



**JOTUN**

# Chemflake

Protective coatings for storage tank interiors



# Chemflake

A range of easy to apply, fast to cure, long-lasting storage tank internal coatings

Maintenance of older tanks is a continuing problem with many tanks never having previously been protected. In addition, together with increasing legislation and concern for the environment, protection of tanks can become a serious economic burden.

Traditionally storage tank interiors have been protected by multi-layers of various types of epoxy laminate. Today, in contrast, long lasting protection can easily be achieved with the application of Chemflake specialised protective coatings.

## **Specifically designed for lasting, economical protection of storage tanks**

The Chemflake range of internal tank linings enables a coating to be selected specifically for the environment in which the tank operates and the product stored.

Chemflake products are advanced glass flake reinforced vinyl ester coatings that outperform traditional systems.

Chemflake products will protect the internal surfaces of the tank from corrosion and will also protect the stored product from contamination.

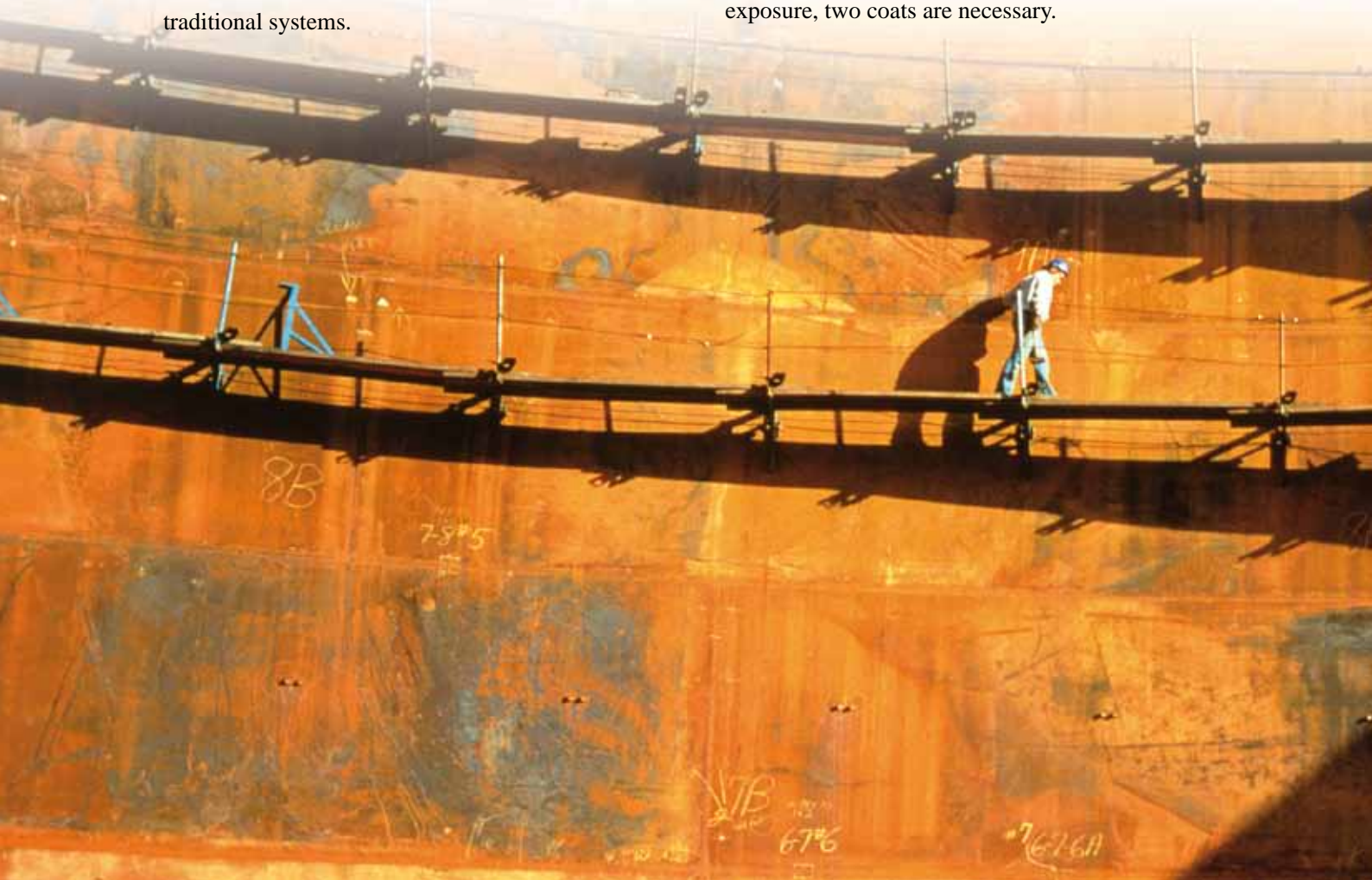
They will also meet current and proposed VOC and emissions-related environmental legislation.

