

غرايس بيزنس خروب ذ.م.م **GRACE BUSINESS GROUP**

TRADING&CONTRACTING & REALESTATE

Tel: +974 4465 7961

P.O.Box: 214082



ABOUT US

Since first opening our doors in 2007, Grace Business Group W.L.L has earned a reputation for our integrity, quality, service and attention to detail.

Our growth from the local builders into one of Qatar's most respected, employee-owned construction companies is a reflection of the strong relationship we have forged over the years of personalized approach to our client service.

With over 12 years of Industrial, Commercial, Institutional, Retail and Residential project experience and success, we are proud that much of our business continues to come from repeat customers and client referrals. Regardless of our size of nature of each construction projects, our company is committed to generating personalized, innovative, quality-driven solution that reflect customer's expectation and deliver superior outcomes.

For more than 200 clients from the private and public sector in the country, Grace Business Group W.L.L has successfully completed more than 150 projects according to the preference to the clients and which exceeds the expectation.

As a specialist contractor, most advanced construction methods and technologies to engineer, build and preserve complex structures. We creates innovative and customized solutions, from initial engineering to project execution, to take up its client's challenges. We as a multi-disciplinary construction partner, capable of providing clients with innovative practical designs and construction solutions adapted to suit the local market. The group has adapted post-tensioning principles to civil structures such as reservoirs, plants, tunnels, off-shore platforms, and stay cables. In addition to post-tensioning and stay cables, the group's scope of works covers pre-casting and formwork systems, repair works, retained earth walls, heavy lifting, monitoring, geo-technics and deep foundations.

Our Major Project division provides skilled and trained staffs, two experienced technical centers, an ability to benchmark new methods, new equipment and new materials; and specialist equipment designed as modular as possible for reuse in different configurations.

In the future development, Grace Business Group W.L.L would aim for creating a differentiated and international organization with the mission to make the first-class construction product which contains our management, innovation and social responsibility, insisting on the management idea of "Creativity supreme, Responsibility first; Construct and Cultivate, Brand Building" and we are willing to make greater contribution to the "Going-out" strategy and the continuous growing for all other enterprise.







All this is guided by the superior vision of MR. ALI EID M A AL-AJMI With this, there is no doubt that Qatar will continue moving steadily towards becoming one of the region's main economic powers. We are as detained as ever to be part of our country's promising future.

It has been an exciting experience to witness the remarkable economic development of Qatar. We are lucky to live in one of the world's fastest growing economies evidenced by our young nation's diversifying markets and infrastructure development. Our organization has been fortunate enough to have actively participated in contributing to Qatar's economy, we have stayed true to our mission of delivering the finest quality services and products in whichever sector we have been involved with.

We believe the success and growth of our business can be attributed to consistency in terms of standards and policies and to the efforts of our supportive local and international partners. Furthermore, we have a very selective recruitment process that ensures our highly qualified staff and management which deliver the best services to the clients.

Over the years, our professional belief in ethics and quality has evolved into a set of corporate standards and practices which we use as our benchmark for excellence. This attitude of providing the highest level of quality in all of our endeavors has paid-off at every step of the way.

As a diversified group of establishments that maintain rigorous international standards in its many products and services which deliver highest and unique proposition to our company and Qatar's growing global trade. Aided by our professional standards, thoroughly tested policies and with the support of our dedicated team members we shall continue to move forward in step with the major developments that are rapidly taking place at home and around the globe.



GENERAL MANAGER'S MESSAGE

Grace Business Group W.L.L is a professional organizational dedicated to serve our clients with Honesty, Integrity and accountability. We are conscious of our responsibility in transforming the organization to make it truly world class, to ensure its continued long term success and growth.

We do know by looking back over the past years that things will be a lot different. We can be a great part of the changes that come with the future. We follow engineering trends and latest technology of modern infrastructure with more skills and optimum utilization in order to achieve goals that we share with our valuable clients and to participate in the economic growth.

Our high ideas and collective youthful force give us the drive to handle advanced technology, and we have a very dynamic corporate culture. We produce results within your timeline and to your specifications. Our main Quality principles are quality people, quality people, quality products, quality process and quality relationship. Upon this four pillar foundation we provide the maximum value to all our clients and a challenging, rewarding, safe environment to our employees. We promise to pursue these aims. There could be no greater reward than to develop. I would like to extend my greatest gratitude to those people for supporting our journey of services with their relentless pursuit for superior performance, and deeply appreciate the continued support.



OUR MISSION

Grace Business Group W.L.L is involved in construction and maintenance of contracting services for Public / Industrial Buildings, Hospitals, Networks for Water and Sewerage Systems, Roads, tunnels, Ports and Infrastructure Projects and General Civil Engineering works in the State of Qatar.

The management of our company is committed to provide customers with the best quality products and services in the above mentioned fields of operation.

Our mission is to ensure total satisfaction of our customers through continual improvement of our services dedicated in achieving and maintaining excellence in all aspects of our activities. Thus, we recognize and accept the responsibility to:

Meet and exceed our client's expectations the first time and every time. Control the hazards and risks posed by our activities and operations to our employees, clients, visitors and other third parties.

Operate without causing any adverse impact to the environment. Ensure total customer satisfaction by providing best quality products and services along with the efficient and timely delivery of the same. Streamline and continuously improve our processes in order to meet and exceed our client's requirements.

Train our employees so as to equip them with the necessary tools to perform their safety, efficiently and competently, Comply with all applicable legal requirements and improve our occupational health and safety performance by providing a safe and secure work environment to our employees, clients and other third parties through the control of hazards and risks.



SERVICES

Grace Business Group W.L.L is a regional construction company capable of taking on any project, large or small, in the Industrial, Commercial and Residential sectors. In today's increasingly challenging construction market, we are adept at tailoring different approaches to meet each client's needs and deliver successful projects.

Over the past 12+ years, our company has developed the skills, techniques, methods and expertise to meet demands in all types of construction project delivery.

Our services include:

- General Contracting
- Pre-Construction
- Construction Management
- Design / Build
- Electrical
- Mechanical
- HVAC
- Network for water and sewage systems
- Building materials

Fire Protection and Floor Coatings

- Fire Protection Coating for Steel Structures
- Floor Epoxy Coatings



BUSINESS STRATEGY

Industrial Diversification

Grace Business Group W.L.L strength lies in the diversification of its business lines and revenue streams. The various developed industry sectors that Grace Business Group W.L.L operates in, have allowed the Company to develop a balanced, diversified, investment profile.

Market Leadership

Over several years, Grace Business Group W.L.L has been recognized as a true market leader. One of the core operating principle is to develop new business that have the same status as the existing and established operations. We constantly seeks opportunities to expand our existing business, to start new ventures in strategically important sectors, and seek acquisition opportunities where real value propositions exist.

Quality of Service

Grace Business Group W.L.L believes that providing the highest quality of services enhances the bond of trust between the Company and its clients. We have many long successful client relationships, developed over many years, through the constant delivery of the highest levels of service.

Operational Efficiency

Grace Business Group W.L.L seeks to proactively manage the costs of its operations through active and accurate assessments of its operational efficiency. The Company will continue to focus on further improving its internal processes, and will continue to implement modern concepts of human resource management, focusing on the recruitment, training and retention of highly skilled employees.

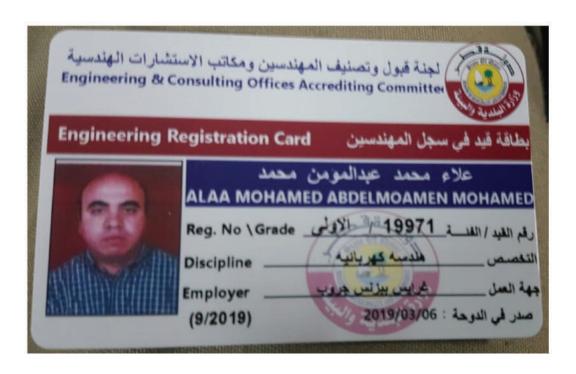
RESOURCE LIST

SI.No.	Position	Strength
1	General Manager	1
2	Project Manger	4
3	Civil Engineers	2
4	Electrical Engineers	2
5	Mechanical Engineers	2
6	Design Engineers	3
7	Cost Control Engineer	2
8	QA/QC Engineer	3
9	Draughtsman	4
10	Accountant	2
11	Admin Officer	2
12	Procurement Officer	4
13	Operations Manager	1
14	Supervisors	10
15	Skilled Labors	50
16	Unskilled Labors	40

SI.No.	Vehicles	Nos.
1	Bus	2
2	3 Ton Pick up	3
3	Pick up	4
4	Van	3
5	Cars	8

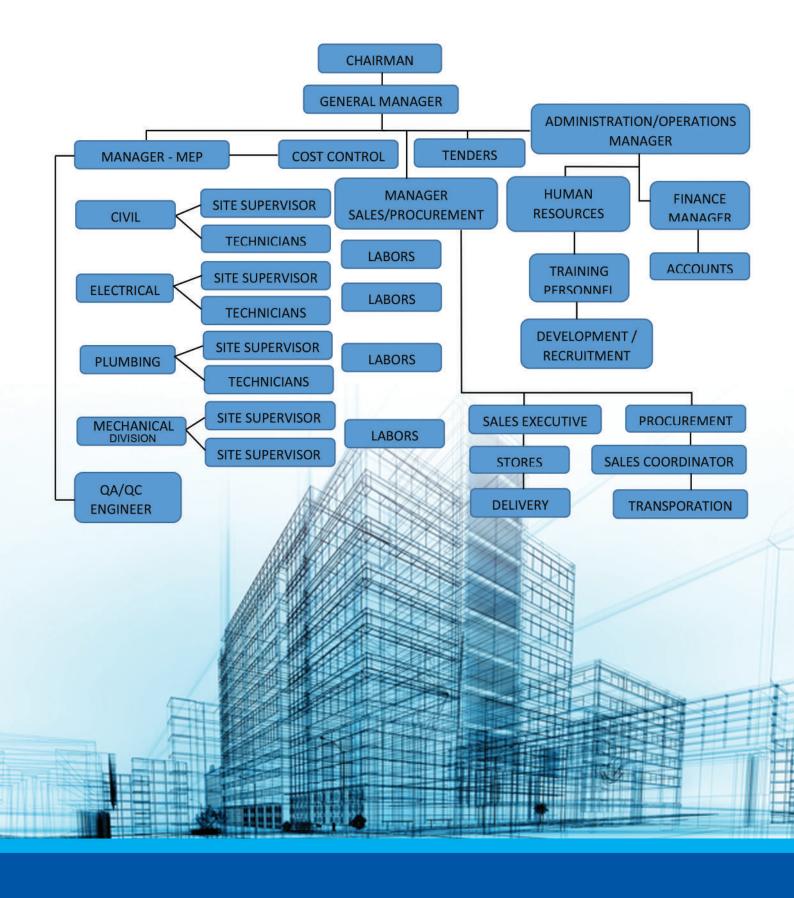
SI.No.	Equipment's	Nos.
1	Earth Compactor	2
2	Concrete Vibrator	4
3	Bobcat	1
4	Generators	4
5	Grinders	9
6	Scaffoldings	4
7	Drilling machine	10

