

Henkel

Quality for Professionals



Handbook

Tangit & BIS Pacifyre® Fire Protection Systems



WALRAVEN



Table of contents

GENERAL

- 4 Henkel worldwide
- 5 Walraven Group
- 6 Collaboration Henkel & Walraven
- 7 Fire safety
- 8 Regulations
- 9 Work safety
- 10 Monitoring
- 11 Conditions

PROCESSING STEPS

- 12-13 Summary of contents
- 14-15 BIS Pacifyre® MK II Fire sleeve

APPLICATION IN THE WALL

- 16 **Hollow conduits**
- 17 **Pipe conduits** Metal with rock wool
- 18 Metal with plastic insulation
- 19 Plastic
- 20 Multi-layer with plastic insulation
- 21 **Cable conduits** Cable bundle
- 22 Cable duct
- 23 **Combi conduits**

APPLICATION IN THE CEILING

- 24 **Hollow conduits**
- 25 **Pipe conduits** Metal with rock wool
- 26 Metal with plastic insulation
- 27 Plastic
- 28 Multi-layer with plastic insulation
- 29 **Cable conduits** Cable bundle
- 30 Cable ducts
- 31 **Combi conduits**

BUILDING COMPONENT JOINTS

- 32 Expansion joint
- 32 Shrink seam joint
- 32 Wall-floor joints

ANCHORING

- 33 Solid foundation
- 33 Hollow foundation

SYSTEM SUMMARY

- 34-35 Tangit & BIS Pacifyre® Fire Protection Systems

PRODUCT SUMMARY

- 36 BIS Pacifyre® MK II Fire sleeve
- 36 Tangit FP 550 2-c Fire resistant foam
- 36 Tangit FP 800 Fire resistant coating
- 37 Tangit FP 450 Fire resistant paste
- 37 Tangit FP 440 Fire resistant grout
- 37 Tangit FP 635 Fire resistant tape
- 38 Tangit FP 410 Fire resistant elastic cement
- 38 Tangit FP 430 Fire resistant acrylic cement
- 39 Tangit FP 100 1-c Fire resistant foam
- 39 Tangit FP 300 Fire resistant mortar
- 40 Tangit FP 520 2-c Gun
- 40 Tangit PP6 2-c Gun
- 41 Tangit CSP1 Gun
- 41 Tangit FP 504 Nozzles
- 42 Pattex Power Tape Crystal
- 42 Pattex CF 900 Fire resistant Chemical Anchor
- 43 Pattex Mixer nozzles
- 43 Pattex Injection plugs
- 43 Pattex Anchor posts

- 44-45 **PRODUCT GUIDE**

- 46-47 **CONSUMPTION TABLE**

- 48 **CONTACT HELPDESK**

Henkel - Worldwide partner for professionals



As specialist in applied chemistry, Henkel is the worldwide market leader when it comes to adhesives, joint cement and surface treatments.

Our products are utilised by the professional craftsman in construction and industry.

Henkel, established in 1876, evolved from a German family firm into an Exchange-listed multinational.

Worldwide the concern employs some 52,000 people in 125 countries.

Henkel headquarters Düsseldorf Germany



LOCTITE.

Teroson

Thomsit

Ceresit



The Walraven Group has been active on an international level for over 65 years in the development, production and sale of innovative and time-saving installation materials for construction and industrial purposes. Its supply programme

comprises such articles as sleeves for fire resistant pipe conduits, fire caps for lighting fixtures and an unprecedented assortment of pipe and cable fastening systems. Walraven has more than 600 employees distributed over 8 sales offices in Europe.

Walraven headquarters Mijdrecht Netherlands



BIS
FASTENING SYSTEMS



BIS
FIRE PROTECTION SYSTEMS



BIS
SANITARY SYSTEMS



Collaboration Henkel – Walraven

Henkel and Walraven have joined forces in the development and distribution of European-certified fire-resistant and smoke proof systems. Official fire tests have been carried out by recognised testing institutes at home and abroad. These tests have demonstrated that the application of Tangit (Henkel) in combination with the BIS Pacifyre® MK II Fire sleeve (Walraven) results in outstanding flame retardance and smoke proof qualities for pipe conduits.

Tangit - the professional brand for the installer

Tangit, part of Henkel, has been manufacturing and selling top quality, reliable products and systems for the professional customer for over 40 years. Tangit products are used for gluing and sealing pipe systems.

This includes:

■ Fire-resistant and smokeproof systems

Certified products for sealing tube, cable (bundle) and cable duct conduits to make them fire resistant and smoke proof. Fire-resistant joints between construction parts and fire resistant anchors (Pattex).

■ Water and gas-tight sealing systems

■ PVC adhesives and PVC cleaners

■ Screw thread seals

BIS Pacifyre® - easy, effective and dependable

BIS Pacifyre® is part of the BIS Fire protection system of Walraven. This system includes various products for the fire-resistant and smoke proof sealing of pipe conduits and lighting fixtures, as well as products for the fire-resistant fastening of pipes.

Assortment

Tangit & BIS Pacifyre®

Fire-resistant
Systems





Why

A brief moment of carelessness, forgetting to blow out a candle, a burning cigarette, a technical defect in an installation - all of these are enough to cause a catastrophe. It is often just a few minutes until a small fire develops into a gigantic conflagration. During a conflagration fire is not the only hazard; it is particularly smoke that can lead to life-threatening situations. Each year over a hundred people die and thousands of people are injured due to fire in the Benelux. In addition to their threat to the community fires also have financial consequences, indeed adding up to losses of millions of euros annually.

Goal

1. people must be able to leave a building without danger;
2. man and his environment must be protected;
3. fire must be kept from spreading;
4. technical installations must be kept functional as long as possible;
5. it must be possible for auxiliary personnel to have access in order to assist.