## **Downtime, the source of higher costs**

When considering alternative coating systems it is essential to take into account the indirect costs incurred through downtime. Waiting around for application to be completed and for curing of the system – what is the effect of this idle time on the operation of the tank?

## **Less downtime, greater savings**

Chemflake products are designed to deliver major reductions in application time and shorter curing – in some cases only one coat may be required. Reduced overcoating intervals means substantial time saving where, with severe chemical exposure, two coats are necessary.



# Chemflake

## The benefits

### Economical

- High volume solids and high dry film thickness in one or two coats
- Rapid curing and overcoating
- Reduces maintenance costs

### Easy to apply

- Apply by standard airless spray or 2 component spray units
- Saves time and labour

### Prolonged lifetime

- Solid glassflake protection throughout the entire coating for maximum adhesion

### Time saving

- Cures fast
- Can be applied in one or two coats of 600–1000 µm per coat

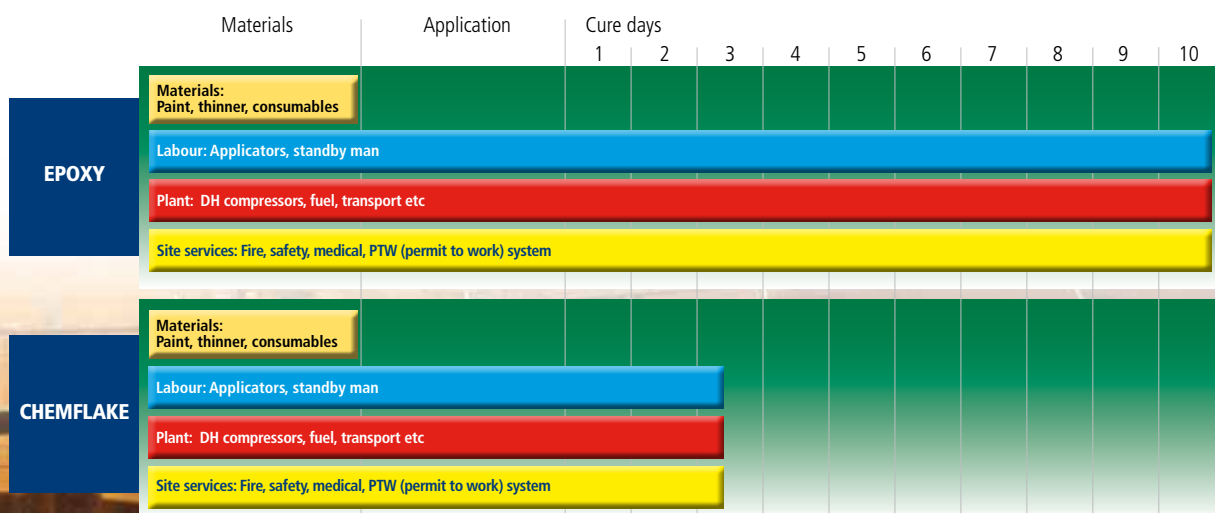
### Versatile

- Resistant to most commonly traded solvents and chemicals

### Temperature resistant

- Immersed – up to 100°C, depending upon service criteria
- Temperature resistant in dry conditions up to 150°C without decomposition

## Estimated costs for 'like for like' specification



# Chemflake Special

## Solvent-less vinyl ester glass flake coating

- Ultra high build range up to 600–750µm per coat
- Pit filling capability
- Re-coat after 2–3 hours
- Rapid cure – tank in commission 72 hours
- 1–2 coat system
- Acid resistant
- Resistant against crude oil up to 90°C
- Temperature resistance 85°C in seawater
- Diverse track record
- VOC compliant to current European legislation
- Approved by Statens Provningsanstalt, the official Swedish Testing Institute, for the internal protection of tanks containing lead-free petrol. The approval is based on a range of tests, including adhesion and impact resistance following immersion in various aggressive liquids. The tests were carried out in collaboration with Allards Varkstader AB, the Swedish tank manufacturers.