SI.No.	Storage Areas	Nos.
1	Retail Outlet	2
2	Warehouse	1





ORGANIZATIONAL CHART



2019/02/07 No 1 of 1

تاريخ الطباعة: صفحة رقم:

Registration and Commercial Licenses Department



إدارة التسجيل والتراخيص التجارية

رخصة تجارية



2015/01/18

تاريخ اصدار الرخصة:

77898

رقم الرخصة: الأسم التجارب:

2020/02/19 48665

تاريخ انتهاء الرخصة: رقم السجل التجارب: غرايس بيزنس جروب شركة

نوع المنشأة التجارية:

السمة التجارية:

بيانات المدير المسؤول:

على عيد محمد الخويطر العجمى

اسم المدير المسئول:

26663400348

رقم الإثبات:

قطر جنسية المدير المسئول: نموذج ختم المنشأة التجاربة :

عقار رقم:

تجارب

بيانات الموقع : تصنيف الموقع:

رقم الدور/ الوحدة:

مكتب تجاري نوع الموقع:

اسم مالك العقار: يوسف محمد العبيدلي

55 العزيزية المنطقة:

نوع الرخصة :

الشارع: عثمان بن عفان

وصف العنوان :

180 رقم الشارع :

الأنشطة التجارية :

إسم النشاط	رقم النشاط
مقاولات كهربائية وصحية	4251101
القيام بالاعمال الميكانيكيه الكترونيه	2002472
تأجير السيارات	2001836
تاجير و استئجار العقارات	701200

إسم النشاط	رقم النشاط
انشاءات عامه (مقاولات عامه)	452000
اعمال صيانه الصبانب	8110031
التجارة في مواد البناء	4752801
تاجير السيارات بالسائق	711170



مدير إدارة التسجيل والتراخيص التجارية



Registration and Commercial Licenses Department

مستخرج ببعض بيانات السجل التجارب

إدارة التسجيل والتراخيص التجارية

تاريخ الطباعة: 2019/01/07



48665 رقم التسجيل الضرببي: 48665 رقم السجل التجارب: السمة التجارية: الأسم التحارب: غرايس بيزنس جروب 16/01/2020 تاريخ انتهاء السجل: 18/01/2011 تاريخ انشاء السجل: 200000 راس المال: شركة ذات مسئولية محدودة الشكل القانونى: جنسية المنشأة: قطر نشط حالة السجل: عدد الفروع:

معلومات الاتصال

صندوق البريد: أرقام الاتصال: +974

الشركاء

الأسم	رقم الإثبات	رقم السجل	الجنسية	النسبة	الحالة
كونيشان كأندب يوسف	25735602545		الهند	16	نشط
مصطفع اربوت	27035608409		الهند	16	نشط
على عيد محمد الخويطر العجمي	د الخويطر العجمم 26663400348		قطر	51	نشط
ثيلاهاث كولاتوثوروثب	27335600185		الهند	17	نشط

المدراء (المخولون بالتوقيع)

Page 1 of 2 رقم, السجل : 48665



تشهد غرفة تجارة و صناعة قطربان المنشاة المذكورة اعلاه سجلت لدير amber certifies that the above mentioned establishment has been registered



وزارة الاقتصاد والتجارة Ministry of Economy and Commerce

Registration and Commercial Licenses Department

مستخرج ببعض بيانات السجل التجارب

إدارة التسجيل والتراخيص التجارية

الصفة (الطلاحية)	الجنسية	رقم السجل	رقم الإثبات	الأسم
طلاحيات كاملة ومطلقة - مدير	الهند		25735602545	كونيشان كاندب يوسف
صلاحيات كاملة ومطلقة - مدير	قطر		26663400348	على عيد محمد الخويطر العجمي
- مدير	الهند		27335600185	ثيلاهاث كولاتوثوروثب

الفروع

حالة الفرع	رقم السجل للفرع	اسم الفرع	الرقم التسلسلب	
مشطوب	48665/1	انسباير سولوشنس	1	
نشط	48665/2	نجمه القاهره	2	

الأنشطة التجاربة

إسم النشاط	الرقم	
مقاولات كهربائية وصحية	4251101	
القيام بالاعمال الميكانيكيه الكترونيه	2002472	
تأجير السيارات	2001836	
تاجير و استئجار العقارات	701200	

إسم النشاط	الرقم
الشاءات عامه (مقاولات عامه)	452000
اعمال صيانه المبانب	81 10031
التجارة في مواد البناء	4752801
تاجير السيارات بالسائق	711170

Page **2** of **2** رقم السجل : 48665



تشهد غرفة تجارة و صناعة قطر بان المنشاة المذكورة اعلاه سجلت لحيق Gatar Chamber certifies that the above mentioned establishment has been registered

Our Major Project Details (Epoxy & Fire Protection Coating)

SI No.	PROJECT DESCRIPTION	CLIENT	YEAR
1	Fire Protection coating 300 Ton (2Hour rating Intumescent)	Alu Tec WLL	2007
2	Epoxy floor coating 10000 m ²	Alu Tec WLL	2010
3	Fire Protection coating 350 Ton (2 Hour rating Intumescent)	Qatar Kuwait UPVC	2010
4	Epoxy floor coating 12000 m²	Qatar Kuwait UPVC	2010
5	Fire Protection coating 200 Ton (2Hour rating Intumescent)	Al Khalaf Construction & Develop.Co.	2011
6	Epoxy floor coating 5000 m²	Al Khalaf Construction & Develop.Co.	2011
7	Fire Protection coating 200 Ton (2Hour rating Intumescent)	Al Andalus W.L.L	2011
8	Epoxy floor coating 5000 m²	Al Andalus W.L.L	2011
9	Fire Protection coating 500 Ton (2Hour rating Intumescent)	Al Khalaf Real estate Co	2011
10	Fire Protection coating 200 Ton (2Hour rating Intumescent)	Jordan Contg. W.L.L	2012
11	Epoxy floor coating 5000 m²	Jordan Contg. W.L.L	2012
12	Floor Painting (5000 m²) at Nuaija	Woqood	2012
13	Fire Protection coating 500 Ton (2Hour rating Intumescent)	ITCC W.L.L	2013
14	Fire protection coating 300 Ton (2Hour rating Intumescent)	Fouria Cont. WLL	2016
15	Fire protection coating 400 Ton (2Hour rating Intumescent)	Qatar Coating WLL	2018
16	Fire protection coating 400 Ton (90minutes rating Intumescent)	Al Bardha Trading and Contracting	2019
17	Epoxy floor coating 1500 m ²	Al-Sulaity Fancy Car Show Room	2019

Our Project Details Civil & MEP

1	24 Shops & 6 Flats Building at Al Khor Petrol Station	Al Khor Petrol Station	2014
2	8 Villa at Al Waab area	NBK	2014
3	Water Proofing & Application of floor painting (2000 m²)	QACC	2015
4	44 Shops at Ain Khalid	Shk. Abdulla Al Thani	2017
5	Villa Tile Project for ITC –Salam international Umsalal	ITC –Salam international	2017
6	2 Villa at Al Waab	NBK	2019



تاريخ الطباعة: 12-11-2017

وقت الطباعة: 7:57

وقم الطلب : PAC17013726



وزارة الداخليسة الادارة العامه للدفاع المدنى إدارة الوقاية

شهـــادة عدم ممانعة

إعتماد منتج نوع الشهادة :

بيانات المنشأة

الاسم التجاري: سيس فاير سولوشنس

66971 رقم السجل التجاري: 101012 رقم الرخصة التجارية:

> رقم الهاتف: 14-7182-00 رقم قيد المنشأة:

> > البريد الإلكتروني:

Fire Rated and Retardant materials التصنيف:

إسم المنتج: Intumescent paints, Fire Retardant Paints

تفاصيل الشهادة

تم مراجعة الطلب المقدم واتضح بأنه لا مانع من اعتماد المنتج /المنتجات الموضحه في التقرير الفني المرفق بناء على اعتماده من قبل الهيئه المختبرية الموضحه في التقرر الفني المرفق.

ملاحظات:

ـيجب على الشركه الالتزام والعمل بما جاء في اشتراطات قسم أنظمة السلامه التي تم الاطلاع والموافقة عليها من خلال الموقع .

- يجب ان يقوم بتركيب هذا المنتج من قبل مهندسين وفنيين معتمدين من الإدارة العامة للدفاع المدني. - يجب ان يحمل المنتج العلامة التجارية للهيئه المختبرية المعتمدة والموضحه في التقرير الفني المرفق.