Solution

Passive fire protection through the installation of fire resistant and smoke proof walls and ceilings. The conduits and joints in these walls and ceilings must also be fire-resistant. If they are not fire-resistant, they cancel out the fire resistance of the fire compartment.

The Buildings Decree (Netherlands) and the Royal Decree (Belgium) delineate the regulations with which a building must comply. These regulations apply to:

- safety
- health
- practicability
- energy conservation and the environment

The chapter 'Safety regulations' regulates the safety of buildings with regard to such factors as fire protection. In order to be certain that structures are built safely, it is delineated in both decrees what NEN/NBN-EN standards structures and the products used in them must meet.

Fire compartmentalisation and functional maintenance

In the realm of fire protection reference is made to such standards as NEN 6068 and NEN 6069 (Netherlands) and NBN/EN 13500 (Belgium). These standards regulate the determination of resistance to the breakthrough of fire and the transfer of fire between rooms (WBDBO).

Components of a building include fire-isolating walls or ceilings in which such interruptions as conduits and joints are some of the factors that determine how fire resistant and smoke proof the building is. Walls and ceilings must meet the above mentioned standards.

Up to the present there have never yet been any specific test methods to use in order to determine the fire resistance of conduits and joints. An integration of European test methods has now made this possible. The NEN / NBN-EN and 1366-4 are the basis for this.

Depending upon the intended use of a building, conduits, joints and openings in walls and ceilings must restore the original fire resistance of those walls and ceilings. Tangit Fire Protection Systems in combination with BIS Pacifyre® MK II Fire sleeves have been given a positive rating by Efectis Nederland BV (part of TNO) and ISIB Belgium and meet the above mentioned requirements. Certification reports are available for perusal. For the fire-resistant installation of (electrical) installations in walls and ceilings, in the context of functional maintenance reference can be made to NPR 2576. The Pattex Fire-resistant chemical anchor CF 900 bears the CT certification.

Conforms with NEN/
NBN-EN 1366-3, 1366-4,
Efectis-ISIB 2007



Work safety

Product information sheets

These include such points as the following:

- product characteristics;
- uses and methods;
- technical specifications.



Product safety sheets

For the safe utilisation of Tangit & BIS Pacifyre® Fire Protection Systems it is important that the safety information sheets be consulted before work commences. If there are any questions one should contact the Helpdesk (see contact data overleaf).

Packaging text

Before work commences the packaging text, and if applicable the information concerning any possible hazardous points, should be read.



Personal protective equipment

When working with the Tangit & BIS Pacifyre® Fire Protection Systems follow these rules:

- the room in which you are working must be well ventilated;
- wear clothing that covers your entire body;
- wear safety goggles;
- wear safety gloves;
- use clean equipment and tools.



Leftover product and disposal of empty packages

Tangit fire-resistant products are not hazardous when hardened, so they are industrial waste. Completely empty packages with < 2% residual are also not hazardous, so they are industrial waste. The further disposal of leftover material and empty packages should take place in accordance with applicable local and national guidelines.

The BIS Pacifyre® MK II Fire sleeve contains no asbestos or other hazardous substances and can therefore be removed with other industrial waste after disassembly.

Conditions

This handbook is based upon the knowledge and experience of Henkel and Walraven Research & Development and external assessments, in accordance with internationally applicable standards.

External tests

For the external testing of Tangit and BIS Pacifyre® Fire Protection Systems over 300 conduits and joints were tested.

The following criteria were applied with regard to wall and ceiling structures:

- walls of cell concrete and metal stud with a thickness of 10 cm + local building up to ≥ 15 cm;
- ceilings of concrete with a thickness ≥ 15 cm;
- conduits consisting of notches of maximum 35 cm x 35 cm and drilled holes;
- conduit material consisting of plastic, multi-layer and metal pipes, cables and cable duct conduits or a combination of these

The BIS Pacifyre® MK II Fire sleeve more than meets the standard and was tested intensively, classified and internationally certified. A summary of the tests and certificates is available on request from your Walraven branch (for contact, see overleaf). Of course further developments in the field of uses, types and testing of the BIS Pacifyre® MK II Fire sleeve never stand still. Walraven reserves the right to make changes without notice.

Liability

The above mentioned characteristics of the products have been demonstrated both in practice and in consumption tests. However, we have no influence upon circumstances contingent upon specific situations. For this reason we advise that you always carry out your own tests in order to determine whether or not a product is suitable for its envisaged use.

In case of doubt contact the Helpdesk (see contact data overleaf).

Liability is not accepted on the basis of the contents of this document or verbal advice unless there is gross negligence on our part. This handbook replaces all previous editions.