One coat and finished!



*After blast cleaning to Sa 2½, apply Chemflake Special*



*Ready in 72 hours. Final inspection*

# Chemflake CV

## The Conductive Version of Chemflake

Chemflake CV is a glass flake reinforced high build vinyl ester coating with high conductivity.

Recommended for application to:

- steel in aggressive environments
- gasoline or bulk crude tanks where an anti-static coating is required

# Chemclear

## Pre-accelerated clear vinyl ester coating

Chemclear is recommended for use as a sealer/size on concrete surfaces. It can be used in combination with glassfibre as a laminating resin.

### Typical Chemflake systems\*

| Substrate       | Coating           | Main use  | Vol. sol. % | VOC gm <sup>2</sup> /l | DFT µm/coat | Number of coats |
|-----------------|-------------------|---|-------------|------------------------|-------------|-----------------|
| <b>Steel</b>    | Chemflake Special | Crude Oil 90°C, wide range of chemicals, acids and alkalis at elevated temperatures | 96          | 60                     | 600–1500    | 2               |
|                 | Chemflake CV      | As main use of Chemflake Special but where a conductive coating is required         | 96          | 60                     | 600–1500    | 1 or 2          |
| <b>Concrete</b> | Chemclear         | Silos and chemical/crude tank containment   | 96          | 60                     | 150         | 1               |
|                 | Chemflake Special | Silos and chemical/crude tank containment   | 96          | 60                     | 600–1500    | 2               |

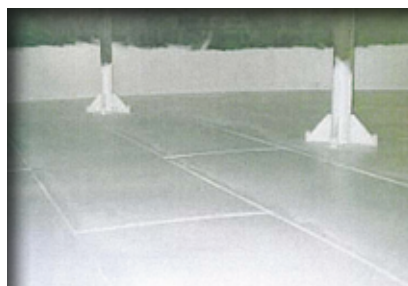
(Chemflake Touch up sets are also available if required)      \* Indications of main use only. Discuss specific requirements with your Jotun Coatings Advisor together with reference to relevant product resistance list. Where a holding primer may be required consult your Jotun Coatings Advisor

### Case histories

#### Studsrup Power Plant Denmark

Main system for internal use in chambers for filters, supporting fue canals and absorber tanks.

Substrate: Carbon steel  
 Exposure: Chemicals  
 Surface prep: Sa 2½  
 Area: 53,000 m<sup>2</sup>  
 System: 2 x 600 µm Chemflake Special  
**Total: 1200 µm DFT**



#### Samarec BP Al Jouf Saudi Arabia

Chemflake applied in one 8 hour shift. Tank returned to service after 3 days.

Substrate: Carbon steel  
 Exposure: Hydrocarbons  
 Surface prep: Sa 2½  
 Area: Approx. 4,000 m<sup>2</sup>  
 System: 2 x 750 µm Chemflake Special  
**Total: 1500 µm DFT**

# Jotun worldwide

## 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

## AZERBAIJAN

Dubendi Firmasi  
Badamdar Sossesi No 27  
BAKU  
Tel: +994 125 105 234  
Fax: +994 125 101 169

## BRAZIL

Jotun Brasil Ltda.  
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 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 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

## CYPRUS

Jotun Paints (Europe) Ltd  
P.O. Box 52177, 4061 LIMASSOL  
visiting address:  
Visionhire Bldg,  
Corner: Manoli Kalomiri & Marikas Kotopouli,  
3rd Floor, 3030 LIMASSOL  
Tel: +357 253 744 55  
Fax: +357 253 744 00

## 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.  
El Sheikh Aly Gad El Haq Street  
Florida Mall, Masaken Sheraton – 4th Floor  
CAIRO  
Tel: +20 2265 1800  
Fax: +20 2265 1801

## 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

## GERMANY

Jotun (Deutschland) GmbH  
Winsberggring 25,  
22525 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.  
Skouze 26 Str.,  
PIREAEUS 18536  
Tel: +30 210 42 85 980-82  
+30 210 42 86 035-37  
Fax: +30 210 42 85 983

## INDIA

Jotun India Pvt Ltd.  
204 & 205 Ascot Centre  
Sahar Road, Andheri (East)  
MUMBAI 400 099  
Tel: +91 22 2822 4600  
+91 22 2820 5900 (+fax)  
Fax: +91 22 2820 5900

