

FINTEX · TETRAKEM



FINLAND

1027 Fire Secure Mastic Adhesive references:

Shipyards:

Aker Yards Turku, Finland
 STX Europe Turku, Finland
 Meyer Turku Oy, Finland
 Mitsubishi Koyagi Nagasaki, Japan
 STX Europe St.Nazaire, France

Cruisers in which our products have been used:

Harmony of the Seas
 Oasis of the Seas
 Allure of the Seas
 M/S Freedom of the Seas
 M/S Liberty of the Seas
 M/S Independence of the Seas
 M/S AIDAprima
 M/S AIDAperla
 Mein Schiff 3
 Mein Schiff 4
 Mein Schiff 5

FT Card

1027 Fire Secure Mastic Adhesive

Product	One-component acrylic-based sealant and mounting adhesive for maritime industry where IMO-classification is required.
Phase	Off white paste like, mild odor.
Suitability	To join materials together, fill holes ja seal etc. Fiberglass fabrics, PVC, ABS, EPS, polystyrene foam, mineral wool, glass wool, mineral board, decoration sheets, panels, ceramic tile for decorating purposes, metal and galvanized metal, textiles, steel, painted steel, aluminium. Not corrosive towards metals.

Technical data

Application Temperature	+ 5°C - + 40°C
Density	1,40 g/ml
Application rate	550 g/min, 3 mm/4 bar
Curing time	± 2–3 mm / 24 h
Elongation break	150 %
Joint movement	15 %
Shore	30 Shore A DIN 53505
Open time	10–15 min
Temperature resistance	- 20°C - +75°C
Using temperature	Minimum + 10°C
Storage stability	12 months after date of production, stored in dry place. +5°C - + 25°C. Protect from freezing.
Certificate	IMO
Colour	Off White or tintable for common colour systems.
Packaging	330 ml plastic cartridge.



Operating directions

Conditions	Surfaces have to be clean and dry, free from grease and dust. In order to obtain good drying, one of the surfaces has to be porous. Application with a hand- or pneumatic caulking gun. Sealant is paintable after fully dried. Always test the adhesive prior to application. Finish and smoothen with water. Adhesive is freeze resistance after dried. Restricted use: Where the product is required to have a surface with low flame spread characteristics (according to IMO FTPC Part 5) and the product is required not to be capable of producing excessive quantities of smoke and/or toxic products or not to give rise to toxic hazards at elevated temperatures (IMO FTPC Part 2), the material shall be used as a strip. The stripe shall not be more than 30 mm wide and 3 mm thick and on both sides of it have to be at least 50 mm wide area non-combustible material.
Cleaning	Water and soap
Tools cleaning	Water
Environment	Adhesive waste has to be delivered to hazardous waste station. Empty cartridge can be recycled or delivered to waste station.
Safety	Product health and safety data sheet must be read before use. These are available at Fintex websites.
Fire resistant	Not flammable
Transport	This product does not sphere of influence in hazardous material.

1050 Fire Secure Adhesive

Product One-component acrylic-based sealant and mounting adhesive for maritime industry where IMO-classification is required.

Phase Off white paste like, mild odor.

Suitability To join materials together, fill holes ja seal etc. Fiberglass fabrics, PVC, ABS, EPS, polystyrene foam, mineral wool, glass wool, mineral board, decoration sheets, panels, ceramic tile for decorating purposes, metal and galvanized metal, textiles, steel, painted steel. Not corrosive towards metals.

Technical data

Application Temperature + 5°C - + 40°C

Density 1,40 g/ml

Application rate 550 g/min, 3 mm/4 bar

Curing Time ± 2-3 mm / 24 h

Elongation break 150 %

Joint movement 15 %

Shore 30 Shore A DIN 53505

Open time 10–15 min

Temperature resistance - 20°C - +75°C

Using temperature Minimum + 10°C

Storage stability 12 months after date of production, stored in dry place. +5°C - + 25°C. Protect from freezing.

Sertificate EC Type- Examination Certificate VTT-C-11651-15-16.
U.S. Coast Guard approval.
Bureau Veritas Type Approval Certificate 24618/B0 BV

Colour Off White or tintable for common colour systems.

Packaging 10L



Operating directions

Conditions Surfaces have to be clean and dry, free from grease and dust. In order to obtain good drying, one of the surfaces have to be porous. Application with a hand- or pneumatic caulking gun. Sealant is paintable after fully dried. Always test the adhesive prior to application. Finish and smoothen with water. Adhesive is freeze resistance after dried.

Restricted use: Where the product is required to have a surface with low flame spread characteristics (according to IMO FTPC Part 5) and the product is required not to be capable of producing excessive quantities of smoke and/or toxic products or not to give rise to toxic hazards at elevated temperatures (IMO FTPC Part 2), the material shall be used as a strip.

The stripe shall not be more than 30 mm wide and 3 mm thick and on both sides of it have to be at least 50 mm wide area non-combustible material.

Cleaning Water and soap

Tools cleaning Water

Environment Adhesive waste has to be delivered to hazardous waste station. Empty cartridge can be recycled or delivered to waste station.

Safety Product health and safety data sheet must be read before use. These are available at Fintex websites.

Fire resistant Not flammable

Transport This product does not sphere of influence in hazardous material.

Table 1
Suitability of various materials when using Tetrakem 1050 and 1027 as adhesive and recommended pretreatment.