Summary of processing steps

Fire-resistant seals and anchors



BIS Pacifyre® MK II Fire sleeve



pgs. 14 - 15

Pipe conduits



Metal: wall pgs. 17-18
ceiling pgs. 25-26

Cable conduits



Cable bundle: wall pg. 21
ceiling pg. 29

Hollow conduits



wall pg. 16 / ceiling pg. 24



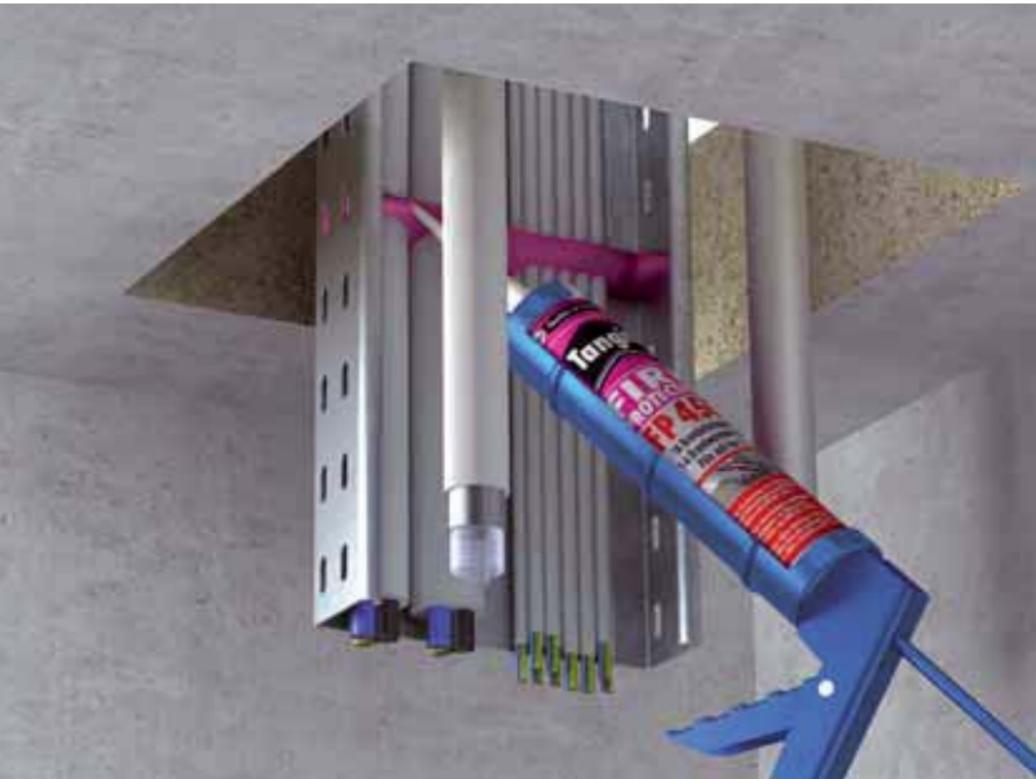
Plastic: wall pg. 19
ceiling pg. 27



Cable conduit: wall pg. 22
Ceiling pg. 30



Multi-layer: wall pg. 20
ceiling pg. 28



Combi conduits



Wall pg. 23 / Ceiling pg. 31

Construction component joints



Flexion joint pg. 32

Anchoring



Hollow foundation pg. 33



Shrink seam joint pg. 32



Solid foundation pg. 33



Wall-floor joints pg. 32

Processing steps

BIS Pacifyre® MK II Fire sleeve

1

Be sure that the pipe is reasonably clean and free of foreign matter (such as mortar). Wrap the sleeve tightly around the pipe.

2

Ensure that the three closure tongues are approximately 45 degrees vertically. The closure tongues will now go easily through the slots.

3

Bend the three closure tongues completely back. The soft foam on the inside should be pressed in lightly.

4

Slide the BIS Pacifyre® MK II into the hole. See to it that the sleeve extends equally on both sides of the wall or floor. If the surface is too rough to push, wrap smooth foil around it.

The BIS Pacifyre® MK II Fire sleeve is illustrated in applications with notches on pages: 18, 19, 20, 23, 26, 27, 28 and 31.

The fire sleeve can also be used in applications with drilled holes (see illustrations page 15).



Hollow conduits

Minimum processing temperature: + 5°C



Metal stud wall with wall thickness = 10 cm:
local build-up to min. 15 cm



Place of Pattex Power Tape Crystal



First spray ± 10 cm foam
(to homogeneous colour)



Spray Tangit FP 550 into the opening



If desired cut away excess foam



Apply Tangit FP 800 coating to the foam with an
overlap of 3 cm on the wall



Fasten identification plate

Products used:

Pattex Power Tape Crystal
Tangit FP 550
Tangit FP 800
Tangit Identification plate

Important: the above illustrations show a square notch.
For a drilled hole the work method is the same and the
same products are used.

Pipe conduits

■ Metal with rock wool

Minimum processing temperature: + 5°C



Products used:

Rock wool
Pattex Power Tape Crystal
Tangit FP 550
Tangit FP 800
Tangit identification plate

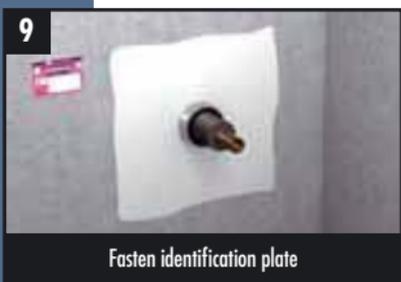
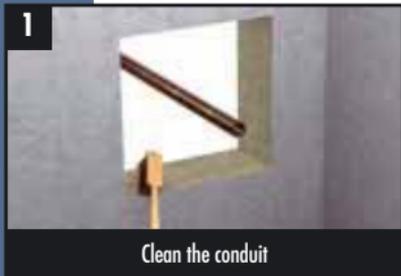
Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

*Rock wool is placed in order to reduce the heat conduction through metal.

Pipe conduits

■ Metal with plastic insulation

Minimum processing temperature: + 5°C



Products used:

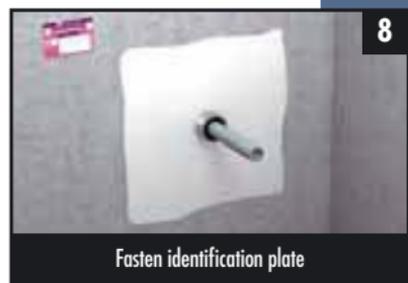
Plastic insulation
BIS Pacifyre® MK II Fire sleeve
Pattex Power Tape Crystal
Tangit FP 550
Tangit FP 800
Tangit & BIS Pacifyre® Identification plate

Important: the above illustrations show a square notch.
For a drilled hole the work method is the same and the same products are used.

Pipe conduits

■ Plastic

Minimum processing temperature: + 5°C



Products used:

BIS Pacifyre® MK II Fire sleeve
Pattex Power Tape Crystal
Tangit FP 500
Tangit FP 800
Tangit & BIS Pacifyre® Identification plate

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

It is possible to apply a Tangit Fire Resistant FP 635 tape around a plastic pipe ($\varnothing \leq 50$ mm) in a drilled hole (notch max. 3 cm): wrap the tape at least 3 revolutions around the pipe and then slide the tape over the pipe into the conduit.