2019-11-12 تاريخ الإنتهاء: تاريخ الاعتماد: 12-11-2017

ع/

بسم الله الرحمن الرحيم

DATE: 2017-11-12 : التاريـــخ

رقم الطلب: PERMIT # PAC17013726



وزارة الداخلية الإدارة العامة للدفاع المدني إدارة الوقاية

التقرير الفني TECHNICAL REPORT			
PRODUCT:	Intumescent paints, Fire Retardant Paints	المنتج :	
PRODUCT APPLICATION :	Fire Rated and Retardant materials	تصنيف المعدة :	
APPLICANT / P.O .Box	سيس فاير سولوشنس	مقدم الطلب :	
MANUFACTURER / LOCATION :	Phoenix Fire Protection (UK) Ltd / U K	الشركة المصنعة / بلد الصنع:	
	الوصف	الموديل	
Single component water based TCEP free thin film intumescent coating for fire protection of structural steelwork.		Phoenix 370-90	
3RD PARTY CERTIFICATE / APPROVAL :	- IFCC1077 - IFC Certification Ltd.	شهادة المختبرات المساندة (من هيئات معتمدة) :	
RECOMMENDATIONS			
Notes: Meets the requirements of BS476: Part 21: 1987.			

ع/ مدير إدارة الوقالية الإدارة العامة الدفاع المدني





Product Data Sheet

www.phoenixasia.com.hk

DESCRIPTION

Phoenix 370-60 Water-based Intumescent Coating is a single component water based TCEP free thin film intumescent coating for fire protection of structural steelwork.

PRODUCT FEATURES AND RECOMMENDED USES

- For use on structural steel columns and beams to provide up to 60 minutes cellulosic fire protection.
- Can be used externally with Phoenix Topseals or other compatible topcoats. Consult Phoenix before use to confirm compatibility.
- Tested and assessed in accordance with BS 476: Part 20 & 21: 1987 and the Criteria of Acceptability given in the ASFP/ BCF "Industry Guidance Document".
- Highly competitive loadings.
- Easy application properties.

PHYSICAL DATA

Specific Gravity : 1.38 kg/litre.

% Solids by Volume : $69 \pm 3 \%$ (ASTM-D2697-91).

Color : White.

VOC : 35 g/ litre calculated from formulation to

satisfy EC Solvent Emission Directive; 25 g/kg content by weight from formulation

to satisfy EC Solvent Emission Directive. : Airless Spray & Brush.

Recommended Application

Method

Recommended Thinner : Water (Thinning will have an adverse effect on sag tolerence).

Recommended Thickness : Refer to loading tables of Phoenix 370-60.

Pack Size : 20-litre units

Shelf Life : 12 months from date of manufacture or 'Use By' date where

specified; Protect from frost.

PRACTICAL APPLICATION RATES (MICRONS PER COAT)

	Airless Spray	Brush
Dry	690	300
Wet	1000*	440

^{*} Maximum sag tolerance typically 1500 µm WFT by airless spray.

Phoenix 370-60



Product Data Sheet

www.phoenixasia.com.hk

AVERAGE DRYING TIMES

	Temperature @ 15°C	Temperature @ 23°C
To Touch	3 Hours	1.5 Hours
To Recoat	6 Hours	4 Hours
To Handle	dle Depending on the total thickness of Phoenix applied	

No more than two coats by airless spray should be applied within any 24-hour period. The above figures are given as guide only. Factors such as air movement and humidity must also be considered.

RECOMMENDED PRIMERS

A range of primers have been fire tested and approved for use under Phoenix 370-60. Consult Phoenix Fire Protection for detail information.

Phoenix 370-60 is not recommended to be applied directly onto galvanized steel and zinc rich primers. Consult Phoenix Fire Protection for more information and technical advices.

RECOMMENDED TOPCOAT

If it can be guaranteed that application and subsequent in-service conditions of Phoenix 370-60 will be in a C1 environment as defined in ISO 12944-2: 2007, then no topcoat is required.

For any other situation, a topcoat, Phoenix APT, must be applied. Topcoats manufactured and supplied by other manufacturers may also be used. Consult Phoenix Fire Protection for technical advices and topcoat compatibilities.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from surface contaminants.

APPLICATION EQUIPMENT

Airless Spray

Nozzle size : 17 to 21 thou depending on application requirements.

Operating Pressure : 175 kg/ cm² (2500 psi)

Petrol Unit

Nozzle size : 17 to 21 thou depending on application requirements.

Operating Pressure : 175 kg/ cm² (2500 psi)





Product Data Sheet

www.phoenixasia.com.hk

APPLICATION EQUIPMENT (CONTINUED)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen.

However, the operating pressure should be the lowest possible consistent with satisfactory atomization. As conditions will vary from job to job, it is the applicator's responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt, consult Phoenix Fire Protection.

Use 3/8' ID fluid line where lengths in excess of 10 feet are required. In-line gun or pump filters should not normally be used.

Phoenix 370-60 is also suitable for brush application, but due to the nature of the material, a ribbed appearance will result. Application of more than one coat may be necessary to give equivalent dry film thickness to a single applied coat by airless spray.

APPLICATION CONDITIONS AND OVERCOATING

Phoenix 370-60 must be applied in a dry environment. It must not be exposed to wet conditions during or after application.

In conditions of high relative humidity good ventilation conditions are essential. Substrate temperature should be at least 3°C above the dew point and always above 0°C.

At application temperatures below 10°C, drying and curing times will be significantly extended, and spraying characteristics may be impaired.

A minimum ambient air temperature of 5°C is required to ensure proper film formation.

Relative humidity should not exceed 80% to ensure proper film formation.

Extended over coating times may be required at low temperatures and/ or high film thicknesses.

ADDITIONAL NOTES

In common with other water based coatings, the drying of Phoenix 370-60 is retarded by high humidity conditions. Lack of air movement also slows down the drying process, and under such conditions it is advisable to introduce some method of circulating air over the coated surface in order to speed up the drying. A ventilated air speed of 2 meters per second is recommended.

Numerical values quoted for physical data may vary slightly from batch to batch.

U.K. HONG KONG





Product Data Sheet

www.phoenixasia.com.hk

HEALTH AND SAFETY

Refer to Material Safety Data Sheet for information on safe storage, handling and application of Phoenix 370-60.

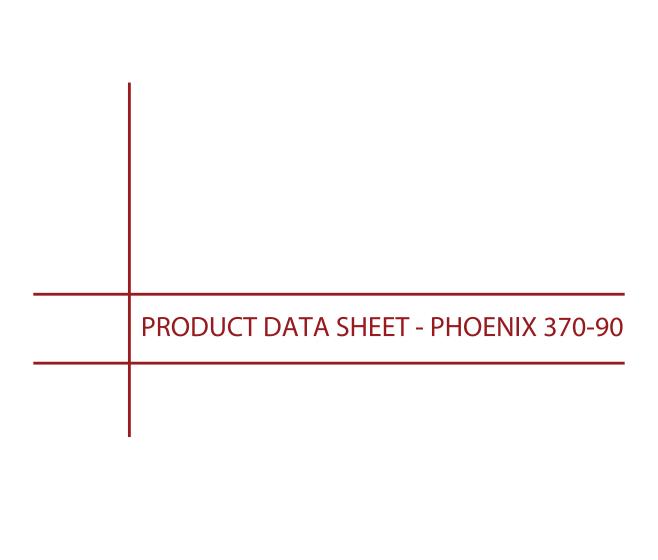
Unlike many other water based intumescent coatings, Phoenix 370-60 does not contain Tris-Chloro Ehthyl Phosphate (TCEP).

TCEP is a category 3 carcinogen, which would cause products to be classified as harmful. Since Phoenix 370-60 is TCEP free, it is not classified as harmful by the Chemicals (Hazard) Information and Packaging for Supply Regulations 2002.

WARRANTY

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Phoenix Fire Protection can accept no liability for the performance of the product, or for any loss or damage arising out of such use.

The information detailed in this data sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Phoenix Fire Protection, quoting the reference number, to ensure that they possess the latest issue.





Product Data Sheet

www.phoenixasia.com.hk

DESCRIPTION

A single component water based TCEP free thin film intumescent coating for fire protection of structural steelwork.

PRODUCT FEATURES AND RECOMMENDED USES

- For use on both structural steel hollow and I-section members (columns and beams) to provide up to 120 minutes cellulosic fire protection.
- Can be used externally with Phoenix Topseals or other compatible topcoats. Consult Phoenix before use to confirm compatibility.
- Tested and assessed in accordance with BS 476: Part 20 & 21: 1987 and the Criteria of Acceptability given in the ASFP/ BCF "Industry Guidance Document".
- Highly competitive loadings.
- Easy application properties.

PHYSICAL DATA

Specific Gravity : 1.40 kg/litre.

% Solids by Volume : $75 \pm 3 \%$ (ASTM-D2697-91).

Color : White.

VOC : 0.19 g/ litre calculated from formulation to

satisfy EC Solvent Emission Directive;

0.13 g/kg content by weight from formulation

to satisfy EC Solvent Emission Directive.

Recommended Application

Method

Recommended Thinner : Water (See additional notes).

Recommended Thickness : Refer to loading tables of Phoenix 370-90.

Pack Size : 20-litre units

Shelf Life : 12 months from date of manufacture or 'Use By' date where

: Airless Spray & Brush.

specified; Protect from frost.

PRACTICAL APPLICATION RATES (MICRONS PER COAT)

	Airless Spray	Brush
Dry	1050	325
Wet	1400*	435

^{*} Maximum sag tolerance typically 1500 µm WFT by airless spray.

Phoenix 370-90



Product Data Sheet

www.phoenixasia.com.hk

AVERAGE DRYING TIMES

	Temperature @ 15°C	Temperature @ 23°C
To Touch	3 Hours	1.5 Hours
To Recoat	6 Hours	4 Hours
To Handle	Depending on the total thickness of Phoenix 370-90 to lapplied	

No more than two coats by airless spray should be applied within any 24-hour period. The above figures are given as guide only. Factors such as air movement and humidity must also be considered.

