Component system EIFS

Technical specification

A. **Cement Free Fiber Reinforced (glue) for fixing sheets on the wall + Fastener nail**
B. **Expanded Polystyrene (EPS)**
C. **Cement Free Fiber Reinforced**
D. **Glass Fiber Mesh**
E. **Cement Free Fiber Reinforced**
F. **Acrylic Primer under topcoat**
G. **Jatasheild Silk topcoat (flat finishing)**

* Please refer to the relevant technical datasheets for recoating and More infromation

Cement Free Fiber Reinforced

Description
Dry-mix polymer adhesive and base coa
containing Portland cement, and requiring only
water for mixing.

board to expanded polystyrene insulation
board.
• For use with Senerflex, SenturionTM I, II, and III,
Senergy Cement-Board StuccoTM System and
all Senergy Surfacing Systems to embed
CORNER MESH and SENERGY
REINFORCING MESH.

Primary uses

• For use with the Senerflex Wall System to adhere expanded polystyrene insulation board to the following acceptable substrates: SENERSHIELDTM, SENERSHIELD-R, unpainted and unglazed concrete or uni masonry, Dens-Glass Gold (ASTM C1177 Fiberock Aqua-Tough Sheathing, water-resistant core gypsum sheathing (ASTM C79/ASTM C1396), new and untreated Exposure 1 or exterior grade plywood o Exposure 1 OSB, PermaBase cement-board, Wonder Board cement- board, Durock cement-board, Plycem cement-board, Harditex cement-board, and Eterspan cement-board (ASTM C1325 Type A Exterior). Note: Wood-based sheathing substrates require priming with Senerprime.

Packaging

25kg per bag

Coverage

Approximate coverage rates are as follows:

• Adhere EPS insulation board to substrate:
7.2m^2 per bag via notched trowel method
8.1m^2 per bag via ribbon and dab method
• Embed FLEXGUARD 4: 12.2m^2 per bag,
Embed INTERMEDIATE 12: 8.6m^2 per bag,
Embed HI-IMPACT 20 & FLEXGUARD 4:
7.2m^2 per bag
• Adhere EPS insulation board to substrate and embed FLEXGUARD 4: 5.1m^2 per bag

Features	Benefits
Dry, bagged product	Lower cement-to-polymer ratio Reduces the chance for efflores
Does not require heated shipping or storage, just add water to mix	Smooth, creamy consistency
Mix only what you need	Trowels easily, speeds mesh embedment, reduces applicator arm fatigue, increases jobsite productivity
Use for small repairs, reduces dumpster and landfill costs of unit disposal	Water based
	Safe, non-toxic, clean up easily with soap and water

Mixing

• Place contents of each bag in a 19 litre container which is clean and free of foreign

board to ensure uniform contact and high initial grab.

substances.
Do not use a container which has contained or been cleaned with a petroleum-based product.
• Fill the container with approximately 5.6 litres of clean, potable water
• Add ALPHA DRY BASE COAT in small increments, mixing after each addition.
• Mix the contents of the ALPHA DRY BASE COAT unit with a low speed drill and paddle mixer until thoroughly blended.
• Additional ALPHA DRY BASE COAT or water may be added to adjust workability.
• Let stand for 5 minutes, then remix and retemper before use.
• Additives are not permitted.
• Close container when not in use.
• Clean tools with soap and water immediately after use.

Application

To adhere EPS to acceptable substrates or to other EPS:
NOTCHED TROWEL METHOD - Apply mixed ALPHA DRY BASE COAT to entire surface of insulation board using a stainless steel trowel with 13mm x 13mm notches spaced 13mm apart, or 10mm x 10mm notches spaced 10mm apart.
#NAME?
Note: Ribbon & dab method is not recommended on gypsum sheathing substrates or Dens-Glass Gold.
Allow application of insulation board to dry (normally 8 to 10 hours) prior to application of ALPHA dry BASE COAT/REINFORCING MESH.
To adhere EPS to acceptable substrates on Senerflex Channeled Adhesive Design option only: Apply to solid surface of insulation board using a stainless steel trowel with 13mm x 13mm notches spaced 50.8mm apart, with the notches installed vertically [parallel to the 50.8mm dimension]. Allow application of EPS insulation board to dry (normally 8 to 10 hours) prior to application of ALPHA BASE COAT/REINFORCING MESH.
As a Base Coat for embedding Reinforcing Mesh: ALPHA DRY BASE COAT shall be applied so as to achieve Reinforcing Mesh embedment with no Reinforcing Mesh color visible. Ensure Reinforcing mesh is free of wrinkles. Allow ALPHA DRY BASE COAT with embedded Reinforcing Mesh to dry hard (normally 8 to 10 hours) prior to application of Senergy Primer or Finish.