Materials	Stainless steel	Galvanized steel	Primer coated steel	Aluminium	Aluminium anodized	Steel aluminium	PVC	ABS	Fiberglass	Ceramic tiles	Concrete	Glass	Teak	Plywood	Fibre boards	Construction boards	Brass	PS, EPS	Fiberglass mesh	Textiles	
Stainless steel																					
Galvanized steel		3 3		3 3	1 1	1 1	1 1	3 0	3 3	2 3	3 3	2 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
Primer coated steel		3 3		3 3	1 1	1 1	1 3	0 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Aluminium										3 3	2 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
Aluminium anodized		3 3		3 3	1 1	1 1	3 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Steel aluminium		3 3		3 3	1 1	1 1	3 3	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
PVC		1 1		1 1	1 1	1 1	1 1	1 1	1 2	1 1	1 1	1 1	1 2	1 1	1 1	1 1	1 1	1 1	1 1	1 1	
ABS		1 1		1 1	1 1	1 1	1 1	1 1	1 2	1 1	1 1	1 1	1 2	1 1	1 1	1 1	1 1	1 1	1 1	1 1	
Fiberglass		1 1		1 1	1 1	1 1	1 1	1 1	1 2	1 1	1 1	1 1	1 2	1 1	1 1	1 1	1 1	1 1	1 1	1 1	
Ceramic tiles		3 3		3 3	1 1	1 1	3 0	3 3	3 1	2 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Concrete		0 0	3 0	3 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Glass		3 3	3 3	3 3	1 1	1 1	3 3	3 3	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
Teak		3 3	2 3	3 3	1 1	1 1	1 3	3 3	3 2	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	3 3	
Plywood		2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 0	2 2	2 2	2 2	2 0	2 2	2 2	2 2	2 2	2 2	2 2	2 2	
Fibre boards		3 0	3 0	0 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Construction boards		3 0	3 0	0 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Brass		3 0	3 0	0 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
PS, EPS		3 0	0 0	0 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Fiberglass mesh		3 0	0 0	0 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Textiles		3 0	0 0	0 0	1 1	1 1	0 0	3 3	3 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	

Suitability	Pretreatment
Excellent	No pretreatment 0
Good	Fine grinding 1
	Coarse grinding 2
Satisfying	Wiping grease off 3
Not recommended	

This table, Table 1, tells suitability of Tetrakem Fire Secure 1027 and 1050 when using them as adhesive. In Table 2 are suitabilities when using Tetrakem Fire Secure 1027 and 1050 as sealant. When glueing non-porous materials the evaporating water must be let out from between materials during drying period . In these cases adhesive must be combed open with a suitable spatula e.g. 8-10mm.

Table 2
Suitability of various materials when using
Tetrakem 1050 and 1027 as sealant and recommended pretreatment.

Materials	Stainless steel	Galvanized steel	Primer coated steel	Aluminium	Aluminium anodized	Steel aluminium	PVC	ABS	Fiberglass	Ceramic tiles	Concrete	Glass	Teak	Plywood	Fibre boards	Construction boards	Brass	PS, EPS	Fiberglass mesh	Textiles
Stainless steel	3	3	3	3	3	3	1	1	1	3	0	3	3	2	3	3	3	3	3	3
Galvanized steel	3	3	3	3	3	3	1	1	1	3	0	3	3	2	3	3	3	3	3	3
Primer coated steel	3	3	3	3	3	3	1	1	1	3	0	3	3	2	0	0	0	0	0	0
Aluminium	3	3	3	3	3	3	1	1	1	3	0	3	3	2	0	0	0	0	0	0
Aluminium anodized	3	3	3	3	3	3	1	1	1	3	0	3	3	2	0	0	0	0	0	0
Steel aluminium	3	3	3	3	3	3	1	1	1	3	3	3	3	2	0	0	0	0	0	0
PVC	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
ABS	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
Fiberglass	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
Ceramic tiles	3	3	3	3	3	3	1	1	1	3	0	3	1	2	0	0	0	0	0	0
Concrete	0	0	0	0	0	3	1	1	1	0	0	3	3	2	0	0	0	0	0	0
Glass	3	3	3	3	3	3	1	1	1	3	3	3	3	2	3	3	3	3	3	3
Teak	3	3	3	3	3	3	1	1	1	1	3	3	3	2	3	3	3	3	3	3
Plywood	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Fibre boards	3	3	0	0	0	0	1	1	1	0	0	3	3	2	0	0	0	0	0	0
Construction boards	3	3	0	0	0	0	1	1	1	0	0	3	3	2	0	0	0	0	0	0
Brass	3	3	0	0	0	0	1	1	1	0	0	3	3	2	0	0	0	0	0	0
PS, EPS	3	3	0	0	0	0	1	1	1	0	0	3	3	2	0	0	0	0	0	0
Fiberglass mesh	3	3	0	0	0	0	1	1	1	0	0	3	3	2	0	0	0	0	0	0
Textiles	3	3	0	0	0	0	1	1	1	0	0	3	3	2	0	0	0	0	0	0

Suitability	Pretreatment
Excellent	No pretreatment 0
	Fine grinding 1
Good	Coarse grinding 2
	Wiping grease off 3
Satisfying	

This table, Table 2, tells suitability of Tetrakem Fire Secure 1027 and 1050 when using them as sealant. In Table 1 there are suitabilities of various materials when using Tetrakem Fire Secure 1027 and 1050 as adhesive.

FT Card

1065 Neofix Contact Adhesive

Product A solvent borne, toluene free, nearly n-hexane free special contact adhesive for industrial and professional use.
Phase Slightly yellowish liquid syntehtetic rubber solution.
Suitability Flooring, shoe- and leather industry, ship-, boat- and carchassis building. Very well suitable for joining of rubber, leather, gaskets, floor- and wall coverings, sheets, mouldings, metals, woodpiles and different linings- and insulations.