Pipe conduits

■ Multi-layer with plastic insulation

Minimal processing temperature: + 5°C



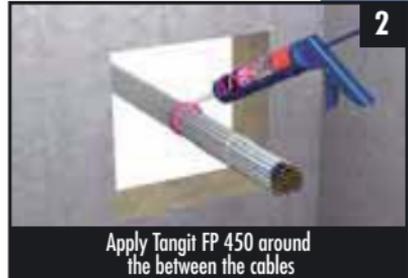
Products used:

Plastic insulation
BIS Pacifyre® MK II Fire sleeve
Pattex Power Tape Crystal
Tangit FP 550
Tangit FP 800
Tangit & BIS Pacifyre® Identification plate
Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

Cable conduits

■ Bundle

Minimal processing temperature: + 5°C



Products used:

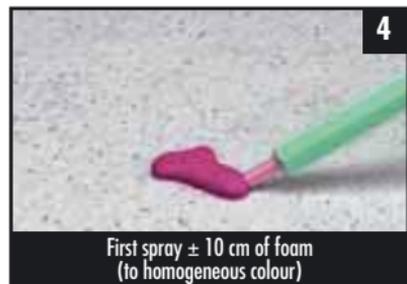
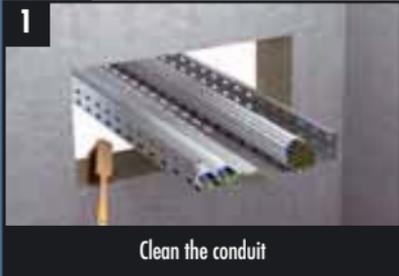
Tangit FP 450
Pattex Power Tape Crystal
Tangit FP 550
Tangit FP 800
Tangit identification plate

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

Cable conduit

■ Cable duct

Minimum processing temperature: + 5°C



Products used:

Tangit FP 450
Pattex Power Tape Crystal
Tangit FP 550
Tangit FP 800
Tangit identification plate

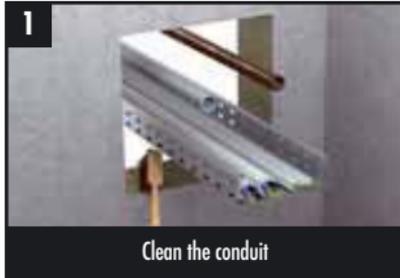
Important: the above illustrations show a square notch.
For a drilled hole the work method is the same and the
same products are used.

Combi conduits

A combined conduit with:

- Cable duct
- Plastic pipe
- Metal pipe with plastic insulation

Minimum processing temperature: + 5°C



Products used:

Plastic insulation
Tangit FP 450
BIS Pacifyre® MK II Fire sleeve
Pattex Power Tape Crystal
Tangit FP 550 / Tangit FP 800
Tangit & BIS identification plate
Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

*Spray first ± 10 cm foam (to homogeneous colour) before grouting the opening.

Ceiling

Hollow conduits

Minimum processing temperature: + 5°C



Products used:

Plasterboard (cover board)
Tangit FP 550
Tangit FP 800
Tangit identification plate

Important: the above illustrations show a square notch.
For a drilled hole the work method is the same and the same products are used.

Pipe conduits

■ Metal with rock wool

Minimum processing temperature: + 5°C



Products used:

Plasterboard cover board
Tangit FP 440
Tangit FP 550
Tangit FP 800
Tangit identification plate

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

*Rock wool is applied in order to reduce heat conduction through the metal.

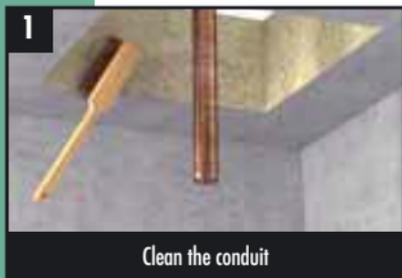
For increased fire-resistance and as cover board for Tangit FP 550.

Ceiling

Pipe conduit

■ Metal with plastic insulation

Minimum processing temperature: + 5°C



Clean the conduit



Apply plastic insulation



Apply BIS Pacifyre® sleeve (see pg. 14)



Screw plasterboard cover plates onto the ceiling



Grout the seams between the plasterboard cover plates and around the sleeve with Tangit FP 440



Spray Tangit FP 550 into the opening



If desired cut away excess foam



Apply Tangit FP 800 coating to the foam with an overlap of 3 cm on the floor



Fasten identification plate

Products used:

Plastic insulation
BIS Pacifyre® MK II Fire sleeve
Plasterboard cover board (cover plate)
Tangit FP 440
Tangit FP 550 / Tangit FP 800
Tangit & BIS Pacifyre® Identification plate

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

For increased fire-resistance and as cover board for Tangit FP 550.

* First spray out ± 10 cm of foam (to homogeneous colour) before grouting the opening.

Pipe conduits

■ Plastic

Minimum processing temperature: + 5°C



Products used:

BIS Pacifyre® MK II Fire sleeve
Plasterboard cover board (cover plate)
Tangit FP 440
Tangit FP 550
Tangit FP 800
Tangit & BIS Pacifyre® Identification plate

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

For increased fire resistance and as a cover board for Tangit FP 550.

* First spray +/- 10 cm foam (to a homogeneous colour), before filling the opening.

** It is possible to apply a Tangit Fire Resistant FP 635 tape around a plastic pipe ($\varnothing \leq 50$ mm) in a drilled hole (notch max. 3 cm): wrap the tape at least 3 revolutions around the pipe and then slide the tape over the pipe into the conduit.

