a favourite topcoat among painters. Hardtop XP is extremely versatile and can be applied by airless spray, brush or roller on a wide range of primers. Roller application properties are excellent with good flow and finish. Low dry spray makes the gloss level predictable and on-site friendly. Hardtop XP has great gloss and colour retention, and gives a better finish, less spills and lower paint consumption.

### The Number 1 selling polyurethane topcoat for heavy corrosion systems

- Excellent colour and gloss retention
- · Excellent application properties
- Excellent brush and roller application properties
- VOC compliant and high solids formulation

# Hardtop FLEXI

High standards of flexibility, durability, gloss and

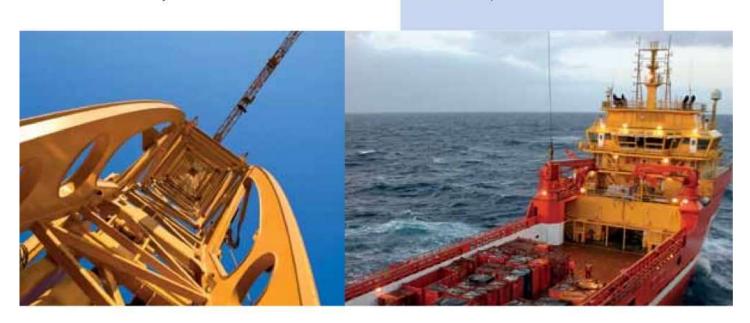
impact resistance

Hardtop Flexi is a high solids (64% volume) polyurethane topcoat with excellent wetting and adhesion properties. Hardtop Flexi has a remarkable ability to resist impact and will maintain initial gloss level over extended periods.

Low VOCs, application of single coats up to 150 microns and fast drying add to the features of Hardtop Flexi. This is one of the few products that contain anticorrosive pigments for best direct to metal performance.

## Exceptional flexibility and impact resistance

- Can be applied in thick coats
- Great adhesion to most primers and substrates
- · Direct to metal performance
- Contains anticorrossive pigmentation
- Slighly lower gloss level works as a 'hider of imperfections'
- · Good gloss retention
- VOC compliant



# Hardtop AS

## Decades of world proven performance



Hardtop AS is a topcoat with a very long track record. Millions of litres have been sold all around the world. This versatile polyurethane has been a favourite for decades and has proven performance. Hardtop AS is the best choice when great chemical or solvent performance is important.

## A versatile topcoat for steel and other metals, concrete & plastics

- Excellent colour and gloss retention
- Good adhesion
- Good chemical resistance
- Well proven formulation

# **Hardtop** HB

## Smooth low gloss finish



When a lower level of gloss is required Hardtop HB is a good choice.

Properties are similar to the well proven Hardtop AS, but with a lower gloss level.

## The most popular low gloss polyurethane

- Smooth low gloss finish
- Possible to apply in higher film thickness
- 4:1 mixing ratio easy to mix
- Low gloss hides imperfections in the surface

# Hardtop OPTIMA

## Ultimate lasting gloss appearance

Hardtop Optima is a high solids product based on a polysiloxane resin with outstanding gloss and colour retentionthat provides superior corrosion protection. Hardtop Optima has optimal adhesion to selected primers, while maintaining its flexibility throughout the system's working life. Extra focus has been put on achieving a formulation that ensures predictable curing. The recommended selection of compatible primers is limited to enable a long-life world class system.

### For long lasting performance

- Excellent colour and gloss retention
- Excellent VOC values
- · Excellent finish
- · Fast drying
- Long lasting flexibility formulation
- · Urethane-free



# Hardtop CA

The acrylic alternative to a polyurethane topcoat



Hardtop CA ia a two-component acrylic topcoat with good colour and gloss retention and is an excellent alternative to a polyurethane topcoat. This crosslinked acrylic has a predictable curing that is appreciated by customers. Hardtop CA is available in a wide range of colours through the MCI colour system.

### Flexible, abrasion, chemical and water resistant

- · Good weather resistance
- · Isocyanate free
- Predictable curing
- VOC compliant

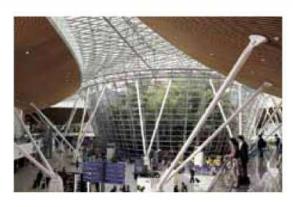
## Hardtop Topcoats for superior finishes

	Hardtop XP	Hardtop Flexi	Hardtop AS
Technology	Polyurethane	Flexible PU	Polyurethane
Gloss level	Glossy	Glossy	Glossy
Thinner	No. 10	No. 10	No. 10
Colours	Unlimited	Unlimited	Unlimited
Solids (volume %)	63% ± 2	64% ± 2	50% ± 2
DFT:			
Typical	60 μm	80 μm	50 μm
Dry	40-80 μm	50-150 μm	40-60 μm
Wet	65-130 μm	80-120 μm	80-120 μm
DRYING TIME (23°C):			
Surface dry	3h	1.5h	1h
Dry to recoat, min	6h	3h	5h
Mixing ratio	10:1	4:1	4:1
Potlife (+23°C)	1.5h	2h	4h
Flash point (Setaflash)	30°C ± 2	25°C ± 2	26°C ± 2
Gloss retention	Excellent	Very good	Excellent
Water resistance	Very good	Very good	Very good
Abrasion resistance	Good	Very good	Very good
Chemical resistance	Good	Very good	Very good
Flexibility	Very good	Excellent	Very good
VOC level (PG6)	320	340	415