Limitations

• Protect bagged materials from moisture during transportation and storage.
• Store Senergy materials in a cool, dry place. Store at no less than 4°C. Protect from extreme heat and direct sunlight. Shelf life is one year when unopened and stored as directed.
• Do not apply Senergy materials in ambient

& DAB METHOD—Apply a ribbon of mixed ALPHA DRY BASE COAT approximately 50mm wide by 10mm thick to entire perimeter of each board with a trowel. Apply dabs or ribbons of 10mm thickness by 100mm in diameter, approximately 200mm over entire surface of

Technical Data

CAN4-S101-M standard methods of fire endurance tests of building construction & materials:
The Senerflex Wall System with ALPHA DRY BASE COAT satisfied conditions of acceptance.
CAN4-S114 standard test for determination of non-combustibility in building materials:
ALPHA DRY BASE COAT satisfied conditions of acceptance.

Health and Safety

Caution
Contains crystalline silica, Portland cement, calcium carbonate, fly ash, proprietary polymer.
Risk
Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains crystalline silica. NTP and IARC recogniz respirable crystalline silica as a human

temperatures below 4°C. Provide supplementary heat during installation and drying period at least 24 hours after installation and until dry when temperatures less than 4°C prevail.
• Do not apply Senergy materials to frozen surfaces.

First Aid
• For eye contact, flush thoroughly with water for at least 15 minutes.
• For skin contact, wash affected areas with soap and water. If irritation persists, SEEK **MEDICAL**
ATTENTION. Remove and wash contaminated clothing.
• If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed,
SEEK IMMEDIATE MEDICAL ATTENTION.
Read Material Safety Data Sheet before using this product.

Expanded Polystyrene (EPS)

Introduction

Expanded Polystyrene is a polymer impregnated with a foaming agent which, when exposed to steam, creates a uniform closed cell structure highly resistant to heat flow and moisture penetration.

This in-plant expansion process is fused into blocks which are cured for dimensional stability and cut into boards.

Due to its low cost per board foot, EPS is an excellent material for all construction applications.

Adequate Strength

Under normal conditions the compressive strength provided by EPS boards usually exceeds most design requirements. When dictated by load conditions, board densities may be increased to meet allowable working stresses.

Advantages

- Low material and installation cost.
- Easy to handle and apply
- Provides an excellent surface for plastic base.
- Excellent bond with drywall and other panel type adhesives.
- Resists moisture penetration.
- Available in wide range of sizes.
- Available in various densities.
- EIFS approved.

Specifications

Expanded Polystyrene boards meet the product requirements established by current building codes and the fol lowing specifications, Standards and Approvals : EN 1602,En 822, EN 823 ,1607 DIN 4108 , DIN 4102

Availability

EPS foam is available in a wide variety of sizes and densities to accommodate all applications.

Available Sizes

Thickness: 1/2” to 37”
Length: 2’ to 16’
Width: 2” to 72”

Dependable Performance

The foaming agent used in the manufacture of EPS foam is replaced by air during the curing process resulting in uniform, longterm, dependable thermal performance.

EIFS approved.

Glass Fiber Mesh

Reinforcing Mesh

Wide-mesh glass fabric

Reinforcing Mesh is a wide-mesh glass fabric. It is used to reinforce 1 Exterior Basecoat / UBI Exterior Basecoat – white and Joint Filler and Skim Coating – white (exterior ceiling applications only).

Reinforcing Mesh

Material characteristics

Weight/unit area approx. 160 g/m2

Mesh size 5 x 5 mm

Initial tear strength approx. 1500 N/5 cm

Thickness ca. 0.8 mm

Width 100 cm

Length 50 m

Colour light blue

Converge

Approx. 1,10-1,15 m^2 per m^2 plastered surface

Working time

Wall area approx. 3-4 minutes/m^2

Ceiling area approx. 4-5 minutes/m^2

Method of delivery/storage

100 cm wide rolls x 50 m long

30 Rolls / Pallet

Store in a dry place and protect from moisture.

from irregularities. Place reinforcing strips of ubi Reinforcing Mesh approx. 30 x 50 cm diagonally from the corners of all building openings. The strips must start directly from the corners beneath the actual fabric layer. Then embed the Reinforcing Mesh horizontally over the full surface, keeping it free of folds, close to the surface and with 10 cm joint overlaps.