Technical data

Application Temperature + 10°C - + 40°C
Curing time 5–15 minutes, depending on conditions.
Temperature resistance - 40°C - +75°C. Heat resistance of dry adhesive seam approx. +75°C without hardener. Solution with Ad1600 herdener 3–10%, heat resistance of dry seam apprpx. 80–90°C.
Using temperature Lowest + 5°C
Storage stability 12 months after date of production, stored in dry place. +5°C - + 25°C. Sprayability will suffer from longer storing.
Thinner 1040 Neofix thinner
Colour Yellowish
Tools Brush, roller or spray gun.
Packaging Steel cans of 1, 3, 10, 20, 200 and 1000L

Density 0,83 g/ml
Dosage approx. 4 m²/l
Open time 10–40 minutes



Operating directions

Conditions Surfaces have to be clean and dry, free from grease and dust. Surfaces can be coarse grinded. Apply adhesive with a brush or a roller thin and smooth layer to both surfaces. The adhesive can be diluted with 1040 Neofix thinner 5 to 20 % by using spraying gun system. Let the glue dry 15 to 40 minutes, depending on conditions. Put the surfaces tightly together, check carefully there is no air bubbles between the surfaces. Overdried surfaces can be reactivated with heat or 1040 Neofix thinner. if heated, press surfaces together when those are still warm. The Neofix adhesive will hold immediately, but the full strength will develop in about two days. The adhesive is freeze resistance after dried.
Cleaning 1040 Neofix thinner or acetone.
Cleaning of tools 1040 Neofix thinner or acetone
Environment Adhesive waste has to be delivered to hazardous waste station . Empty cans can be recycled or delivered to waste station.
Warnings Contains hydroactive solvents 15–50%, ethyl acetate 15–50%.
Safety Harmful. Product healt and safety data sheet must be read before use. These are available at Fintex websites.
Fire resistant Highly flammable
Transport ADR transportation class UN 1133 Adhesives containing a flammable liquid 3, I. Store in well closed cans in a cool and well ventilated storage. The directions for storing and transportation of flammable liquids will apply.

1065R Neofix Spray Adhesive

Product	A solvent borne, toluene free, nearly n-hexane free special contact adhesive for industrial and professional use.
Phase	Slightly yellowish liquid synthetic rubber solution
Suitability	Flooring, shoe- and leather industry, ship-, boat- and car chassis building. Very well suitable for joining rubber, leather, gaskets, floor- and wall coverings, sheets, moldings, metal, woodpiles and different linings- and insulations.

Technical data

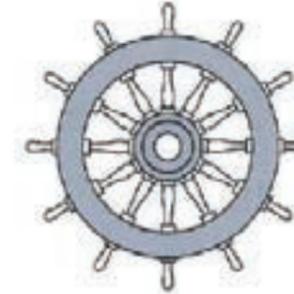
Application Temperature	+ 10°C - + 40°C
Density	0,83 g/ml
Curing time	5–15 minutes, depending on conditions.
Dosage	approx. 4 m ² /l
Open time	10-40 minutes
Temperature resistance	- 40°C - +75°C. Heat resistance of dry adhesive seam approx. +75°C without hardener.
Using temperature	Lowest + 5°C
Storage stability	12 months after date of production, stored in dry place. +5°C - + 25°C. Sprayability will suffer from longer storing.
Thinner	1040 Neofix thinner
Colour	Yellowish
Tools	Spray gun.
Packaging	Steel cans of 1, 3, 10, 20, 200 and 1000L

Operating directions

Conditions	Surfaces have to be clean and dry, free from grease and dust. Surfaces can be coarse grinded. Apply adhesive with a spray gun a thin and smooth layer to both surfaces or one surface, depending on used material and purpose. When necessary adhesive can be diluted with 1040 Neofix thinner from 5 to 10 % when using spraying gun system. Let the glue dry 15 to 40 minutes, depending on conditions. Put the surfaces tightly together, check carefully there are no air bubbles between the surfaces. Over dried surfaces can be reactivated by heat or 1040 Neofix thinner or acetone. when heated, press surfaces together when those are still warm. The Neofix adhesive will hold immediately, but the full strength will develop in about two days. The adhesive is freeze resistance after dried.
Cleaning	1040 Neofix thinner or acetone.
Cleaning of tools	1040 Neofix thinner or acetone
Environment	Adhesive waste has to be delivered to hazardous waste station . Empty cans can be recycled or delivered to waste station.
Warnings	Contains hydroactive solvents 15–50%, ethyl acetate 15– 50%.
Safety	Harmful. Material health and safety data sheet must be read before use. These are available at Fintex websites.
Fire resistant	Highly flammable
Transport	ADR transportation class UN 1133 Adhesives containing a flammable liquid 3, I . Store in well closed cans in a cool and well ventilated storage. The directions for storing and transportation of flammable liquids will apply.

EC TYPE-EXAMINATION CERTIFICATE

according to Marine Equipment Directive (Module B)



NOTIFIED BODY 0809

This is to certify that the examined products with type designations

Fire Secure Mastic Adhesive 1027
Fire Secure Adhesive 1050

meet the requirements imposed in IMO 2010 FTP Code (ref. Ch. 5.2.1 and Ch. 8), Annex 1 Part 2 and Part 5 (IMO Resolution MSC.307(88) Annex 1 Part 2 and Part 5) on

materials with low flame-spread characteristics and not producing excessive quantities of smoke and toxic products or not giving rise to toxic hazards at elevated temperatures

and the provisions of Marine Equipment Directive 96/98/EC, as amended, last amendment (EU) 2015/559, that apply to

surface materials with low flame-spread characteristics.

These products have been assigned a U.S. Coast Guard Module B number (164.112 / EC0809) to note type approval to Module B only as it pertains to obtaining U.S. Coast Guard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004

Manufacturer of the product is

Fintex-Tetrakem Oy.

The Certificate is valid until May 22, 2021 unless cancelled or revoked, provided the conditions in this certificate are complied with and the equipment remains satisfactory in service.