RECOMMENDED PRIMERS

A range of primers have been fire tested and approved for use under Phoenix 370-90. Consult Phoenix Fire Protection for detail information.

Phoenix 370-90 is not recommended to be applied directly onto galvanized steel and zinc rich primers. Consult Phoenix Fire Protection for more information and technical advices.

RECOMMENDED TOPCOAT

If it can be guaranteed that application and subsequent in-service conditions of Phoenix 370-90 will be in a C1 environment as defined in ISO 12944-2: 1998, then no topcoat is required.

For any other situation, a topcoat, Phoenix APT, must be applied. Topcoats manufactured and supplied by other manufacturers may also be used. Consult Phoenix Fire Protection for technical advices and topcoat compatibilities.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from surface contaminants.

APPLICATION EQUIPMENT

Airless Spray

Nozzle size : 19 to 21 thou depending on application requirements.

Operating Pressure : 175 kg/ cm² (2500 psi)

Petrol Unit

Nozzle size : 19 to 21 thou depending on application requirements.

Operating Pressure : 175 kg/ cm² (2500 psi)





Product Data Sheet

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APPLICATION EQUIPMENT (CONTINUED)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen.

However, the operating pressure should be the lowest possible consistent with satisfactory atomization. As conditions will vary from job to job, it is the applicator's responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt, consult Phoenix Fire Protection.

Use 3/8' ID fluid line where lengths in excess of 10 feet are required. In-line gun or pump filters should not normally be used.

Phoenix 370-90 is also suitable for brush application, but due to the nature of the material, a ribbed appearance will result. Application of more than one coat may be necessary to give equivalent dry film thickness to a single applied coat by airless spray.

APPLICATION CONDITIONS AND OVERCOATING

Phoenix 370-90 must be applied in a dry environment. It must not be exposed to wet conditions during or after application.

In conditions of high relative humidity good ventilation conditions are essential. Substrate temperature should be at least 3 °C above the dew point and always above 0 °C.

At application temperatures below 10°C, drying and curing times will be significantly extended and spraying characteristics may be impaired.

A minimum ambient air temperature of 5°C is required to ensure proper film formation.

Relative humidity should not exceed 80% to ensure proper film formation.

Extended overcoating times may be required at low temperatures and/ or high film thicknesses.

ADDITIONAL NOTES

In common with other water based coatings, the drying of Phoenix 370-90 is retarded by high humidity conditions. Lack of air movement also slows down the drying process, and under such conditions it is advisable to introduce some method of circulating air over the coated surface in order to speed up the drying. A ventilated air speed of 2 meters per second is recommended.

Numerical values quoted for physical data may vary slightly from batch to batch.

U.K. HONG KONG





Product Data Sheet

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HEALTH AND SAFETY

Refer to Material Safety Data Sheet for information on safe storage, handling and application of Phoenix 370-90.

Unlike many other water based intumescent coatings, Phoenix 370-90 does not contain Tris-Chloro Ehthyl Phosphate (TCEP).

TCEP is a category 3 carcinogen, which would cause products to be classified as harmful. Since Phoenix 370-90 is TCEP free, it is not classified as harmful by the Chemicals (Hazard) Information and Packaging for Supply Regulations 2002.

WARRANTY

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Phoenix Fire Protection can accept no liability for the performance of the product, or for any loss or damage arising out of such use.

The information detailed in this data sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Phoenix Fire Protection, quoting the reference number, to ensure that they possess the latest issue.





1st Issue: Feb 2014

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

- i) Product details: Phoenix 370-90 Intumescent Basecoat is a thin film intumescent coating for the fire protection of structural steelwork.
- ii) Product type & use: Fire proofing coating for use on structural steelwork
- iii) Application of the substance / preparation of coating
- iv) Manufacturer/ Supplier:

Phoenix Fire Protection (Asia) Ltd.

Tower B, Unit 601, Viking Technology and Business Center

93a Ta Chuen Ping Street, Kwai Chung

Hong Kong (SAR)

Telephone: (852) 2810 6101 Facsimile: (852) 2851 9599

2. COMPOSITION / INFORMATION ON INGREDIENTS

Tris (1-chloro-2-propyl) phosphate		2.5 - 10%
CAS-No.: 13674-84-5	EC No.: 237-158-7	

Classification (EC 1272/2008) Classification (67/548/EEC)

Acute Tox. 4 – H302 Xn; R22

- * The Full Text for all R-Phrases is Displayed in Section 16.
- * Composition Comments
 The data shows are in accordance with the le

The data shown are in accordance with the latest EC Directives.

3. HAZARDS IDENTIFICATION

CLASSIFICATION (1999/45) Not Classified.

CLASSIFICATION (EC 1272/2008)

Physical and Chemical Hazards : Not Classified. Human Health : Not Classified. Environment : Not Classified.

LABEL IN ACCORDANCE WITH (EC) NO. 1272/2008 No pictogram required.

SUPPLEMENTAL LABEL INFORMATION (EU)

EUH210 Safety data sheet available upon request.

HUMAN HEALTH

The hazardous properties of the product are considered limited. May cause minor irritation on skin contact.

U.K. HONG KONG



1st Issue: Feb 2014

4. FIRST - AID MEASURES

* General Information

General first aid, rest, warmth and fresh air. Never give liquid to an unconscious person. Get medical attention if any discomfort continues.

* Inhalation

Remove victim immediately from source of exposure. Keep the affected person warm and at rest. Get prompt medical attention. Place unconscious person on the side in the recovery position and ensure breathing can take place. If respiratory problems, artificial respiration/oxygen.

* Eve Contact

Make sure to remove any contact lenses from the eyes before rinsing. Immediately flush with plenty of water or eyewash solution for up to 10 minutes. Get medical attention if any discomfort continues.

* Skin Contact

Immediately remove contaminated clothing. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water.

* Ingestion

Do NOT induce vomiting. Get medical attention immediately. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Do not use water jet as an extinguisher, as this will spread the fire. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Cool containers exposed to flames with water until well after the fire is out. Avoid breathing fire vapours. When heated and in case of fire, harmful vapours/ gases may be formed.

* Protective Measures In Fire

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear protective clothing as described in Section 8 of this safety data sheet. Warn everybody of potential hazards and evacuate if necessary. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

* Environmental Precautions

Do not discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into water courses must be immediately alerted to the Environmental agency or other appropriate regulatory body.

* Spill Clean Up Methods

Keep combustibles away from spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage. Store in a cool and well-ventilated place. Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.



1st Issue: Feb 2014

7. HANDLING AND STORAGE

Usage Precautions

Risk of vapour concentration on the floor and in low-lying areas. Eliminate all sources of ignition. Use non sparking hand tools and explosion-proof electric equipment. Keep containers tightly closed. Keep away from heat, sparks and open flame. Ventilation and extraction must be arranged so that all parts of the workplace are properly ventilated i.e. there are no recesses or pockets where high vapour concentrations are allowed to build up. If there is any doubt about the adequacy of the ventilation/ extraction of solvent vapour, regular monitoring of confined workplaces should be carried out. Do not use in confined spaces without adequate ventilation and/or respirator. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray mists. Do not eat, drink or smoke when using the product. Wear protective clothing as described in Section 8 of this safety data sheet. Never use pressure to empty; the container is not a pressure vessel. Keep in original container. Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards. Contaminated rags and cloths must be put in fireproof containers for disposal. The following guide weight indicators are given to enable users to carry out manual handling assessments. 20 liter pail = 30.0 kg.

* Storage Precautions

Observe the label precautions. Store in closed original container at temperatures between 5°C and 25°C. Store in a cool and well-ventilated place. Keep away from sources of ignition - No smoking. Containers which are open should be properly resealed and kept upright to prevent leakage. Avoid contact with oxidizing agents. Keep away from heat, sparks and open flame. Store in accordance with local regulations.

* Storage Class
Store in accordance with local regulations.



1st Issue: Feb 2014

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- * <u>Ingredient Comments</u> SUP = Supplier's recommendation
- * Protective Equipment















- Process Condition
 - Provide eyewash station.
- * Engineering Measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. All handling to take place in well-ventilated area.

Respiratory Equipment

Respiratory protection must be used if air contamination exceeds acceptable level. Wear full face mask supplied with gas cartridge suitable for organic substances. In case of inadequate ventilation, use air-supplied full-mask. Do not use in confined spaces without adequate ventilation and/ or respirator.

Hand Protection

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.

- * Eye Protection
 - Wear splash-proof eye goggles to prevent any possibility of eye contact.
- * Other Protection
 - Wear appropriate clothing to prevent any possibility of skin contact.
- * Hygiene Measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using, do not eat, drink or smoke.

* Skin Protection

Wear appropriate clothing to prevent any possibility of skin contact. Wear suitable protective clothing as protection against splashing or contamination.



1st Issue: Feb 2014

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Viscous liquid.

COLOUR: White.

ODOUR Characteristic SOLUBILITY: Miscible with water

BOILING POINT (°C): 100°C RELATIVE DENSITY: 1.4 g/cm³

VISCOSITY: 35 poise Rotothinner at 20°C

10. STABILITY AND REACTIVITY

* Stability

No particular stability concerns. Follow precautions for safe handling described in this safety data sheet. Stable under the prescribed storage conditions.

* Condition To Avoid

Avoid heat, flames and other sources of ignition. Avoid contact with strong oxidisers. Avoid frost.

* Material To Avoid

Strong acids. Strong alkalis. Strong oxidising substances.

* Hazardous Decomposition Products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

11. TOXICOLOGICAL INFORMATION

* Toxicological Information

No information available.

* General Information

Prolonged contact may cause dryness of the skin.

* Inhalation

In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

* Ingestion

Gastrointestinal symptoms, including upset stomach. May cause stomach pain or vomiting.

* Skin Contact

Acts as a defatting agent on skin. May cause cracking of skin, and eczema. Irritating to skin.