Ceiling

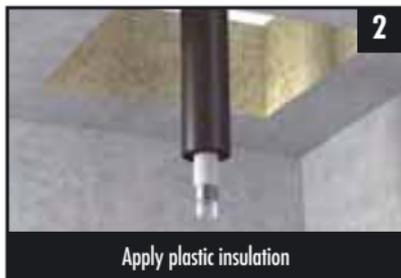
Pipe conduits

■ Multi-layer with plastic insulation

Minimum processing temperature: + 5°C



Clean the conduit



Apply plastic insulation



Apply BIS Pacifyre® sleeve (see pg. 14)



Screw plasterboard plates onto the ceiling



Grout seams between the plasterboard plates and around the sleeve with Tangit FP 440



Spray Tangit FP 550 into the opening



If desired cut away excess foam



Apply Tangit FP 800 coating to the foam with an overlap of 3 cm on the floor



Fasten identification plate

Products used:

Plastic insulation
BIS Pacifyre MK II Fire sleeve
Plasterboard cover plate (cover board)
Tangit FP 440
Tangit 550 / Tangit FP 800

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

For increased fire-resistance and as cover board for Tangit FP 550.

* First spray out ± 10 cm of foam (to homogeneous colour) before grouting the opening.

Cable conduits

■ Bundle

Minimum processing temperature: + 5°C



Products used:

Plasterboard cover plate
Tangit FP 440
Tangit FP 550
Tangit FP 800
Tangit identification plate

Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used.

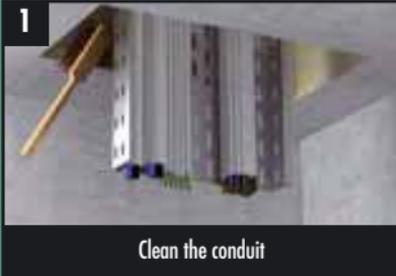
For increased flame retardance and as cover board for Tangit FP 550.

Ceiling

Cable conduits

■ Cable duct

Minimum processing temperature: + 5°C



1 Clean the conduit



2 Apply Tangit FP 450 around the cables



3# Screw plasterboard plates onto the ceiling



4 Grout the seams between the plasterboard plates and around the cable duct with Tangit FP 440



5 First spray ± 10 cm foam (to homogeneous colour)



6 Spray Tangit FP 550 into the opening



7 If desired cut away excess foam



8 Apply FP 800 coating to the foam with an overlap of 3 cm on the floor + 15 cm over the length of the cables and cable duct



9 Fasten the identification plate

Products used:

Plasterboard cover plate (cover board)
Tangit FP 450 / FP 440
Tangit FP 550
Tangit FP 800
Tangit identification plate

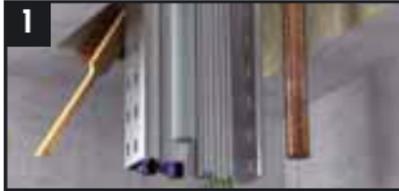
Important: the above illustrations show a square notch. For a drilled hole the work method is the same and the same products are used/

Combi conduits

A combined conduit with:

- Cable duct
- Plastic pipe
- Metal pipe with plastic insulation

Minimum processing temperature: + 5°C



1 Clean the conduit



2 Apply Tangit FP 450 around the cables



3 Apply BIS Pacifyre® sleeve (see pg. 14).
Around ... with insulation



4 Apply BIS Pacifyre® sleeve
(see pg. 14). Around ...



5# Screw the plasterboard cover plates onto the ceiling



6 Grout the seams between the plasterboard cover plates
around the cables, cable duct and pipes with FP 440



7 First spray ± 10 cm of foam
(to homogeneous colour)



8 Spray Tangit FP 550 into the opening



9 If desired cut away excess foam



10 Apply FP 800 coating on the foam with an overlap of 3 cm on the
floor + 15 cm over the length of the cables and cable duct



11 Fasten identification plate

Products used:

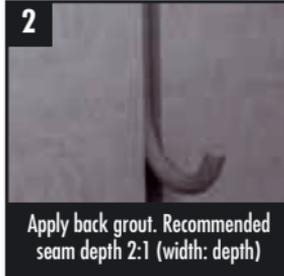
Plastic insulation
BIS Pacifyre® MK II Fire sleeve
Plasterboard cover plate (cover board)
Tangit FP 450 / Tangit FP 440
Tangit FP 550 / Tangit FP 800
Tangit & BIS Pacifyre® Identification plate

Important: the above illustrations show a square notch.
For a drilled hole the work method is the same and the
same products are used.

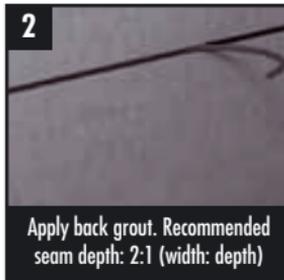
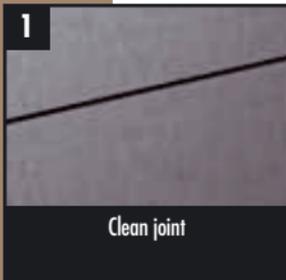
Construction component joints

Horizontal and vertical applications

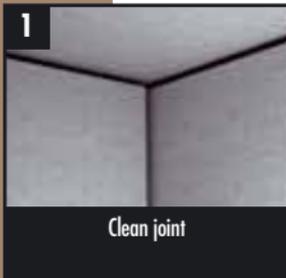
■ Expansion joint



■ Shrink seam joint



■ Wall-floor joint



Tangit FP100 1-c Fire-resistant foam can be used in many ways.
For various designs see the table below.