For exterior ceiling application apply ubi Joint Filler and Skim Coating – white at least 3-5 mm thick, spread to achieve a flat surface free from irregularities. Then embed the AQUAPANEL1 Reinforcing Mesh over the full surface, keeping it free of folds, close to the surface and with 10 cm joint overlaps.

For plaster layers < 1 mm thick or for felted surfaces or those to be painted, a 33 cm wide additional reinforcing strip of ubi Exterior Reinforcing Tape is required over the board joints. The ubi Tape (10 cm) can then be omitted.

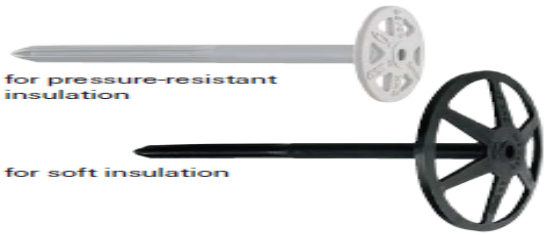
Processing

Apply Exterior Basecoat 5-7 mm thick or ubi Exterior Basecoat – white 4-5 mm, spread to achieve a flat surface free

Insulation support nial

Insulation support DHK

OVERVIEW



Insulation support **DHK 45**, plate-ø 45 mm

Insulation support **DHK**, plate-ø 90 mm

Suitable for:
- Concrete
- Natural stone with dense structure
- Solid brick
- Solid sand-lime brick
- Solid block made from lightweight concrete
- Aircrete
- Vertical perforated brick
- Perforated sand-lime brick

FLUOR CHLOR BROM HALOGENFREE

For fixing of:
Soft and pressure-resistant insulating material, e.g.
- Glass wool
- Rock wool
- Polystyrene
- PU panels
- Foam glass
- Light building boards made of wood wool
- Coir matting
- Cork boards

DESCRIPTION

- Impact-resistant plastic insulation fixing.
- When driven in, the fixing grips the hole walls by means of its rough profile.

Advantages/benefits
- Small min. anchoring depth reduces the amount of drilling.
- Simple and quick hammerset installation saves work.
- Flexible ribs in the disc for continuous pressure of the thermal insulation.
- No buckling of the shank.
- No additional screws or nails.
- Different plate sizes for various applications.
- Due to black colouring the DHK does not stand out on clad insulating material.

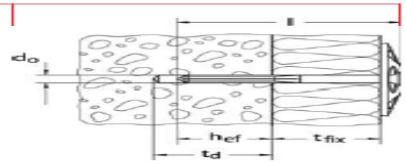
INSTALLATION

Type of installation
- Push-through installation

Installation tips
- Temperature range when installed: - 40° C to + 80° C

TECHNICAL DATA

Type	Art.-No.	ID		drill Ø d_0 [mm]	min. drill-hole depth for through fixings t_d [mm]	effect. anchorage depth h_{ef} [mm]	anchor length l [mm]	max. usable length t_{fix} [mm]	qty. per box pcs.
DHK 40	**80937**	2		8	35	20	65	40	250
DHK 60	**80938**	9		8	35	20	85	60	250
DHK 80	**80939**	6		8	35	20	105	80	250
DHK 100	**80940**	2		8	35	20	125	100	250
DHK 120	**80941**	9		8	35	20	145	120	200
DHK 140	**80949**	5		8	35	20	165	140	200
DHK 45/40	**80892**	4		8	35	20	65	40	250
DHK 45/60	**80893**	1		8	35	20	85	60	250
DHK 45/80	**80894**	8		8	35	20	105	80	250
DHK 45/100	**80895**	5		8	35	20	125	100	250



LOADS

Recommended loads N_{rec} and mean ultimate loads N_u [kN].

Substrate	N_u	N_{rec}
Concrete ≥ C12/15	0.24	0.03
Solid brick Mz 12	0.22	0.03
Solid sand-lime brick KSV 12	0.24	0.03
Perforated sand-lime brick KSL 6	0.20	0.03
Vertical perforated brick HLz 12	0.12	0.02
Aircrete G2	0.13	0.02

fischer FIXING SYSTEMS

FIXING PRINCIPLES

In detail: The general principles for installation, the correct drilling procedure and much more on page 26.

ACRYLIC EMULSION PRIMER

Product description
Acrylic Emulsion Primer is an acrylic copolymer based alkali resistant primer sea

Recommended use
To be used for priming exterior cement plaster and concrete substrates. May be used for internal cement plaster, concrete substrates.