* Eve Contact

Irritating and may cause redness and pain.



1st Issue: Feb 2014

12. ECOLOGICAL INFORMATION

* Ecotoxicity

There are no data on the ecotoxicity of this product. The product components are not classified as environmentally hazardous. However, this does not exclude possibility that large or frequent spills can have a harmful or damaging effect on the environment.

* Bioaccumulation

No data available on bioaccumulation. The product does not contain any substances expected to be bioaccumulating.

13. DISPOSAL CONSIDERATIONS

General Information

Waste, residue, empty containers, discarded work clothes and used disposable towels must be collected in designated receptacles, labeled with content.

* Disposal Methods

Dispose of waste and residues in accordance with local authority requirements. Absorb in vermiculite or dry sand and dispose of at a licensed hazardous waste collection point.

14. TRANSPORT INFORMATION

 General Information Not regulated.

15. REGULATORY INFORMATION

National Regulations

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689. Workplace Exposure Limits 2005 (EH40).

16. OTHER INFORMATION

General Information

Restricted to professional users. Only trained personnel should use this material.

Revision Date

10th February 2014

Revision No./ Repl. Sds Generated

1

Risk Phases In Full

R22 Harmful if swallowed.

NC Not classified.

Hazard Statement In Full

H302 Harmful if swallowed.



تاريخ الطباعة: 12-11-2017

وقت الطباعة: 7:57

وقم الطلب : PAC17013726



وزارة الداخليسة الادارة العامه للدفاع المدنى إدارة الوقاية

شهـــادة عدم ممانعة

إعتماد منتج نوع الشهادة :

بيانات المنشأة

الاسم التجاري: سيس فاير سولوشنس

66971 رقم السجل التجاري: 101012 رقم الرخصة التجارية:

> رقم الهاتف: 14-7182-00 رقم قيد المنشأة:

> > البريد الإلكتروني:

Fire Rated and Retardant materials التصنيف:

إسم المنتج: Intumescent paints, Fire Retardant Paints

تفاصيل الشهادة

تم مراجعة الطلب المقدم واتضح بأنه لا مانع من اعتماد المنتج /المنتجات الموضحه في التقرير الفني المرفق بناء على اعتماده من قبل الهيئه المختبرية الموضحه في التقرر الفني المرفق.

ملاحظات:

ـيجب على الشركه الالتزام والعمل بما جاء في اشتراطات قسم أنظمة السلامه التي تم الاطلاع والموافقة عليها من خلال الموقع .

- يجب ان يقوم بتركيب هذا المنتج من قبل مهندسين وفنيين معتمدين من الإدارة العامة للدفاع المدني. - يجب ان يحمل المنتج العلامة التجارية للهيئه المختبرية المعتمدة والموضحه في التقرير الفني المرفق.

2019-11-12 تاريخ الإنتهاء: تاريخ الاعتماد: 12-11-2017

ع/

Page 1 of 2

بسم الله الرحمن الرحيم

التاريـــخ: 11-12 : DATE

رقم الطلب: PERMIT # PAC17013726



وزارة الداخلية الإدارة العامة للدفاع المدني إدارة الوقاية

التقرير الفني TECHNICAL REPORT			
PRODUCT:	Intumescent paints, Fire Retardant Paints	المنتج :	
PRODUCT APPLICATION :	Fire Rated and Retardant materials	تصنيف المعدة:	
APPLICANT / P.O .Box	سيس فاير سولوشنس	مقدم الطلب :	
MANUFACTURER / LOCATION :	Phoenix Fire Protection (UK) Ltd / U K	الشركة المصنعة / بلد الصنع:	
الوصف		الموديل	
Single component water based TCEP free thin film intumescent coating for fire protection of structural steelwork.		Phoenix 370-90	
3RD PARTY CERTIFICATE / APPROVAL :	- IFCC1077 - IFC Certification Ltd.	شهادة المختبرات المساندة (من هيئات معتمدة):	
RECOMMENDATIONS			
Notes: Meets the requirements of BS476: Part 21: 1987.			

ع/ مدير إدارة الوقار الإدارة العامة الدفاع

Major Project References - Completed/ Ongoing Projects

Project Name	Country	Year	Consultant	Client	Main Contractor	Steel contractor	Status
Sheikh Issa Sports City	Bahrain		Tilke GmbH	Minstry of Bahrain		Butler Steel	Completed
Hidd Port	Bahrain		Ceberco	Ministry of Bahrain		Zamil Steel	Completed
Caterpillar Warehouse	Bahrain		MSCEB	Al Bahar		Zamil Steel	Completed
Intercool Warehouse	Bahrain		Arif Zadia			Zamil Steel	Completed
Buddha Bar	Bahrain		Arif Sadia		Al Merizl Contracting		Completed
Riffa Views	Bahrain		MSCEB		Cybroc		Completed
Traffco Warehouse	Bahrain		Al Darazi			Kirby	Completed
Lexus Showroom	Bahrain		Arif Sadia		Al Tawfeek		Completed

تاريخ الطباعة: 23-05-2016

وقت الطباعة: 12:15

وقم الطلب: PAC16005770:



وزارة الداخليسة الادارة العامه للدفاع المدنى إدارة الوقاية

شهـــادة عدم ممانعة

إعتماد منتج نوع الشهادة :

بيانات المنشأة

الاسم التجاري: جوتن قطر للاصباغ

رقم السجل التجاري: 12944 رقم الرخصة التجارية: 1/14895

> رقم قيد المنشأة: رقم الهاتف: 10-6147-01

> > البريد الإلكتروني:

Fire Rated and Retardant materials التصنيف:

إسم المنتج: Intumescent paints, Fire Retardant Paints

تفاصيل الشهادة

. تم مراجعة الطلب المقدم واتضح بأنه لا مانع من اعتماد المنتج /المنتجات الموضحه في التقرير الفني المرفق بناء على اعتماده من قبل الهيئه المختبرية الموضحه في التقرر الفني المرفق

ملاحظات:

-يجب على الشركه الالتزام والعمل بما جاء في اشتراطات قسم أنظمة السلامه التي تم الاطلاع والموافقة عليها من خلال الموقع .

- يجب ان يقوم بتركيب هذا المنتج من قبل مهندسين وفنيين معتمدين من الإدارة العاّمة للدفاع المدني. - يجب ان يحمل المنتج العلامة التجارية للهيئه المختبرية المعتمدة والموضحه في التقرير الفني المرفق .

2018-05-23 تاريخ الإنتهاء: تاريخ الاعتماد: 23-05-2016

بسم الله الرحمن الرحيم

DATE: 2016-05-23 : التاريسيخ

رقم الطلب: PERMIT # PAC16005770



وزارة الداخلية الإدارة العامة للدفاع المدني إدارة الوقاية

TECHNICAL REPORT			التقرير الغني
PRODUCT:	Intumescent paints, Fire Retard	ant Paints	المنتج :
PRODUCT APPLICATION :	Fire Rated and Retardant ma	aterials	تصنيف المعدة :
APPLICANT / P.O .Box	جوتن قطر للاصباغ		مقدم الطلب :
MANUFACTURER / LOCATION :	JOTUN A/S / NORWA	Y	الشركة المصنعة / بلد الصنع:
PRODUCT / MODEL :	الوصف	الموديل	قائمة المنتجات :
	Intumescent Coatings for Steelwork for the protection of I-Shaped and hollow steel sections. Refer to Tables 1-31 as indicated in Certifire Cert. No. CF 5243 for the precise scope which show the total dry film thickness of Steelmaster 1200WF (excluding primer and top sealer) required to provide fire resistance of 30min up to 180min for differing sections and section factor.	Steelmaster 1200WF	
3RD PARTY CERTIFICATE / APPROVAL :	- CF 5243	CERTIFIRE - WARRINGTON	شهادة المختبرات المساندة (من هيئات معتمدة) :
RECOMMENDATIONS			التوصيات
	TEST STANDARD: BS476:Part	21:1987	

ع/ مدير إدارة الرقالدة الإدارة العامة للدفاع المدني





CERTIFICATE OF APPROVAL No CF 5243

This is to certify that, in accordance with TS00 General Requirements for Certification of Fire Protection Products The undermentioned products of

JOTUN A/S

P.O. Box 2021, N-3202 Sandefjord, Norway Tel: +47 33 45 7000 Fax: +47 33 45 7242

Have been assessed against the requirements of the Technical Schedule(s) denoted below and are approved for use subject to the conditions appended hereto:

CERTIFIED PRODUCT

TECHNICAL SCHEDULE

Steelmaster 1200WF

TS 15 INTUMESCENT COATINGS FOR STEELWORK

Signed and sealed for and on behalf of CERTIFIRE

Sir Ken Knight

Chairman - Management Council

Page 1 of 31

Issued: 13th May 2014 Revised: 25th July 2014 Valid to: 12th May 2019









CERTIFICATE No CF 5243 JOTUN A/S

Steelmaster 1200WF

- This approval relates to the use of Steelmaster 1200WF for the fire protection of I-shaped and hollow steel sections. The precise scope is given in Tables 1 to 20 which show the total dry film thickness of Steelmaster 1200WF (excluding primer and topcoat) required to provide fire resistance periods in accordance with BS476: Part 21: 1987 of 30 minutes up to 180 minutes for differing sections and section factors.
- 2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.'
- The products are approved on the basis of:
 - i) Initial type testing.
 - ii) A design appraisal against TS15.
 - iii) Certification of quality management system to ISO 9001: 2008.
 - iv) Inspection and surveillance of factory production control
 - v) Audit testing
- The data referring to three-sided fire exposure of beams relate to beams supporting concrete floor slabs. Separate consideration is required where this is not the case.
- 5. The data shown is applicable to steel sections blast cleaned to Swedish Standard SA2.5 or equivalent and primed with a suitable and compatible primer. Specifications of surface preparations, primers and topcoats is available from Jotun Paints whose responsibility is to ensure that Steelmaster 1200WF is compatible for use in respect of both ambient and fire conditions. The total dry film thickness of primer and topcoat should not exceed that tested.
- The data shown is applicable to Steelmaster 1200WF applied by spray to horizontal, vertical, flexural and compression members supporting loads up to the maximum design loads specified in BS449: Part 2.
- 7. The approval relates to ongoing production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.
- The data shown in the tables is based on assessments which comply with the criteria for acceptability now incorporated within the CERTIFIRE scheme.