Espoo June 23, 2016


Ritva Paalanen
Inspection Manager




Heli Välimäki
Senior Expert

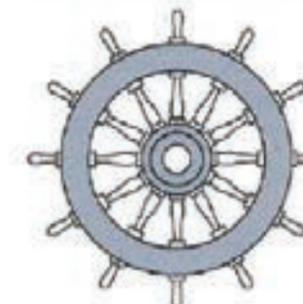
Manufacturer	Fintex-Tetrakem Oy Mäkirinteentie 13 FI-36220 Kangasala Finland.
Equipment	Annex A.1 Items No A.1/3.18(a) and No A.1/3.18(e) , surface materials with low flame-spread characteristics.
Products	Fire Secure Mastic Adhesive 1027. Fire Secure Adhesive 1050
Product description	Fire Secure Mastic Adhesive 1027, a waterdispersion-based, solvent-free mastic adhesive. Fire Secure Adhesive 1050, a waterdispersion-based, solvent-free adhesive
Technical document	Fintex-Tetrakem product specification for Adhesives 1027 and 1050.
Test reports	Test Report RTE1159/04, 16 April 2004, VTT Finland.
Test methods	IMO FTPC Part 5 (IMO Resolution MSC. 61(67) Annex 1 Part 5) Surface materials with low flame-spread characteristics (test procedure IMO Resolution A.653(16) on adhesives used in the construction of "A", "B" and "C" class divisions).
Restricted use	The products shall be used on as a strip not more than 30 mm wide and 3 mm thick and on both sides at least 50 mm wide area non-combustible material.
Notes	<p>This certificate replaces the previous EC Type-Examination Certificates (B-module) VTT-C-11618-15-16 and VTT-C-7059-15-11.</p> <p>This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with the notified body named on this certificate.</p> <p>Should the specified regulations or standards be amended during the validity of this certificate, the product is to be reapproved prior to it being placed on board vessels to which the amended regulations or standards apply.</p> <p>The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E or F) of Annex B of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.</p>

END OF CERTIFICATE



QUALITY-SYSTEM APPROVAL

according to Marine Equipment Directive



NOTIFIED BODY 0809

This is to certify that the manufacturer

Fintex-Tetrakem Oy

operates an approved quality system for
surface materials with low flame-spread characteristics.

The examined quality system meets the provisions of
The Marine Equipment Directive 96/98/EC, as amended, last amendment
(EU) 2015/559 that apply to

production-quality assurance (module D).

The manufacturer is allowed to affix the U.S. Coast Guard approval number (according to Table of this certificate) as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27, 2004.

The certificate was issued May 23, 2016

The Certificate is valid until May 22, 2021 unless cancelled or revoked.

Espoo June 23, 2016


Ritva Paalanen
Inspection Manager




Heli Välimäki
Senior Expert

Manufacturer Fintex-Tetrakem Oy
Mäkrinteentie 13
FI-36220 Kangasala
Finland

Equipment Annex A.1 Item No A.1/3.18, surface materials with low flame-spread characteristics.

Products and Type Examination Certificates

Products and Type Examination Certificates are listed in Table 1.

Table 1. Adhesives concerned by the production-quality assurance.

Product designation	EC Type- Examination Certificate no.	U.S.Coast Guard approval number	Expiry Date
Fire Secure Mastic Adhesive 1027	VTT-C-11651-15-16	164.112/ EC0809 / VTT-C-116518-15-16	May 22, 2021
Fire Secure Adhesive 1050	VTT-C-11651-15-16	164.112 / EC0809 / VTT-C-11650-15-16	May 22, 2021

Quality-system assessment reports

Audit of the plant on April 7, 2016. (Inspection report of VTT Expert Services Ltd number VTT-Q-00175-05-16, dated May 18 2016.

Conditions

The manufacturer must fulfil the obligations arising out of the approved quality system.

The manufacturer must keep the notified body informed of any updating of the quality system.

This approval is subject to an annual renewal audit

Notes

This certificate authorizes the manufacturer or his authorized representative established within the Community in conjunction with the EC Type Examination (Module B) Certificate of the equipment listed in the appendix of this certificate to affix the "Mark of Conformity" (wheelmark).

This certificate loses its validity if the manufacturer makes any changes or modifications to the approved quality system, which have not been notified to, and agreed with the notified body named in this certificate and after lapse of time, withdrawal or revocation of the EC Type Examination (Module B) Certificate.

END OF CERTIFICATE



Marine & Offshore
Division

Certificate number: 24618/B0 BV

File number: ACI 1300/244/001

Product code: 5230H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to
Fintex-Tetrakem Oy
Kangasala - FINLAND

for the type of product
SURFACE LININGS

Fire Secure Mastic Adhesive 1027, Fire Secure Adhesive 1050

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships Part C, Chapter 4
SOLAS 74 Convention, as amended, Reg. II-2/3, II-2/5
IMO Resolution MSC.36(63) (1994 HSC Code) 7
IMO Resolution MSC.97(73) (2000 HSC Code) 7
IMO Res. MSC.61(67)-(FTP Code) with IMO Res MSC.307(88) (2010 FTP Code) article 8
IMO MSC/Circ.1120

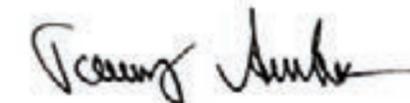
This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 29 Jul 2021

For BUREAU VERITAS,

At BV HELSINKI, on 29 Jul 2016,

Tommy Andersson




 This certificate is recognized by Transport Canada

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarpm.com/veristarnb/jsp/viewPublicPdfTypepc.jsp?id=kcInjaaw9>

BV Mod. Ad.E 530 October 2014

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Fire Secure Mastic Adhesive 1027 is an acrylic-based solvent free mastic adhesive (density 1.4 g/ml). The product has been tested on a 19 mm thick non-combustible Monolux board with a density of 768 kg/m³.