Hardtop HB	Hardtop Optima	Hardtop CA
Polyurethane	Polysiloxane	2 K acrylic
Low gloss	Glossy	Glossy
No. 10	No. 7 or 17	No. 7 or 17
Unlimited	Unlimited	Unlimited
50% ± 2	76% ± 2	60% ± 2
80 µm	75 μm	75 μm
60-100 μm	60-100 μm	60-125 μm
120-200 μm	80-130 μm	100-210 μm
2h	3h	2.5h
6h	4h	5h
4:1	4:1	9:1
4h	6h	4h
26°C ± 2	30°C ± 2	28°C ± 2
Excellent	Excellent	Good
Very good	Very good	Very good
Very good	Very good	Good
Very good	Very good	Good
Very good	Good	Excellent
418	215	340





### Jotun worldwide

Jotun Coatings and Jotun Paints Division of Jotun A/S Legal Jotun entities world wide are listed. For details of Branch offices and listed, please visit 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

Av Santa Luzia, 2084 - Santa Luzia 24.722-315 São Gonçalo RIO DE JANEIRO Tel: +55 21 2776 1313 Fax: +55 21 2776 2263

#### P.R. of CHINA

Jotun Coatings (Zhangjiagang) Co. Ltd. Jotun COSCO Marine Coatings (Qingdao) Co. Ltd. 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 1208, 12/F, Stanhope House 734 King's Road, Quarry Bay 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

Florida Mall. Masaken Sheraton - 4th Floor Tel: +20 2265 1800 Fax:+20 2265 1801

#### **FINLAND**

Nor-Maali OY Vanhatie 20, 15240 LAHTI

## FRANCE

Jotun A/S

92300 LEVALLOIS PERRET Tel: +33 1 4519 3882 Fax:+33 1 4519 3894

#### 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

18, Vouliagmenis Avenue, Glyfada Tel: +30 210 42 85 980-82

+30 210 42 86 035-37 Fax:+30 210 42 85 983/ +30 210 42 87 237

Boston House Suren Road, Behind Cinemax Theatre. Andheri East. Mumbai – 400 093 Tel: +91 22 2822 4600 Fax:+91 22 2820 5900

#### INDONESIA

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

#### IRFLAND

Jotun (Ireland) Ltd., Unit K7, Marina Commercial Park,

#### ITALY

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

#### **KOREA (SOUTH)**

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 Al Mumtaz Imp. of Paints and Equipm. Co. P.O. Box 6850 Tel:+218 214777811

#### MALAYSIA

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 Fax +31 181 617 899

#### NORWAY

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

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

#### PAKISTAN

Plot no. 2-H, Sector 5 Korangi Industrial Area, KARACHI Tel: +92 213 5121 491-2 Fax:+92 213 5121 493

#### **PHILIPPINES**

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

#### POLAND

Jotun Polska Sp.zo.o. Ul. 10 Lutego 16, 81-364 GDYNIA Tel: +48 58 555 1515 Fax:+48 58 781 9692

#### RUSSIA

196128 ST. PETERSBURG Tel: +7 81 2332 0080 / 2785 0034 Fax:+7 81 2783 0525

Fax:+966 2636 2483

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

#### Jotun (Singapore) Pte. Ltd.

Singapore 637236 Tel: +65 650 882 88 Fax:+65 6265 7484

#### **SOUTH AFRICA**

Jotun Paints South Africa (PTY) Ltd. **BLACKHEATH 7581** 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

Amata Nakom Ind. Estate (BIPII) Donhualoh, Amphur Muang CHONBURI 2000 Tel: +66 38 214 824-6/214 347-51 Fax:+66 38 214 373/375

Jotun Boya San. ve Ticaret. A.S. Yeni Camlik Caddesi, Ayaz Sok. No. 2/4, ISTANBUL 34418 Tel: +90 21 2279 7878 Fax:+90 21 2279 2549

#### U. A. E.

Abu Dhabi Jotun Abu Dhabi (LLC) ABU DHABI Tel: +971 2551 0300 Fax:+971 2551 0232

Dubai Jotun U.A.E. Ltd. (LLC) Al Quoz Industrial Area DUBAI Tel: +971 4339 5000 Fax:+971 4338 0666

#### USA

9203 Highway 23, P.O. Box 159, Belle Chasse, LA 70037 Tel: +1 800 229 3538 / +1 504 394 3538 Fax:+1 504 394 3726

### VIETNAM

Song Than Industrial, Zone, No.1 Street 10, Di An District, Binh Duong Province Tel: +84 65 074 2206-9 YEMEN

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



Tel:+47 33 45 70 00 jotun.com