Page 2 of 32 Signed

Man

Issued: 13th May 2014 Revised: 25th July 2014 Valid to: 12th May 2019



Steelmaster 1200WF

Product description

This is a one component waterborne acrylic thin film intumescent coating. Independently tested and approved for fire protection of structural steel exposed to cellulosic fire up to 180 minutes. Suitable for properly prepared carbon steel substrates.

Typical use

Specially designed as passive fire protection for steel constructions. Suitable for structural steel exposed to internal environments up to C3 corrosive category as defined in ISO 12944 -2.

Approvals and certificates

BS 476 part 20/21 ASTM E84

Additional certificates and approvals may be available on request.

Colours

white

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	69 ± 2 %
Flash point	ISO 3679 Method 1	101 °C
Specific gravity	calculated	1,35 kg/l
VOC-USA / VOC-Hong Kong	EPA Method 24	24 g/l

The provided data is typical for factory produced products, subject to slight variation depending on colour.

Recommended film thickness per coat

Dry film thickness per coat: 210-690 microns Wet film thickness per coat: 300-1000 microns

All steel sections must be coated with correct film thickness to achieve the required fire rating. Please refer to the current loading tables. For further advice please contact your local Jotun office.

Note: The film thickness is only achievable by airless spray application in one coat.

Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

Refer to the Application Guide (AG) for additional information.

Date of issue: 12 March 2015 Page: 1/4

This Technical Data Sheet supersedes those previously issued.



Surface preparation summary table

	Surface preparation		
Substrate	Minimum	Recommended	
Carbon steel	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)	

Application

Application methods

The product can be applied by

Spray: Use airless spray.

Brush: Recommended for stripe coating and small areas, care must be taken to achieve the

specified dry film thickness.

Refer to the Application Guide (AG) for additional information.

Product mixing ratio (by volume)

Single pack

Thinner/Cleaning solvent

Do not add thinner. The product is ready to use and should not be thinned.

Cleaning solvent: Fresh water

Guiding data for airless spray

Nozzle tip (inch/1000): 19-23

Pressure at nozzle (minimum): 200 bar/2900 psi

Drying and Curing time

Substrate temperature	10 °C	23 °C	40 °C
Surface (touch) dry	4 h	2 h	1 h
Dried to handle	16 h	6 h	4 h
Dry to over coat, minimum	16 h	6 h	4 h
Dry to over coat, maximum, atmospheric	extended		

Date of issue: 12 March 2015 Page: 2/4

Technical Data Sheet Steelmaster 1200WF



Drying and curing times are determined under controlled temperatures and relative humidity below 80%, and at the typical DFT for the product.

All drying times have been measured at a dry film thickness of 700 µm.

Topcoating:

The minimum overcoating interval of this product with approved topcoats is 48 hours. Prior to application of topcoat, the applicator must ensure that the specified dry film thickness has been achieved and the system is dried to handle.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness. Dry sand sprinkled on the surface can be brushed off without sticking to or causing damage to the surface.

Dried to handle: Minimum time before the coated objects can be handled without physical damage.

Dried to over coat, minimum: The shortest time allowed before the next coat can be applied.

Dry to over coat, maximum, atmospheric: The longest time allowed before the next coat can be applied without any surface preparation.

Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jotun for specific system recommendation.

To ensure fire performance, primers and topcoats must be compatible with Steelmaster 1200WF. Contact your local Jotun office for a list of approved Jotun primers and topcoats.

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Steelmaster 1200WF	18.5	20

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

When storing and transporting, the temperature must be between 5 °C and 35 °C. Outside of this, it is advisable to use climatic control. Protect from freezing at all times during storage and transport.

Shelf life at 23 °C

Steelmaster 1200WF 6 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Date of issue: 12 March 2015 Page: 3/4

This Technical Data Sheet supersedes those previously issued.

Technical Data Sheet Steelmaster 1200WF



Caution

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Jotun's technical documentation. Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Jotun representative for approval before commencing the work.

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

Colour variation

Products primarily meant for use as primers and antifoulings may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

Disclaimer

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Date of issue: 12 March 2015 Page: 4/4

Technical Data JOTAFLOOR SEALER



Product description

Jotafloor Sealer is a transparent two-pack epoxy sealer/primer exhibiting excellent penetration properties to ensure good adhesion between Jotafloor products and most masonry surfaces.

Recommended use

As a sealer/primer for subsequent Jotafloor products or for use independently as a dust binder for concrete floors.

Film thickness and spreading rate

	Minimum	maximum	ıypıcaı
Film thickness, dry (µm)	30	50	40
Film thickness, wet (µm)	80	130	100
Theoretical spreading rate (m²/l)	12,5	7,7	10

Comments

Substrate porosity and profile will affect practical coverage rates.

Physical properties

Colour Transparent Solids (vol %)* 40 ± 2

Flash point $25^{\circ}\text{C} \pm 2 \text{ (Setaflash)}$

GlossGlossyWater resistanceVery goodSolvent resistanceExcellent

Chemical resistance Excellent Check chemical resistance values in Jotafloor chemical

resistance chart.

Flexibility Good

*Measured according to ISO 3233:1998 (E)

Surface preparation

All concrete damaged by exposure to chemicals, contaminated by any substance or unsound in any way, shall be removed to expose sound concrete.

Coated surfaces

Clean, dry and undamaged compatible primer. Contact your local Jotun office for more information.

JOTAFLOOR SEALER Page 1 of 4

Other surfaces

Concrete surface preparation by using dust free captive blasting units, grinding equipment, sand blasting or high pressure water jetting is critical to achieving the right surface profile prior to paint application. Contact your local Jotun office for more information.

The coating may be used on other substrates. Please contact your local Jotun office for more information.

Condition during application

The temperature of the substrate should be minimum 10°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying. The moisture content in the concrete should not exceed 4 % (by weight). The coating should not be exposed to oil, chemicals or mechanical stress until fully cured.

Application methods

Spray Use airless spray or conventional spray

Brush Recommended for stripe coating and small areas, care must be taken to achieve the

specified dry film thickness.

Roller May be used. However when using roller application care must be taken to apply

sufficient material in order to achieve the specified dry film thickness.

Application data

Mixing ratio (volume) 4 parts Comp. A (base) to be mixed thoroughly with 1 part Comp. B

(curing agent). NO PART MIXING

Mixing ½ hour prior to use.

Pot life (23°C) 8 hours (reduced at higher temp.)

Thinner/Cleaner Jotun Thinner No. 17

Guiding data airless spray

Pressure at nozzle 15 MPa (150 kp/cm² 2100 psi) **Nozzle tip** 0.46 - 0.58 mm (0.018-0.023")

Spray angle 40-80°

Filter Check to ensure that filters are clean

Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

- * Good ventilation (Outdoor exposure or free circulation of air)
- * Typical film thickness
- * One coat on top of inert substrate

Substrate temperature	10°C	23°C	40°C
Surface dry	2 h	1 h	0.5 h
Through dry	14 h	6,5 h	3 h
Cured	14 d	7 d	2 d
Dry to recoat, minimum	8 h	4 h	1,5 h

1. The surface should be free from chalking and contamination prior to application. Best intercoat adhesion occurs when the subsequent coat is applied before the preceding coat has cured.

JOTAFLOOR SEALER Page 2 of 4

The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

Typical paint system

As dust binder: Jotafloor Sealer	Nominal	
For coloured finish: Jotafloor Sealer Jotafloor Topcoat	1 x 40 μm 2 x 50 μm	(Dry Film Thickness) (Dry Film Thickness)
or Jotafloor Sealer Jotafloor Coating or	1 - 2 x 40 μm 1 x 300 μm	(Dry Film Thickness) (Dry Film Thickness)
Jotafloor Sealer Jotafloor SL Universal	1 - 2 x 40 μm 1 x 2000 - 4000 μm	(Dry Film Thickness) (Dry Film Thickness)

Note: Thickness of the finished system will vary depending on use of the finished floor. Consult your local Jotun Office for advice.

Other systems may be specified, depending on area of use

Storage

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

Handling

Handle with care. Stir well before use.

Packing size

16 | Comp. A (base) and 4 | Comp. B (curing agent)

4 | Comp. A (base) and 1 | Comp. B (curing agent)

Packing may vary from country to country according to local requirements.

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.

DISCLAIMER

The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product is often used under conditions beyond our control, we cannot guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.

JOTAFLOOR SEALER Page 3 of 4

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Jotun is a World Wide company with factories, sales offices and stocks in more than 50 countries. For your nearest local Jotun address please contact the nearest regional office or visit our website at www.jotun.com

> ISSUED 1 APRIL 2003 BY JOTUN THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED

JOTAFLOOR SEALER Page 4 of 4



Jotafloor EPC 300

Product description

This is a two component amine cured solvent free epoxy coating. It is a high performance product. It is a self smoothing, easy to apply product, leaving a seamless surface. It has excellent chemical, abrasion and impact resistance. If enhanced slip resistance is required Jotafloor Non Slip can be used in the system. To be used as finish coat in atmospheric environments. Can be applied directly in two coats or on approved primers depending on the conditions of the concrete substrate.

Typical use

Designed for a wide range of floors with various levels of mechanical and chemical exposure. Recommended for warehouses, garages, dairies, factories, laboratories, aircraft hangars, food, beverage and plant rooms where non-slip properties are required.