Fire Secure Adhesive 1050 is an acrylic-based solvent free adhesive (density 1.3 g/ml).

2. DOCUMENTS AND DRAWINGS:

Technical data sheet and safety data sheet dated 30/03/2016.

3. TEST REPORTS:

3.1 - Test report No. RTE2544/04 dated 19 July 2004 as per IMO FTP Code, Annex 1, Part 5 [testing standard : IMO Resolution A.653 (16)] from VTT Building Technology, Finland

3.2 - Statement No. RTE10816/98 dated 2 October 1998 from VTT Building Technology, Finland confirming the similarity of products Fire Secure Mastic Adhesive 1027 and Fire Secure Adhesive 1050.

4. APPLICATION / LIMITATION:

4.1 - The products should be used on non-combustible material. Application thickness should be not more than 4 mm and the product should be used as stripes of not more than 30 mm in width. Distance between stripes is to be not less than 50 mm.

4.2 - In application of FTP Code 2010 Annex 2 § 2.2, the product is expected to satisfy the requirement of smoke & toxicity without further testing

4.3 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The Fire Secure Mastic Adhesive 1027 and Fire Secure Adhesive 1050 are to be supplied by Fintex-Tetrakem Oy in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - Fintex-Tetrakem Oy has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - Fintex-Tetrakem Oy has declared to Bureau Veritas the following production site(s):

Fintex-Tetrakem Oy
Mäkirinteentie 13
FI 36220 Kangasala
FINLAND

6. MARKING OF PRODUCT:

The product or packing is to be marked with manufacturer name, type, designation and fire-technical rating.

7. OTHERS:

7.1 - It is the Fintex-Tetrakem Oy's responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate n° 24618/A0 BV issued on 06/07/2011 by the Society.

*** END OF CERTIFICATE ***



Marine & Offshore
Division

BUREAU
VERITAS

RECOGNITION FOR BV MODE II SCHEME

Fintex-Tetrakem Oy
Kangasala - FINLAND

Summary of the range of the recognition which is detailed in the subsequent page(s):
Surface Linings for Marine Applications

This certificate is issued to attest that BUREAU VERITAS has performed, at the above company's request and in compliance with the requirements of NR320, a satisfactory assessment of the manufacturing facilities and associated quality procedures related to the range of the recognition.

This certificate will expire on: 28 Oct 2019

For BUREAU VERITAS,
At BV HELSINKI, on 29 Jul 2016,
Tommy Andersson



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF RECOGNITION

1. RANGE OF THE RECOGNITION

The products listed in the table below are not required to be certified individually or per batch by Bureau Veritas. Their compliance with the approved type is solely certified by the manufacturer using its own format of document and marking to allow traceability to the approved type (HBV products as defined in NR320).

App. number	Validity date	Item designation	Trade name
24618/B0 BV	29 Jul 2021	SURFACE LININGS - 5230H	Fire Secure Mastic Adhesive 1027, Fire Secure Adhesive 1050

2. LIMITATIONS

The certificates listed in the range of recognition are to be valid, as applicable.

Bureau Veritas is to be informed immediately of any modification to manufacturing facilities and associated quality procedures in order to agree on appropriate actions.

Fintex-Tetrakem Oy has to apply for the periodical audits as agreed with Bureau Veritas.

3. REMARKS

Nil.

*** END OF CERTIFICATE ***

FINTEX · TETRAKEM

Craftsmanship you can rely on!



6002 Tetrakem FS 2 Primer

Product	Flat waterborne acrylate dispersion paint with IMO fire classification.
Suitability	As primer and topcoat for ceilings with fire classification and as a topcoat on indoor walls. Suitable for use on concrete, plaster and filler surfaces, along with different kinds of wood, chip and plywood boards, plasterboards, fibreglass wallpapers for painting as well as previously painted ceilings and indoor walls.
Certificate	Certificate NO VTT-C-11764-15-16
Properties	<p>Properties of 6002 Tetrakem FS 2 Primer:</p> <ul style="list-style-type: none"> • IMO (MED Marine Equipment Directive) • Good opacity • Solvent-free paint • Does not yellow with age • Suitable as a topcoat on ceilings • Best indoor emission class M1 • AP base can be tinted • Manufactured in Finland



Technical data

Dry matter content	App. 52 %
Density	1,40 g/ml
Gloss group	RT6, flat
MT group	2012 MT211, 311 and 2001 MT 30
Wear resistance	Fair, withstands over 2,000 scrubblings. SFS3455.
Tinting	Using common indoor paint colour charts. The AP base paint can be tinted in light shades.
Storage	36 months in the original package, store in a dry and cool place, with temperatures of +5 to +25 °C.
Coverage	<p>Previously painted surfaces 8–12 m²/l</p> <p>Wood and building board surfaces 6–10 m²/l</p> <p>Concrete, plaster and filler surfaces 5–7 m²/l</p> <p>Fibreglass wallpaper, wallpapers for painting 5–7 m²/l</p>
Dry time	A painted surface is dry to the touch after 30 min and can be recoated after 1–2 h. Drying times are indicative and they depend on temperature, relative air humidity and ventilation.
Tools	Spray gun, roller or paintbrush
Thinning	Water
Cleaning of tools	Water
Package sizes	AP base 2.7 l, 9 l and 18 l tin can
Transport	No VAK classification
EU VOC limit value	Cat. A/d 30 g/l (2010), the ready-to use product's VOC max. 30 g/l

6002 Tetrakem FS 2 Primer



Directions for use

Application conditions

Temperatures should be over +5 °C, but under + 25 °C, air humidity below 80 %.