## INDONESIA

P.T. Jotun Indonesia Paints and Chemicals  
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. Noghere  
34147 - MUGGIA (TRIESTE)  
Tel: +39 040 23 98204  
Fax: +39 040 23 98222

## JAPAN

NKM Coatings Co., Ltd.  
25-15 Higashi Ohi 5-chome  
Shinagawa-ku, TOKYO 140-8520  
Tel: +81 3 3472 3521  
Fax: +81 3 3472 3481

## KAZAKHSTAN

Jotun Boya San ve Tic. AS  
Kazakhstan Repr. Office  
EXPO-City, Pavillion 15, Office 106  
Timiryazev Str. 42  
ALMATY  
Tel/Fax: +7 727 266 5557

## 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

## LATVIA

Jotun Paints (Europe) Ltd.  
Representative Office,  
Daugaygrivas 83/89  
Office No.75, 1007 RIGA  
Tel: +371 6747 3908/9  
Fax: +371 6747 3907

## LIBYA

Al Mumtaz Imp.of Paints & Equipm.Co.  
P.O.Box 6850,  
TRIPOLI  
visiting address:  
Ben Al Ahmer Str., Hai Al Andalous district  
TRIPOLI  
Tel: +218 214 777 811  
Fax: +218 214 780 718

## MALAYSIA

Jotun (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,  
3248 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.) Limited  
Plot no. 2-H, Sector 5  
Korangi Industrial Area, KARACHI  
Tel: +92 213 5121 491-2  
Fax: +92 213 5121 493

## PHILIPPINES

Jotun Singapore Pte. Ltd –  
Philippine Branch Office,  
846 West Service Road, Km.18,  
South Super Highway, Paranaque City  
METRO MANILA 1714  
Tel: mobile: +63 9088 8098 90  
office: +63 2239 1032 to 34 /  
+63 2776 1337 / +63 2776 1651 local 216  
Fax: +63 2822 0760

## POLAND

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

## PORTUGAL

Jotun Iberica SA. (Suc. Portugal)  
Estrada Vale ede Mulatas,  
Armazem no. 5  
2910-338 SETUBAL  
Tel: +351 265 708 910  
Fax: +351 265 708 563

## QATAR

Jotun Qatar  
10th Floor Al Wakra Tower  
P.O. Box 24373,  
Code-0974, DOHA  
Tel: +974 441 2977  
Fax: +974 441 2728

## ROMANIA

Jotun Boya San.ve.Tic.A.S.  
Representative Office Romania  
Str, Nicolae Jorga Nr 113A  
8700 CONSTANTA  
Tel: +40 241 516987  
Fax: +40 241 513863  
Mobile: +40 722 230961

## RUSSIA

Jotun Paints O.O.O.  
Stachek Avenue 57, No.31  
198096 ST. PETERSBURG  
Tel: +7 81 2332 0080 / 2785 0034  
Fax: +7 81 2783 0525

## 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.  
11&15 Sixth Lok Yang Road,  
Jurong, SINGAPORE 628111  
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 Estática 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

## SYRIA

Jotun Syria  
Mr. Anas Tayarrah,  
c/o Arabian Enterprises  
P.O.Box 9130, DAMASCUS  
Tel: +963 116 113 820  
Fax: +963 116 115 951  
Mobile: +963 942 300 23

## THAILAND

Jotun Thailand Ltd  
Amata Nakom Ind. Estate (BIPII)  
700/353 Moo 6 Tumbol  
Donhualoh, Amphur Muang  
CHONBURI 2000  
Tel: +66 38 214 824-6/214 347-51  
Fax: +66 38 214 373/375

## TURKEY

Jotun Boya San. ve Ticaret. A.S.  
Yeni Camlik Caddesi,  
Ayaz Sok. No. 2/4,  
4. Levent, ISTANBUL 34418  
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 2551 0300  
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: +1 800 229 3538  
+1 504 394 3538  
Fax: +1 504 394 3726

## VIETNAM

Jotun Paints (Vietnam) Co. Ltd.  
Song Than Industrial. Zone,  
No.1 Street 10,  
Di An District,  
Binh Duong Province  
Tel: +84 65 074 2206-9  
Fax: +84 65 074 2205

## YEMEN

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

## HEAD OFFICE

Jotun A/S  
P.O.Box 2021, 3248 Sandefjord, Norway  
Tel: +47 33 45 70 00 Fax: +47 33 45 79 00  
www.jotun.com