Approvals and certificates

Determination of Compressive Strength - ASTM C579: 51.6 N/mm² Determination of Tensile Strength - ASTM C307: 22.3 N/mm² Determination of Flextural Strength - ASTM C580: 41.6 N/mm² Determination of Crack bridgeability - ASTM C836:2005: 1.92mm Determination of Water permeability - BSEN 12390-8: 2009: 100% Determination of Shore 'A' hardness - ASTM D2240:2005: 98 Determination of Taber Abrasion (1000 Cycles) - ASTM D4060:2010

Additional certificates and approvals may be available on request.

Colours

according to colour card

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	98 ± 2 %
Gloss level (GU 60 °)	ISO 2813	gloss (70-85)
Flash point	ISO 3679 Method 1	100 °C
VOC-US/Hong Kong	US EPA method 24 (tested)	75 g/l

The provided data is typical for factory produced products, subject to slight variation depending on colour. All data is valid for mixed paint.

Gloss description: According to Jotun Performance Coatings' definition.

Date of issue: 16 December 2015 Page: 1/4



Film thickness per coat

Typical recommended specification range

Dry film thickness 200 - 800 μm Wet film thickness 200 - 815 μm Theoretical spreading rate 4,9 - 1,2 m^2/l

Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

Surface preparation summary table

	Surface preparation			
Substrate	Minimum	Recommended		
Coated surfaces and Concrete	Clean, dry and undamaged compatible coating as per SSPC SP13/NACE NO 6 /ASTM D4258 -05 /ACI 503.6R-97/SSPC-TR 5/ICRI TECHNICAL GUIDELINE 03741/NACE02203	Clean, dry and undamaged compatible coating as per SSPC SP13/NACE NO 6 /ASTM D4258 -05 /ACI 503.6R-97/SSPC-TR 5/ICRI TECHNICAL GUIDELINE 03741/NACE02203		

Application

Application methods

The product can be applied by

Roller: Recommended.

After achieving the desired thickness and to avoid air bubbles, it is very important to pierce the coating with a spiked roller.

Conditions during application: The temperature of the substrate should be minimum $10\,^{\circ}\text{C}$ and at least $3\,^{\circ}\text{C}$ above the dew point of the air, measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying. The moisture content in the substrate should not exceed $4\,^{\circ}\text{C}$ (by weight). The coating should not be exposed to oil, chemicals or mechanical stress until fully cured.

Product mixing ratio (by volume)

No part mixing of this product.

Use a slow speed drill and mixing paddle. Pour the full contents of the mixed material onto the floor immediately after mixing is completed.

The temperature of base and curing agent is recommended to be 18 °C or higher when the paint is mixed.

Jotafloor EPC 300 Comp A 3 part(s)
Jotafloor EPC 300 Comp B 1 part(s)

Date of issue: 16 December 2015 Page: 2/4

Technical Data Sheet Jotafloor EPC 300



Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17

Drying and Curing time

Substrate temperature	5 °C	23 °C	40 °C
Surface (touch) dry	8 h	5 h	2 h
Walk-on-dry	32 h	20 h	8 h
Dry to over coat, minimum	32 h	20 h	8 h
Dry to over coat, maximum, atmospheric	96 h	72 h	36 h
Dried/cured for service	12 d	9 d	3 d

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage.

Dry to over coat, minimum: The shortest time allowed before the next coat can be applied.

Dry to over coat, maximum, atmospheric: The longest time allowed before the next coat can be applied.

Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

Induction time and Pot life

Paint temperature	23 °C
Pot life	20 min

45 min. after poured on to the floor.

Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jotun for specific system recommendation.

Previous coat: epoxy

Subsequent coat: epoxy, polyurethane

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Jotafloor EPC 300 Comp A	13.5	20
Jotafloor EPC 300 Comp B	4.5	5

Date of issue: 16 December 2015 Page: 3/4

This Technical Data Sheet supersedes those previously issued.

Technical Data Sheet Jotafloor EPC 300



The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Shelf life at 23 °C

Jotafloor EPC 300 Comp A 24 month(s)
Jotafloor EPC 300 Comp B 24 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Caution

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Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

Colour variation

When applicable, products primarily meant for use as primers or antifoulings may have slight colour variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

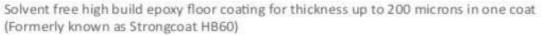
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Date of issue: 16 December 2015 Page: 4/4





Description

Strongcoat HB is a high build, hard wearing, solvent free epoxy resin coating, designed to provide a hard, gloss coating to concrete floors. It is supplied as two pack material in addition to a colour pack in preweighted quantities ready for on site mixing and use.

Strongcoat HB permits the application of floor coatings in excess of 200 microns per coat and can be coloured to suit site requirements.

With the addition of Antislip Aggregate (Slip resistant aggregate No. 2 or 3) between coats, slip resistant floor system can be achieved with a build up thickness between 1.25 to 2 mm.

Applications

Strongcoat HB is used as protective, decorative, high chemical resistance and hard wearing floor coating system for a wide range of applications including:

- ▲ Aircraft hangars.
- Car parks.
- Soft drink and beverage production areas.
- ▲ Dairies production areas.
- ▲ Show rooms.
- A Production, maintenance and assembly areas.
- ▲ Warehouses.
- General food processing and manufacturing plants.

Advantages

- Produces a seamless, glossy, glass-like surface that is both easy to clean and does not induce bacterial and fungal growth.
- ▲ High chemical and mechanical resistance.
- Available in a wide range of attractive colours.
- Cost effective.
- A Easy application.
- A High build.

Standards

Strongcoat HB complies with the requirements of EN 1504-2, Surface Protection Systems principle 5.1.

Technical Properties @ 25°C:

Colour: Available in different colours

Mixed density: $1.55 \pm 0.10 \text{ g/cm}^3$

Solid contents: 100%

Pot life: 50 - 70 min @ 25°C 20 - 40 min @ 35°C

20 - 40 min @ 35

Minimum time 12 hr @ 25°C between coats: 6 hr @ 35°C

Maximum time 36 hr @ 25°C between coats: 18 hr @ 35°C

Full curing time: 7 days @ 25°C 5 days @ 35°C

Compressive strength:

BS 6319-2

≥ 70 MPa @ 7 days

Flexural strength:

EN 13892-2

≥ 30 MPa @ 7 days

Tensile strength:

ASTM D638

≥ 20 MPa @ 7 days

Bond strength on

C25/30 concrete: ASTM D4541 ≥ 2 MPa @ 7 days (concrete failure)

EN 1542

Shore D hardness @

14 days: ASTM D2240 85

Water absorption:

ASTM D570 ≤ 0.15%

Taber abrasion

resistance: (1000 g, 1000 cycle)

≤85 milligram

ASTM D4060, weight loss

CS17 wheel

VOC: < 10

≤ 10 g/ltr

ASTM D2369 (complies with LEED)



Method of Use

Substrate Preparation

The substrate must be clean, dry, even, dense and free from oil, grease, dust and other contaminants.

A clean surface will ensure maximum adhesion between the substrate and the coating. Concrete floors must have a minimum compressive strength of 25 N/mm² and a maximum concrete relative humidity of 80% (max. moisture content of 4%), relative humidity can be measured using a hygrometer.

Concrete relative humidity should be less than 80% for concrete 28 days old or more.

Surface Preparation

Unsound layers and contaminated concrete surfaces must be prepared using mechanical surface removing equipment. Acid etching can be used only in well ventilated areas. Areas deeply contaminated by oil or grease, such areas should be treated by hot compressed air.

Priming

Strongcoat HB is designed to be used without a primer. However, for highly porous substrates, Strongcoat Primer or Strongcoat Primer S is recommended.

Mixing

To avoid inconsistent workability and pot life, make sure that the materials to be used are stored in shaded area and protected from extremes of temperatures, for at least 24 hours prior to application.

Prior to mixing, stir individual components of Resin, Hardener and colour pack. Add the entire contents of the colour pack into the base container and mix with heavy duty drill for 2 minutes till a uniform colour is achieved. Add the entire contents of the hardener container to the mixed colour pack and base and mix thoroughly for at least 3 minutes.

Coating

Use brush or lambs wool roller, or airless spray machine to apply the mixed Strongcoat HB onto the prepared surfaces.

Performance characteristics	EN 1504-2 requirements	Measured value
Abrasion resistance: (1000 g, 1000 cycles) EN ISO 5471-1 H22 wheel	≤ 3000 mg	≤ 1500 mg
Impact resistance: EN ISO 6272-1	≥ 10 N.m	≥ 10 N.m (Class II)
Capillary water absorption: EN 1062-3	< 0.1 kg/m².h ^{0.5}	≤ 0.005 kg/ m².h ^{0.5}
Adhesion strength: EN 1542	≥ 1 MPa without trafficking ≥ 2 MPa with trafficking	≥ 3.0 MPa (Rigid system with trafficking)

Occassional Spillage.

Chemical Resistance after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

Organic Acids	
Oleic Acid sat.	R
Citric Acid 25%	R
Acetic Acid 5%	R
Acetic Acid 10%	RS
Yogurt	R
Lactic Acid 10%	RS
Inorganic Bases	
Sodium Hydroxide 50%	R
Ammonia Solution 10%	R
Potassium Hydroxide 50%	R
Aquous Solutions	
Sodium Chloride sat	R
Tap Water	R
Chlorinated Water	R
Dead Sea Water	R
Solvents	
White Spirit	R
Xylene	R
Toluene	R
Acetone	R

To get a film thickness of 400 microns, apply 2 coats of Strongcoat HB at 3.1 m³/kg per coat, second coat should be applied at a right angle to the first coat. The second coat may be applied as soon as the first coat has initially dried.

When Strongcoat Primer is used at a rate of 5 m²/kg, it will give a dry film thickness between 120 - 150 microns with a clear yellow glossy finish.

Antislip Application

The base coat should be applied at a minimum film thickness of 250 microns and then fully blinded with the chosen Antislip Aggregate. Once the base coat has reached initial cure, all excess aggregates should be removed before a further application of Strongcoat HB top coat.