Painting instructions Remove dirt and dust from the surface to be painted. If required, clean the surface with Maalarin tehopesu. Fill holes and cracks with a suitable ready-to-use filler or 1027 Tetrakem Fire Secure mastic adhesive before painting. Apply 1-2 times as required, with either a roller, paintbrush or spray gun. Use appropriate protective gear and protective clothing during the painting job.

Liability clause The information on the FT card is based on laboratory tests and practical results. All test results are indicative. As we cannot influence the application conditions and working methods, we are only responsible for the quality of the paint, which we guarantee is in accordance with high quality requirements and the certificate. We are not liable for any damages caused by the incorrect use of the product against the directions for use, or if used for an inappropriate purpose.

Environmental protection

Any unused liquid paint should be delivered to a collection point for dangerous waste. Empty, dry paint vessels can be delivered to a recycling depot or, if this possibility is not available, to a landfill.

Application safety The composition of the product does not require any safety labelling. There is a separate safety data sheet available for the product.

Flammability Non-combustible.

6007 Tetrakem FS 7 Acrylic Matte

Product Matte waterborne acrylate dispersion paint with IMO fire classification. A base white paint, C base milky, clear paint after drying.

Suitability Matte topcoat for indoor walls and ceilings. Suitable for use on concrete, plaster and filler surfaces, along with different kinds of wood, chip, plywood and mineral boards, plasterboards, fibreglass wallpapers for painting as well as previously painted ceilings and indoor walls..

Certificate Certificate NO VTT-C-11764-15-16

Properties Properties of 6007 Tetrakem FS 7 Acrylic Matte paint:

- IMO (MED Marine Equipment Directive)
- Good opacity
- Solvent-free paint
- A and C bases, can be tinted using well-known tinting systems
- Good wet scrubbing durability
- Matte topcoat for indoor use
- Manufactured in Finland
- M1 product



Technical data

Dry matter content	App. 51 %
Density	1.30 g/ml
Gloss group	RT5, matte
MT group	MT314
Wear resistance	Good, withstands over 5,000 scrubblings. SFS3455. SFS-EN 13300 Class II, ISO 11998.
Tinting	A and C bases. Can be tinted using well-known indoor paint systems.
Storage	36 months in the original package, store in a dry and cool place, with temperatures of +5 to +25 °C.
Coverage	Previously painted surfaces 8–12 m ² /l Wood and building board surfaces 6–10 m ² /l Concrete, plaster and filler surfaces 5–7 m ² /l Fibreglass wallpaper, wallpapers for painting 5–7 m ² /l
Dry time	A painted surface is dry to the touch after 30 min and can be recoated after 2 h. Drying times are indicative and they depend on temperature, relative air humidity and ventilation.
Tools	Spray gun, roller or paintbrush
Thinning	Water
Cleaning of tools	Water
Package sizes	A bases 2.7 l, 9L and 18 l, C bases 2.7 and 9 l tin can
Transport	No VAK classification
EU VOC limit value	Cat. A/d 30 g/l (2010), the ready-to use product's VOC max. 30 g/l

6007 Tetrakem FS 7 Acrylic Matte



Directions for use

Application conditions

Temperatures should be over +5 °C, but under + 25 °C, air humidity below 80 %.

Painting instructions Remove dirt and dust from the surface to be painted. If required, clean the surface with Maalarin tehopesu. Fill holes and cracks with a suitable ready-to-use filler or 1027 Tetrakem Fire Secure mastic adhesive before painting. Apply 1–2 times as required, with either a roller, paintbrush or spray gun. Use appropriate protective gear and protective clothing during the painting job.

Liability clause The information on the FT card is based on laboratory tests and practical results. All test results are indicative. As we cannot influence the application conditions and working method, we are only responsible for the quality of the paint, which we guarantee is in accordance with high quality requirements and the certificate. We are not liable for any damages caused by the incorrect use of the product against the directions for use, or if used for an inappropriate purpose.

Environmental protection

Any unused liquid paint should be delivered to a collection point for dangerous waste. Empty, dry paint vessels can be delivered to a recycling depot or, if this possibility is not available, to a landfill.

Application safety The composition of the product does not require any safety labelling. There is a separate safety data sheet available for the product.

Flammability Non-combustible.

6020 Tetrakem FS 20 High Performance Acrylic

Product Semi-matte waterborne acrylate dispersion paint with IMO fire classification.
A base white paint, C base milky as fluid, clear paint after drying.

Suitability Matte topcoat for indoor walls. Suitable for use on concrete, plaster and filler surfaces, along with different kinds of wood, chip, plywood and mineral boards, plasterboards, fibreglass wallpapers for painting as well as previously painted ceilings and indoor walls.

Certificate Certificate NO VTT-C-11764-15-16

Properties Properties of 6020 Tetrakem FS 20 High Performance Acrylic paint:

- IMO (MED Marine Equipment Directive)
- Good opacity
- Solvent-free paint
- Can be tinted using well-known tinting systems
- Washable
- Semi-matte topcoat for indoor use
- Manufactured in Finland
- M1 product



Technical data

Dry matter content	App. 49 % by weight
Density	1.30 g/ml
Gloss group	RT4, semi-matte
MT group	MT314
Wear resistance	Very good, withstands over 15,000 scrubblings. SFS3455. SFS-EN 13300 Class I, ISO 11998.
Tinting	A and C bases can be tinted
Storage	36 months in the original package, store in a dry and cool place, with temperatures of +5 to +25 °C
Coverage	Previously painted surfaces 8–12 m ² /l Wood and building board surfaces 6–10 m ² /l Concrete, plaster and filler surfaces 5–7 m ² /l Fibreglass wallpaper, wallpapers for painting 5–7 m ² /l
Dry time	A painted surface is dry to the touch after 30 min and can be recoated after 2 h. Drying times are indicative and they depend on temperature, relative air humidity and ventilation.
Tools	Spray gun, roller or paintbrush
Thinning	Water
Cleaning of tools	Water
Package sizes	A bases 2.7 l, 9 l and 18 l, C bases 2.7 and 9 l tin can
Transport	No VAK classification
EU VOC limit value	Cat. A/d 30 g/l (2010), the ready-to use product's VOC max. 30 g/l

6020 Tetrakem FS 20 High Performance Acrylic



Directions for use

Application conditions

Temperatures should be over +5 °C, but under + 25 °C, air humidity below 80 %.