	Wall thickness	Foam depth	Foam width	Combined with rock wool	Fire resistance
1 st design	≥ 115 mm	≥ 115 mm	10 - 30 mm	X	30 min
2 nd design	≥ 200 mm	≥ 200 mm	10 - 20 mm	X	60 min
3 rd design	≥ 200 mm	≥ 200 mm	21 - 45 mm	X	30 min
4 th design	≥ 115 mm	≥ 55 mm	10 - 45 mm	60 mm	240 min
5 th design	≥ 200 mm	2 x ≥ 70 mm*	10 - 45 mm	60 mm**	240 min

* = interior and exterior

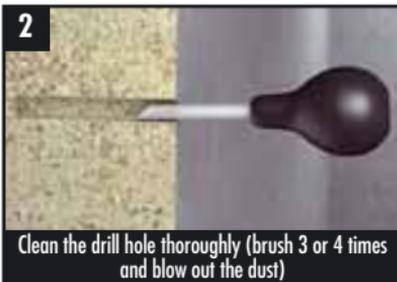
** = core

For good recognisability the colour Magenta is used. For available colours see page 38.

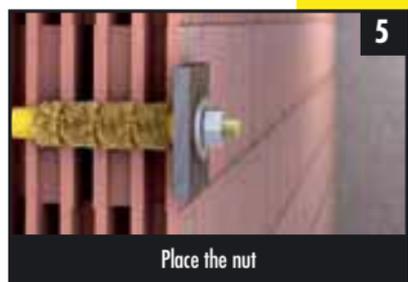
Anchoring

Wall and ceiling applications

■ Solid objects



■ Hollow objects



Tangit & BIS Pacifyre®

System summary



1	2	3	4	5	6	7	
Horizontal conduit with plastic pipe	Horizontal conduit with plastic pipe	Vertical conduit with metal pipe	Vertical conduit with plastic pipe	Horizontal conduit with cable bundle	Horizontal conduit with cables	Horizontal conduit combi	
FP 550 FP 635/ BIS Pacifyre® FP 800	FP 550 FP 800 BIS Pacifyre®	FP 550 FP 800 Steenwol	FP 550 FP 800 BIS Pacifyre®	FP 550 FP 450 FP 800	FP 550 FP 800	FP 550 + FP 800 BIS Pacifyre® rock wool	

Fire resistant systems



8	9	10	11	12	13	14	15
Horizontal conduit with cable duct	Horizontal empty conduit	Vertical conduit with cable duct	Vertical/horizontal shrink seam joint	Vertical/horizontal joint	Vertical flexion joint	Hollow space	Fire resistant chemical anchor
FP 550 FP 450 FP 800	FP 550 FP 800	FP 550 + FP 440 FP 450 FP 800	FP 430	FP 100	FP 410	FP 300	Pattex CF 900

Product summary

BIS Pacifyre® MK II Fire sleeve

A BIS Pacifyre® Fire sleeve is a one-part built-in fire sleeve consisting of a stainless steel mounting bracket with closure tongue. A temperature sensitive intumescent material is applied over the entire surface.



- Fire resistant and smoke proof to 240 minutes
- Consistent with NEN / NBN-EN 1366-3 (2007-Efectis / ISIB)
- Easy to install
- Wide range of uses
- Outstanding acoustic properties

Meet requirements:
NEN/NBN-EN 1366-3
2007-Efectis/ISIB

Application: BIS Pacifyre® MK II Fire sleeve prevents fire and smoke penetration via metal pipes and plastic pipes in conduits, walls and ceilings. Applicable for horizontal, vertical and diagonal pipe positions.

Packaging: 1 unit **Colour:** silver **VE:** 1 x 1 unit

Tangit FP 550 2-c Fire resistant foam

2-component foam for the fire resistant and smoke proof sealing of conduits in walls and ceilings.



- Fire resistant and smoke proof to 90 minutes
- Consistent with NEN / NBN-EN 1366-3 (2007-Efectis/ISIB)
- Surface to 35 cm x 35 cm (1200 cm²)
- Fast hardening: final strength after approx. 20 min., can be cut after approx. 6 min.
- Application with Tangit FP 520/PP6

Meet requirements:
NEN/NBN-EN 1366-3
2007-Efectis/ISIB

Application: For creating fire resistant and smoke proof conduits with pipes (diameter ≤ 140 mm) cable ducts, cables (bundle) to a diameter of 32 mm per cable.

Packaging: 300 ml tube **Colour:** pink **VE:** 6 x 300 ml

Tangit FP 800 Fire resistant coating

In response to heat, intumescent fire resistant and smoke proof coating.



- Fire resistant and smoke proof to 90 minutes
- Consistent with NEN / NBN-EN 1366-3 (2007/Efectis/ISIB)
- Expands under the influence of heat
- Can be plastered or painted

Meet requirements:
NEN/NBN-EN 1366-3
2007-Efectis/ISIB

Application: Fire resistant and intumescent coating for conduits with metal and plastic pipes, cables and cable ducts.

Packaging: pot 1 kg/pail 15 kg **Colour:** white **VE:** 2 x 1 kg / 1 x 15 kg

Product summary

Tangit FP 450 1-c Fire resistant paste

In response to heat, intumescent fire resistant and smoke proof paste.



- Fire resistant and smoke proof to 90 minutes
- Consistent with NEN / NBN-EN 1366-3 (2007-Efectis/ISIB)
- Expands under the influence of heat
- For cables with diameter ≤ 32 mm
- Application with Tangit FP 520/PP6/ traditional cement gun

Meet requirements:
NEN/NBN-EN 1366-3
2007-Efectis/ISIB

Application: Fire resistant and intumescent sealing paste for electrical cables (bundle) and cable ducts in walls and ceilings. Part of the Tangit Fire Resistant system for electrical cable conduits.

Packaging: 300 ml tube **Colour:** pink/brown **VE:** 12 x 300 ml

Tangit FP 440 Fire resistant grout

For fire resistant grouting of seams between plasterboard cover plates around pipe lines, cable bundles and cable ducts in ceilings.