The top coat should be applied at a minimum film thickness of 400 - 750 microns depending on Antislip Aggregate size used.

Remarks

- Strongcoat HB should not be applied at temperatures below 10°C or where ambient relative humidity exceeds 85%.
- Strongcoat HB should not be applied onto surfaces known to suffer from rising damp.
- In case of spray applications, airless spray machines should be used.
- A minimum thickness of 150 microns per coat should be applied to obtain a smooth finish.

Cleaning

Tools and equipment can be cleaned with DCP Solvent when it is wet. Dried Strongcoat HB may be removed mechanically.

Packaging

Strongcoat HB is available in 6 kg packs (3.9 litre) and in 18 kg packs (11.6 litre).

Coverage

Standard coverage: Strongcoat Primer S: 5 m²/kg.

Strongcoat HB(base coat): 0.31 kg/m². Strongcoat HB (top coat): 0.31 kg/m². Occassional Spillage. Chemical Resistance after full cure (7 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

Oils & Fuels		
Brake Fluid	R	
Engine Oil	R	
Diesel	R	
Kerosene	R	
Detergents & Soaps	R	
Inorganic Acids		
Sulphuric Acid 25%	R	
Sulphuric Acid 40%	R	
Phosphoric Acid 20%	RS	
Hydrochloric Acid 10%	R	
Hydrochloric Acid 32%	RS	
Nitric Acid 10%	R	

R: Resistant

RS: Resistant with slight discoloration

Chemical Resistance:

Based on test method ASTM D543, after 7 days immersion in the below chemicals

RS
R
R
R
R
R
R
R
R

R: Resistant

RS: Resistant with slight discoloration

Approximate system thickness: 500 - 600 microns.

Antislip coverage When used with Antislip Aggregate #2 to achieve medium texture:

Strongcoat Primer S: 5 m3/kg.

Strongcoat HB (base coat): 0.38 kg/m². Antislip aggregate #2: 2.0 – 4.0 kg/m². Strongcoat HB (top coat): 0.62 kg/m². Approximate system thickness: 2.0 mm.

Antislip coverage When used with Antislip Aggregate #3 to achieve fine texture:

Strongcoat Primer S: 5 m3/kg.

Strongcoat HB (base coat): 0.36 kg/m2.

Antislip aggregate #3: 2.0 - 4.0 kg/m2. Strongcoat HB (top coat): 0.51 kg/m2. Approximate system thickness: 1.25 mm.

Storage

Store in a dry area out of direct sunlight at temperatures between 5°C and 35°C.

Shelf Life

Strongcoat HB has a shelf life of 12 months from date of manufacture if stored in proper conditions and unopened packs.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

Cautions

Health and Safety

Strongcoat HB should not come in contact with skin and eyes.

In case of accidental splashes to the eyes, rinse thoroughly with clean water and seek medical advise. Suitable protective gloves and goggles should be worn. Do not use solvent to clean Strongcoat HB from skin.

For further information refer to the Material Safety Data Sheet.

Fire

Strongcoat HB is nonflammable. Strongcoat Primer S and DCP Solvent are flammable. Ensure adequate ventilation. Do not use near a naked flame and do not smoke during use.

Flash Point: DCP Solvent: 37°C.

More from Don Construction Products

A wide range of construction chemical products are manufactured by DCP which include:

- ▲ Concrete admixtures.
- Surface treatments
- Grouts and anchors.
- Concrete repair.
- Flooring systems.
- Protective coatings.
- A Sealants.
- ▲ Waterproofing.
- Adhesives.
- Tile adhesives and grouts.
- Building products.
- Structural strengthening.



We endeavor to ensure that any advice, recommendation or information we may give in product literature is accurate and correct. However, due to the fact that we have no direct or continuous control over where or how the products are applied, DCP cannot accept any liability either directly or indirectly arising from the use of DCP products, whether or not in accordance with any advice, specification, recommendation or information given by us.





Date: 21/03/2019 Ref: CFS/HR/LT/19/045

Pages: 1 Nos.

TO WHOM SO EVER IT MAY CONCERN

Subject: Approved Applicator

Dear Sir/ Madam,

We Cease Fire Solutions, with its registered office at P.O. Box: 37677, Doha, Qatar hereby confirm that, M/s. Grace Business Group w.L.L with its registered office at P.O. Box: 2827, Doha, Qatar is our approved applicator for Phoenix Intumescent coatings.

Thanking you,

For Cease Fire Solutions,

Sen George

Head of Sales and Operations









Setting new Standards in Structural Fire Protection

Tower B, 6/F, Unit 601

Tower B, 6/F, Unit 601

Viking Technology & Business Centre
93.Ta Chuum Ping Street, Kwal Chung

Hong Kong (SAR

Tel: +852 2810 6101

Fax: +852 2810 9105

F-Mail: Info@phonys.stv.

Ref # QTR/1801/WL

WARRANTY LETTER

Based on the information supplied for the above project and material applied on/off site, Phoenix Fire Protection (Asia) Ltd. guarantees that the specification proposed products consisting of Phoenix 370-60 Water-based Intumescent basecoats will provide the agreed fire protection performance (60 minutes FRP) when applied to structural steelwork (to BS 476 part 21) for a period of 05 years from 24-04-2018.

The above guarantee is subject to the following conditions:

- All products must be applied by manufacturer's approved applicators only, to the recommended specification and manufacturer's written instructions.
- 2) The paint system must be applied and maintained in accordance with Phoenix's written instructions provided for this project.
- Final DFT readings and certification must be authorized by Phoenix's Contract Support Staff before issue.
- The performance of the paint system will not drop below corrosion levels as determined under ISO 4628-3 (Ri3).

Phoenix basecoat painted steel members can be left without a top seal coat if the steel sections are concealed and shall be classified as under C1 environment condition (i.e., Low relative humidity and no likelihood of damp or condensation or damages).

Page 01/02



Setting new Standards in Structural Fire Protection

PHOENIX TIRE PROTECTION (ASIA) LTD
Tower B, 6/F, Unit 601
Viking Technology & Business Centre
93 Ta Chuen Ping Street, Kwai Chung
Flong Kong (SAR)
Tet +852 2810 6101
Fax: 4852 2851 9599
E-Mall: info@phoenixasis.com.hi
Website: www.phoenixasis.com.hi
Website: www.phoenixasis.com.hi

The Warranty excludes the following:

- 1) Any damage to the coatings not repaired in conjunction with the Quality Plan for this project.
- Any problem caused by a primer system/ product used from another manufacturer other than that mentioned in the proposed specification or quality plan.
- 3) Any change in the use of the structure which may affect the environmental conditions.
- Any condition which may affect the performance of the system not divulged at the time of application.

For and on behalf of Phoenix Fire Protection (Asia) Ltd.

Ray Lucas

General Manager - Middle East

For and on behalf of Brick and Stone Contracting

OUR MAJOR PROJECTS FLOOR COATING & STREEL STRUCTURE FIRE PROOFING COATING

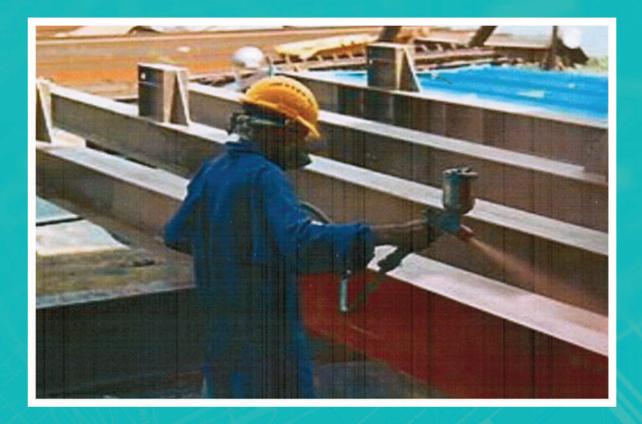








OUR MAJOR PROJECTS FLOOR COATING & STREEL STRUCTURE FIRE PROOFING COATING









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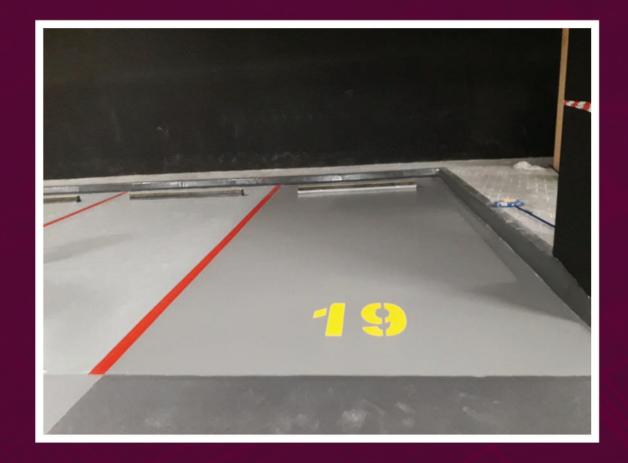


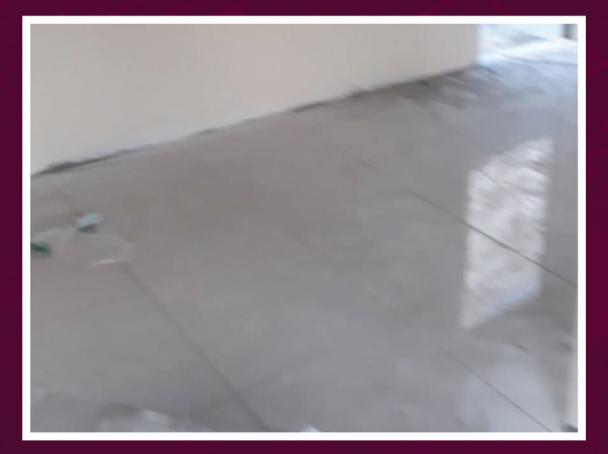




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