Painting instructions Remove dirt and dust from the surface to be painted. If required, clean the surface with Maalarin tehopesu. Fill holes and cracks with a suitable ready-to-use filler or 1027 Tetrakem Fire Secure mastic adhesive before painting. Apply 1–2 times as required, with either a roller, paintbrush or spray gun. Use appropriate protective gear and protective clothing during the painting job.

Liability clause The information on the FT card is based on laboratory tests and practical results. All test results are indicative. As we cannot influence the application conditions and working method, we are only responsible for the quality of the paint, which we guarantee is in accordance with high quality requirements and the certificate. We are not liable for any damages caused by the incorrect use of the product against the directions for use, or if used for an inappropriate purpose.

Environmental protection

Any unused liquid paint should be delivered to a collection point for dangerous waste. Empty, dry paint vessels can be delivered to a recycling depot or, if this possibility is not available, to a landfill.

Application safety The composition of the product does not require any safety labelling. There is a separate safety data sheet available for the product.

Flammability Non-combustible.

6011 Tetrakem FS Ceiling Plus

Product	Flat waterborne acrylate dispersion paint with IMO fire classification. Extremely good opacity.
Suitability	As a primer and topcoat for ceilings with fire classification and as a primer on indoor wall surfaces. Suitable for use on concrete, plaster and filler surfaces, along with different kinds of wood, chip, plywood and mineral boards, plasterboards, fibreglass wallpapers for painting as well as previously painted ceilings and indoor walls.
Certificate	Certificate NO VTT-C-11764-15-16
Properties	<p>Properties of 6011 Tetrakem FS Ceiling Plus paint:</p> <ul style="list-style-type: none"> • IMO (MED Marine Equipment Directive) • Extremely good opacity, one application is usually sufficient • Solvent-free paint • Does not yellow with age • Suitable on ceiling and wall surfaces • AP base can be tinted • Manufactured in Finland



Technical data

Dry matter content	App. 58 %
Density	1.40 g/ml
Gloss group	RT6, flat
MT group	2012 MT211, 311 and 2001 MT 30
Wear resistance	Fair, withstands over 2,000 scrubblings. SFS3455.
Tinting	Using common indoor paint colour charts. The AP base paint can be tinted in light shades.
Storage	36 months in the original package, store in a dry and cool place, with temperatures of +5 to +25 °C.
Coverage	<p>Previously painted surfaces 8–12 m²/l</p> <p>Wood and building board surfaces 6–10 m²/l</p> <p>Concrete, plaster and filler surfaces 5–7 m²/l</p> <p>Fibreglass wallpaper, wallpapers for painting 5–7 m²/l</p>
Dry time	A painted surface is dry to the touch after 30 min and can be recoated after 1–2 h. Drying times are indicative and they depend on temperature, relative air humidity and ventilation.
Tools	Spray gun, roller or paintbrush
Thinning	Water
Cleaning of tools	Water
Package sizes	A bases 2.7 l, 9 l and 18 l, C bases 2.7 and 9 l tin can
Transport	No VAK classification
EU VOC limit value	Cat. A/d 30 g/l (2010), the ready-to use product's VOC max. 30 g/l

6011 Tetrakem FS Ceiling Plus



Directions for use

Application conditions

Temperatures should be over +5 °C, but under + 25 °C, air humidity below 80 %.

Painting instructions Remove dirt and dust from the surface to be painted. If required, clean the surface with Maalarin tehopesu. Fill holes and cracks with a suitable ready-to-use filler or 1027 Tetrakem Fire Secure mastic adhesive before painting. Apply 1–2 times as required, with either a roller, paintbrush or spray gun. Use appropriate protective gear and protective clothing during the painting job.

Liability clause The information on the FT card is based on laboratory tests and practical results. All test results are indicative. As we cannot influence the application conditions and working method, we are only responsible for the quality of the paint, which we guarantee is in accordance with high quality requirements and the certificate. We are not liable for any damages caused by the incorrect use of the product against the directions for use, or if used for an inappropriate purpose.

Environmental protection

Any unused liquid paint should be delivered to a collection point for dangerous waste. Empty, dry paint vessels can be delivered to a recycling depot or, if this possibility is not available, to a landfill.

Application safety The composition of the product does not require any safety labelling. There is a separate safety data sheet available for the product.

Flammability Non-combustible.

6025hs KSM25 FS Special Antimicrobial

Product	Semi-matte waterborne antimicrobial acrylate dispersion paint with IMO fire classification. A base white paint and C base milky as fluid, clear paint after drying.
Suitability	An extremely wear-resistant and moisture-proof washable topcoat for indoor walls. Suitable for use on concrete, plaster and filler surfaces, along with different kinds of wood, chip, plywood and mineral boards, plasterboards, fibreglass wallpapers for painting as well as previously painted ceilings and indoor walls in areas that are exposed to hard or excessive wear or that require good hygienic properties.
Certificate	Certificate NO VTT-C-11764-15-16
Standards	ISO 22196:2011
Properties	<p>Properties of 6025hs FS Special Antimicrobial:</p> <ul style="list-style-type: none"> • IMO (MED Marine Equipment Directive) • Antimicrobial wall paint • Resistant to hard or excessive wear • Can be tinted using well-known tinting systems • Washable and moisture-proof • Semi-matte topcoat for indoor use • Manufactured in Finland • M1 product