- Fire resistant to 90 minutes
- Consistent with NEN/NBN-EN 1366-3 (2007-Efectis/ISIB)
- Expands under the influence of heat
- Application with Tangit FP 520/PP6/ traditional cement gun

Meet requirements:
NEN/NBN-EN 1366-3
2007-Efectis/ISIB

Application: FP 440 Fire resistant and smoke proof grout is also suitable for sealing small conduits with electrical cables and PVC pipes, as well as cracks, holes and joints in walls and ceilings.

Packaging: 310 ml tube **Colour:** white **VE:** 12 x 310 ml

Tangit FP 635 Fire resistant tape

Epoxy resin tape that expands under the influence of heat.



- Fire resistant to 90 minutes
- Consistent with NEN/NBN-EN 1366-3 (2007-Efectis/ISIB)
- For drilled holes with max. notch 30 mm
- Self-adhesive
- Easy application
- For pipes with a diameter ≤ 50 mm

Meet requirements:
NEN/NBN-EN 1366-3
2007-Efectis/ISIB

Application: For making fire resistant conduits with plastic pipes in walls and ceilings. Only to be used in combination with Tangit FP 550.

Packaging: 2 m x 4 cm x 3,5 mm **Colour:** black **VE:** 2 x 1 unit

Product summary

Tangit FP 410 Fire resistant elastic cement

Fire resistant and smoke proof grouting cement that is intumescent in response to heat.



- 1-Component neutral hardening elastic cement
- Fire resistant to 240 minutes: fire and smoke proof
- Consistent with NEN/NBN-EN 1366-4 (2007-Efectis/ISIB)
- Permanently elastic (including without exposure to fire)
- UV resistant and with long shelf life
- Application with Tangit FP 520/PP6/
traditional cement gun

Meet requirements:
NEN/NBN-EN 1366-4
2007-Efectis/ISIB

Application: Fire resistant and smoke proof elastic cement for grouting flexion joints and structural joints in walls and floors. To be used on such foundations as concrete, aerated concrete, plaster, glass, sandline bricks, metal and masonry work. Use Sista P 800 Primer for optimal adhesion.

Packaging: 300 ml **Colour:** white/grey **VE:** 25 x 300 ml

Tangit FP 430 Fire resistant acrylic cement

Fire resistant and smoke proof grouting cement that is intumescent in response to heat.



- 1-Component foaming acrylic cement
- Fire resistant to 240 minutes: fire and smoke proof
- Consistent with NEN/NBN-EN 1366-4 (2007-Efectis/ISIB)
- Good adhesion to most building materials
- Can be painted
- Application with Tangit FP 520/PP6/
traditional cement gun

Meet requirements:
NEN/NBN-EN 1366-4
2007-Efectis/ISIB

Application: Fire resistant, smoke proof acrylic cement that foams in response to heat for the grouting of joints and shrink seams in walls and ceilings. To be used on such foundations as concrete, aerated concrete, plaster, glass, wood, sandline bricks, metal and masonry work.

Packaging: 300 ml **Colour:** white **VE:** 25 x 300 ml

Product summary

Tangit FP 100 1-c Fire resistant foam

1-Component foam for the fire resistant and smoke proof grouting of such spaces as joints as seams.



- Fire resistant and smoke proof for 60 to 240* minutes
- Consistent with NEN/NBN-EN 1366-4 (2007-Efectis/ISIB)
- Heat and noise insulating
- Foam yield approx. 40 litres/tube
- Application with Ceresit CSP1 Gun

Meet requirements:
NEN/NBN-EN 1366-4
2007-Efectis/ISIB

Application: Fire resistant 1-c PU foam for grouting wall-floor joints, joints between building elements and connections around casings and doors. Also for grouting small openings in walls and other hollow spaces.

* FP 100 1-c Fire resistant foam in connection with rock wool

Packaging: 750 ml tube **Colour:** light green **VE:** 12 x 750 ml

Tangit FP 300 Fire resistant mortar

Cement-based shrink-free fire resistant and smoke proof mortar.



- Fire resistance class: A 1, M60
- Consistent with EN 998-2
- Shrink-free, including on exposure to fire
- Firm, can also be utilised vertically
- Rapid hardening (harder than concrete within one hour)

Application: Fire resistant and smoke proof mortar for grouting areas around sleeves, as well as grouting seams and holes in walls and ceilings.

Meet requirements:
EN 998-2
Klasse A 1, M60

Packaging: 10 kg pail **Colour:** grey **VE:** 1 x 10 kg

Product summary

Tangit FP 520 2-c Gun

2-Component gun for applying such substances as Tangit FP 550 2-c Fire resistant foam.

- For intensive use

Also suitable for applying Tangit FP 450, Tangit FP 440, Tangit FP 430, Tangit FP 410, Pattex CF 900.



Packaging: box containing 1 unit **Colour:** black **VE:** 1 x 1 stuk

Tangit PP6 2-c PP6 2-c Gun

2-Component gun for applying such substances as Tangit FP 550 2-c Fire resistant foam

- For regular use

Also suitable for applying Tangit FP 450, Tangit FP 440, Tangit FP 430, Tangit FP 410, Pattex CF 900.



Packaging: box containing 1 unit **Colour:** anthracite **VE:** 1 x 6 units

Product summary

Ceresit CSP1 Gun

PU gun for applying Tangit FP 100 1-c Fire resistant foam.

Gun can be cleaned with Ceresit TS 36 PU-cleaner.



Packaging: box containing 1 unit **Colour:** black/grey **VE:** 1 x 1 units

Tangit FP 504 Nozzles

To be used as spare nozzles with Tangit FP 550 2-c Fire resistant foam



- For the complete and homogeneous mixing of the 2 components Tangit FP 550

Packaging: bag of 10 units

VE: 4 x 10 units

Pattex Power Tape Crystal



Before grouting a conduit with Tangit FP 550, $\pm 3/4$ of the opening should be covered with Pattex Power Tape Crystal. The tape prevents leakage of the foam through the conduit and also allows neat finishing of the conduit after the tape is removed.