Application data
Mixing ratio (volume) Single pack.
Thinner/Cleaner Water
Guiding data airless spray
Pressure at nozzle 140 - 190 kg./cm^2 (2100 p.s.i.)
Nozzle tip 0.021" - 0.027"
Spray angle 65° - 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
* Relative humidity 70%

Substrate temperature 10°C 23°C 40°C
Surface dry 6 h 3 h 1 h
Through dry 12 h 5 h 3 h
Dry to recoat, minimum 1 6 h 3 h 1 h
Dry to recoat, maximum 2,3
1. Recommended data given for recoating with the same generic type of paint.
2. In case of multi-coat application, drying times will be influenced by the number and sequence and

by the total thickness of previous coats applied – reference is made to the corresponding system

3. The surface should be dry and free from any contamination prior to application of the subsequent coat.
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
Exterior :
Acrylic Emulsion Primer 1 coat
Texo Compound 1 coat
Jotashield, Jotacryl, Durathane or Futura 2 coats

Storage
The product must be stored in accordance with national regulations. The product must be kept in a cool and well-ventilated place, protected from heat and direct sunlight. Containers must be kept tightly closed.

Handling
Handle with care. Stir well before use.
Packing size
1 US G and 5 US G.
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.

Finishing top coat

JOTASHIELD TOPCOAT SILK

Product description

Jotashield Topcoat Silk is a 100% pure acrylic based paint specially formulated to with stand the harsh Middle East climate. The special acrylic binder gives a durable and long lasting silk finish with low dirt pickup. Jotashield's special formulation will also protect against concrete carbonation. It is ideal for decorating and protecting exterior surfaces and specially suited as a maintainence product.

Recommended use

For use on most exterior surfaces onto concrete and cement plaster. Can also be used as topcoat on other emulsion based paints and as a topcoat for textured systems.

Film thickness and spreading rate

Minimum Maximum Typical

Film thickness, dry (µm) 25 35 30

Film thickness, wet (µm) 65 92 80

Theoretical spreading rate

(m^2/l)

15 10,8 12,6

Physical properties

Colour Refer to the Jotashield Exterior Colour fan.

Solids (vol %)* 38 ± 2

*Measured according to ISO 3233:1998 (E)

Surface preparation

The substrate must be sound, clean, dry, free from dust, oil, grease and laitance etc. All traces of release agents must be removed. On chalky and dusty surfaces, all loose material must be removed by stiff bristle brushing.

Other surfaces

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 min. 10°C and min. 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate.

Application methods
Spray Airless or conventional spray.
Brush Recommended.
Roller Recommended.
Application data
Thinner/Cleaner Water
Guiding data airless spray
Pressure at nozzle 140 - 190 kg./cm^2 (2100 p.s.i.)
Nozzle tip 0.021" - 0.027"
Spray angle 65° - 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
* Relative humidity 70%

Substrate temperature	**10°C**	**23°C**	**40°C**
Surface dry	12 h	6 h	2 h
Through dry	16 h	8 h	4 h
Dry to recoat, minimum 1	12 h	6 h	2 h
Dry to recoat, maximum 2,3			

1. Recommended data given for recoating with the same generic type of paint.
2. In case of multi-coat application, drying times will be influenced by the number and sequence and by the total thickness of previous coats applied – reference is made to the corresponding system data sheet.
3. The surface should be dry and free from any contamination prior to application of the subsequent coat.

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

Jotashield Penetrating or Alkali Resistant Primer 1 coat

Jotashield Topcoat Silk 2 coats

If any Block filler is used to rectify imperfections on the substrate, proper sanding followed by a full undiluted coat of Penetrating Sealer must be used before applying any Jotashield Topcoats.

Other systems may be specified, depending on area of use

Test Certificates

Determination of Moisture Vapour Transmission Rate - Performed by Taywood Engineering, UK.

Determination of Carbon Dioxide Diffusion Resistance - Performed by Taywood Engineering, UK.

Determination of Water Absorption - Performed by Taywood Engineering, UK.

Determination of Tensile Strength - Performed by Al Futtaim Tarmac Lab, U.A.E.

Determination of Elongation at Break - Performed by Al Futtaim Tarmac Lab, U.A.E.

Storage

The product must be stored in accordance with national regulations. The product must be kept in a cool and well-ventilated place, protected from heat and direct sunlight. Containers must be kept tightly closed.

Handling

Handle with care. Stir well before use.

Packing size

1 US G and 5 US G.

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.