Technical data

Dry matter content	App. 52 % by weight
Density	1.30 g/ml
Gloss group	RT6, half-matte
MT group	MT314
Wear resistance	Very good, withstands over 20,000 scrubblings. SFS3455. SFS-EN 13300 Class I, ISO 11998.
Tinting	A and C bases can be tinted.
Storage	36 months in the original package, store in a dry and cool place, with temperatures of +5 to +25 °C.
Coverage	<p>Previously painted surfaces 8–12 m²/l</p> <p>Wood and building board surfaces 6–10 m²/l</p> <p>Concrete, plaster and filler surfaces 5–7 m²/l</p> <p>Fibreglass wallpaper, wallpapers for painting 5–7 m²/l</p>
Dry time	A painted surface is dry to the touch after 30 min and can be recoated after 2 h. Drying times are indicative and they depend on temperature, relative air humidity and ventilation.
Tools	Spray gun, roller or paintbrush
Thinning	Water
Cleaning of tools	Water
Package sizes	A bases 2.7 l, 9 l and 18 l, C bases 2.7 and 9 l tin can
Transport	No VAK classification
EU VOC limit value	Cat. A/d 30 g/l (2010), the ready-to use product's VOC max. 30 g/l

6025hs KSM25 FS Special Antimicrobial



Directions for use

Application conditions

Temperatures should be over +5 °C, but under + 25 °C, air humidity below 80 %.

Painting instructions Remove dirt and dust from the surface to be painted. If required, clean the surface with Maalarin tehopesu. Fill holes and cracks with a suitable ready-to-use filler or 1027 Tetrakem Fire Secure mastic adhesive before painting. Apply 1-2 times as required, with either a roller, paintbrush or spray gun. Use appropriate protective gear and protective clothing during the painting job.

Liability clause The information on the FT card is based on laboratory tests and practical results. All test results are indicative. As we cannot influence the application conditions and working method, we are only responsible for the quality of the paint, which we guarantee is in accordance with high quality requirements and the certificate. We are not liable for any damages caused by the incorrect use of the product against the directions for use, or if used for an inappropriate purpose.

Environmental protection

Any unused liquid paint should be delivered to a collection point for dangerous waste. Empty, dry paint vessels can be delivered to a recycling depot or, if this possibility is not available, to a landfill.

Application safety The composition of the product does not require any safety labelling. There is a separate safety data sheet available for the product.

Flammability Non-combustible.

6009hs Tetrakem Satin FS Antimicrobial

Product Flat waterborne antimicrobial acrylate dispersion paint with IMO fire classification.
A base white paint and C base milky as fluid, clear paint after drying.

Suitability Wear-resistant and washable topcoat for indoor walls. Suitable for concrete, plaster and filler surfaces, along with different kinds of wood, chip, plywood and mineral boards, plasterboards, fibreglass wallpapers for painting as well as previously painted ceilings and indoor walls in areas that are exposed to moderate wear or require good hygienic properties as well as a flat gloss level.

Certificate Certificate NO VTT-C-11764-15-16

Standards ISO 22196:2011

Properties Properties of 6009hs Tetrakem Satin FS Special Antimicrobial:

- IMO (MED Marine Equipment Directive)
- Antimicrobial wall paint
- Moderately wear-resistant
- Can be tinted using well-known tinting systems
- Washable
- Flat topcoat for indoor use
- Manufactured in Finland



Technical data

Dry matter content	App. 55 % by weight
Density	1.35 g/ml
Gloss group	RT6, flat
MT group	MT314
Wear resistance	SFS3455. SFS-EN 13300 Class I, ISO 11998.
Tinting	A and C bases can be tinted.
Storage	36 months in the original package, store in a dry and cool place, with temperatures of +5 to +25 °C.
Coverage	Previously painted surfaces 8–12 m ² /l Wood and building board surfaces 6–10 m ² /l Concrete, plaster and filler surfaces 5–7 m ² /l Fibreglass wallpaper, wallpapers for painting 5–7 m ² /l
Dry time	A painted surface is dry to the touch after 30 min and can be recoated after 2 h. Drying times are indicative and they depend on temperature, relative air humidity and ventilation.
Tools	Spray gun, roller or paintbrush
Thinning	Water
Cleaning of tools	Water
Package sizes	A bases 2.7 l, 9 l and 18 l, C bases 2.7 and 9 l tin can
Transport	No VAK classification
EU VOC limit value	Cat. A/d 30 g/l (2010), the ready-to use product's VOC max. 30 g/l

6009hs Tetrakem Satin FS Antimicrobial



Directions for use

Application conditions

Temperatures should be over +5 °C, but under + 25 °C, air humidity below 80 %.

Painting instructions Remove dirt and dust from the surface to be painted. If required, clean the surface with Maalarin tehopesu. Fill holes and cracks with a suitable ready-to-use filler or 1027 Tetrakem Fire Secure mastic adhesive before painting. Apply 1–2 times as required, with either a roller, paintbrush or spray gun. Use appropriate protective gear and protective clothing during the painting job.

Liability clause The information on the FT card is based on laboratory tests and practical results. All test results are indicative. As we cannot influence the application conditions and working method, we are only responsible for the quality of the paint, which we guarantee is in accordance with high quality requirements and the certificate. We are not liable for any damages caused by the incorrect use of the product against the directions for use, or if used for an inappropriate purpose.

Environmental protection

Any unused liquid paint should be delivered to a collection point for dangerous waste. Empty, dry paint vessels can be delivered to a recycling depot or, if this possibility is not available, to a landfill.

Application safety The composition of the product does not require any safety labelling. There is a separate safety data sheet available for the product.

Flammability Non-combustible.

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