- Adheres perfectly to most surfaces and materials
- 100% watertight
- Can be pulled off manually

Packaging: 20 m roll **VE:** 6 x 20 m

Pattex CF 900 Fire resistant chemical anchor



Vinylester-resin based fire resistant chemical anchor. For anchoring in walls, ceilings and floors.

- 2-Component
- Fire resistant to 120 minutes
- European certification
- Easy to use and easy to dose
- To be used on hollow and solid surfaces
- Styrene-free
- Application with Tangit FP 520/PP6/traditional cement gun

Pattex CF 900 Chemical anchor is suitable for fastening (heavy) objects whereby retaining their functionality is significant. Pattex CF 900 is suitable for such surfaces as solid stone, concrete, porous concrete and lightweight concrete.

Packaging: 300 ml tube **Colour:** grey **VE:** 12 x 300 ml



- ETA-05/0133
- ETA-05/0134
- ETA-05/0135



Product summary



Pattex Mixer nozzles



- For the complete and homogeneous mixture of Pattex CF 900 Chemical anchor



Packaging: bags of 5 units **VE:** 10 x 5 bags

Pattex Injection plugs



- For the perfect spreading of the chemical anchor in hollow materials
- Ensures centring of the anchor post in the drill hole
- Available in 2 formats, suitable for anchor posts:
M8: 13 x 100 mm
M10: 15 x 100 mm



Packaging: bags of 5 units **VE:** 10 x 5 bags

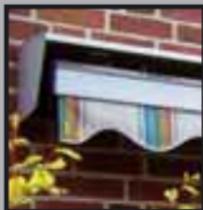
Pattex Anchor posts



- For perfect anchoring in solid materials and hollow materials (in combination with Pattex injection plugs)
- Available in 2 formats:
M8 x 100 mm
M10 x 110 mm



Packaging: bags of 5 units **VE:** 10 x 5 bags



Product guide

Product/realm of application

Wall	PIPES		
	Flammable	Inflammable with rock wool insulation	Inflammable with plastic insulation
			
Tangit FP 550			
Tangit FP 450			
Tangit FP 440			
Tangit FP 800			
BIS Pacifyre® MK II			
Tangit FP 300			
Tangit FP 635**			
Pattex CF 900			
Pattex injection plugs			

Product/realm of application

Ceiling	PIPES*		
	Flammable	Inflammable with rock wool insulation	Inflammable with plastic insulation
			
Tangit FP 550			
Tangit FP 450			
Tangit FP 440			
Tangit FP 800			
BIS Pacifyre® MK II			
Tangit FP 300			
Tangit FP 635**			
Pattex CF 900			
Pattex injection plugs			

 Solution

 Alternative solution for sleeve

 Alternative solution for FP 550 + FP 800

Consumption table

Tangit FP 550 2-c Fire resistant foam (300ml)

Use in number of tubes Tangit FP 550

Conduit	WALL THICKNESS		
	10 cm	15 cm	20 cm
≤ 200 cm ²	0,6	0,9	1,1
400 cm ²	1,1	1,7	2,3
800 cm ²	2,3	3,4	4,6
1200 cm ²	3,4	5,1	6,8

Consumption calculation:

(length conduit (cm) x width conduit (cm) x depth conduit (cm))

1000

/ 3,5 = number of tubes

Tangit FP 635 Fire resistant tape

Use in number of layers Tangit FP 635 (2m x 4cm x 3,5mm)

Pipe diameter	Number of layers
≤ 40 mm	1
≤ 50 mm	2

Tangit FP 430 Fire resistant acrylic cement (300ml)

Number of millilitres Tangit FP 430 per meter

Joint depth	WALL THICKNESS			
	10 mm	15 mm	20 mm	25 mm
5 mm	50 ml	75 ml	100 ml	125 ml
7,5 mm	75 ml	110 ml	150 ml	190 ml
10 mm	100 ml	150 ml	200 ml	250 ml
12,5 mm	125 ml	190 ml	250 ml	310 ml

Recommended ratio 2:1 (joint width: joint depth)

Tangit FP 410 Fire resistant elastic cement (300ml)*Number of millilitres Tangit FP 410 per meter*

	WALL THICKNESS			
Joint depth	10 mm	15 mm	20 mm	25 mm
10 mm	100 ml	150 ml	200 ml	250 ml
15 mm	150 ml	225 ml	300 ml	375 ml
20 mm	200 ml	300 ml	400 ml	500 ml
25 mm	250 ml	375 ml	500 ml	625 ml

Recommended ratio 1:1 (joint width: joint depth)**Tangit FP 100 1-c Fire resistant foam (750ml)***Number of cans Tangit FP 100 per 10 meters joint*

	WALL THICKNESS			
Joint depth	10 mm	20 mm	30 mm	40 mm
50 mm	0,13	0,25	0,4	0,5
70 mm	0,18	0,35	0,53	0,7
100 mm	0,25	0,50	0,75	1
150 mm	0,38	0,75	1,13	1,5
200 mm	0,50	1	1,5	2

Tangit FP 440 Fire resistant elastic cement (310ml)*Number of millilitres Tangit FP 440 per meter*

	WALL THICKNESS			
Joint depth	10 mm	15 mm	20 mm	25 mm
5 mm	50 ml	75 ml	100 ml	125 ml
7,5 mm	75 ml	110 ml	150 ml	190 ml
10 mm	100 ml	150 ml	200 ml	250 ml
12,5 mm	125 ml	190 ml	250 ml	310 ml

Recommended ratio 2:1 (joint width: joint depth)**Tangit FP 450 1-c Fire resistant paste (300ml)***Consumption 100 ml per rail (10 mm x 10 mm) of 1 metre*

Henkel

Quality for Professionals



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