Performance Paint Systems

ASBESTOS ENCAPSULATION SYSTEM

Background:

Category: Silicate minerals

Optical properties: Biaxial

Asbestos is a set of naturally occurring silicate minerals, which all have in common their eponymous asbestiform habit i.e. long, thin fibrous crystals, with each visible fibre composed of millions of microscopic “fibrils” that can be released by abrasion and other processes.

Warning: It is essential the Asbestos be handled by trained personnel.

Asbestos can pose a health hazard when it is disturbed, and asbestos fibres become airborne where they can be inhaled. Undamaged non-friable asbestos is best left undisturbed and managed in place. If done improperly, removing asbestos has the potential to create a greater health risk than leaving it undisturbed.

Exposure to asbestos can cause severe diseases such as lung cancer or mesothelioma, a rare and very aggressive form of cancer which affects the outer lining of the lungs (the pleura). However, asbestos is dangerous only when airborne fibres are inhaled or ingested.

The most common way for asbestos fibres to enter the body is through breathing. In fact, asbestos containing material is not generally considered to be harmful unless it is releasing dust or fibres into the air where they can be inhaled or ingested. Asbestos is most hazardous when it is friable.

Breathing in air containing asbestos fibres can lead to asbestos-related diseases, mainly cancers of the lungs and chest lining. Asbestos is only a risk to health if asbestos fibres are released into the air and breathed in. Past exposure to asbestos currently kills around 4000 people a year in Great Britain alone.

Any work carried out on asbestos in New Zealand should be done according to Health and Safety at Work (Asbestos) Regulations 2016 (LI 2016/15)

Why choose us:

When designing this Asbestos coating system several systems were considered. Firstly a single high viscosity single coating was evaluated, but this did not give the depth of penetration into the Asbestos fibre required in order to bind the fibres prior to coating. Penetration is a desired property because the polymer will soak into the Asbestos and bind the top layer inside the asbestos sheet or board. This also creates the perfect base for an encapsulation coating of hydrophobic high build coloured polymer. A hydrophobic system was chosen to reduce the likely hood of water entering the system when the system is used as a roof coating

Before you start:

Be sure all appropriate safety precautions are taken and protective breathing equipment is warn and that all regulations are followed according to Health and Safety at Work (Asbestos) Regulations 2016 (LI 2016/15

Be sure the surface of the asbestos is cleaned by the appropriate chemical cleaner and as much moss, mould, lichen, general industrial contamination etc is removed. No abrasive cleaning methods should be used.

It is preferable for the substrate to be as dry as possible, a moisture content below 12% is desirable. Although the water can escape downwards though the sheet excess water will extend the system dry time and make the coating vulnerable to heavy dew or an early shower.

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ASBESTOS ENCAPSULATION SYSTEM

1. Encapsulation Coat is a low viscosity nano particle primer specifically designed to penetrate and bind asbestos. It forms a perfect surface for the Subflex 1000 High Build Base Coat to adhere to. This should be applied at 10-12 square meters per litre.

2. Subflex 1000 is a water based High Build Acrylic finish coat for exterior surfaces. Its unique formulation imparts a high degree of water resistance and elastomeric properties making it an ideal final finish over cementitious substrates including Asbestos systems, concrete blocks and EIFS. The elastomeric properties of Subflex 1000 will help minimize water ingress resulting from small substrate surface cracking. This coating should be applied at 700 microns per coat. Two coats are required to attain a 1mm dry film build required in this system.

3. Hydrophobic Finish Coat is a high gloss and should be applied at 5 square meters per litre to give a film thickness of 200 microns wet film build. The correct film thickness is important as it will impact on the life and effectiveness of the coating. Hydrophobic Finish Coat is available in a variety of colours but its recommended colour is white.

White is recommended along with a high gloss, as this combination reflects the most light to minimise heat build up in the asbestos sheet. Minimising the heating effect reduces the movement (expansion and contraction) of the asbestos and reduces the lapped sheets rubbing together so creating asbestos dust. This coating helps to reduce cooling costs as the white colour reflects the suns heat. Available in White.

Exterior Coating Procedure

1. Clean roof without using abrasion (Quaternary or Sodium Hypochlorite).Remove dead moss and lichen. See TDS.
2. Apply Encapsulation Coat to the Asbestos at specified spread rate.
3. Apply waterbased Epoxy primer to similarly cleaned gutters if asbestos too
4. Apply High Build Subflex 1000 at specified spread rate
5. Apply Hydrophobic Finish Coat at specified spread rate
6. Be sure to chemically wash every year preferably using a quaternary to maintain optimal coating reflective and encapsulation performance. This will insure minimum degradation of the coatings surface from moss and mould.

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Asbestos Exterior Cladding Coating
Data Sheet

Description:

Encapsulation Coat Asbestos Primer, Subflex 1000 High Build Base Coat and Hydrophobic Finish Coat combined together have unique properties ensuring excellent performance on properly prepared asbestos surfaces. **Subflex 1000** unique formulation imparts a high degree of water resistance and elastomeric properties making it an ideal coating to help bind back Asbestos in this system. The special oxide pigments incorporated in **Hydrophobic Finish Coat** provide high UV resistance and gloss retention. **Hydrophobic Finish Coat** also has an in film additive that will help to slow the build up of moss and mould.

Coating Procedure

1. Clean roof without using abrasion (Quaternary or Sodium Hypochlorite)
2. Apply Encapsulation Coat at specified spread rate
3. Apply waterbased Epoxy primer to similarly cleaned gutters if asbestos too
4. Apply Subflex 1000 at specified spread rate
5. Apply Hydrophobic Finish Coat at specified rate
6. Be sure to chemically wash every year preferably using a quaternary to maintain optimal coating reflective performance. There should be no moss or mould on the asbestos prior to coating.

Physical Properties

Encapsulation Coat Asbestos Primer

Resin Type:	Modified Acrylic
Solvent:	Water
Colour:	Clear
Drying time:	2 hours @ 18**°**C
Recoat time:	3 hours @ 18°C
Dry Film Thickness:	80 - 100µ wet
No. of coats:	1
Thinning & Cleaning:	Does not require thinning. Water clean up

Subflex 1000

Resin Type	Acrylic Emulsion
Solvent	Water
Colour	White & Pastels. Dark Colours made to order
Finish	Silk
Drying time	1 hour at 18°C

Recoat time	3 hours
Dry Film Thickness	700µ minimum
No. of coats	2 coats of 700 µ
Theoretical Coverage	1-2m²per litre per coat to attain DFT of 1mm
Primer Needed	Yes, depending on substrate
Thinning & Cleaning	Does not require thinning, wash up with water.

Hydrophobic Finish Coat

Resin Type:	Modified Acrylic
Solvent:	Water
Colour:	White or Grey
Finish:	Available in Gloss only
Drying time:	2 hours @ 18**°**C
Recoat time:	3 hours @ 18°C
Dry Film Thickness:	200µ wet 1 coat
No. of coats:	1
Theoretical Coverage:	5m² per litre to attain 80µ DFT.
Primer Needed:	Yes
Thinning & Cleaning:	Does not require thinning, Water clean up.

Performance:

- Excellent adhesion, water and UV resistance.
- Very good mould resistance.

Limitations:

- Do not apply when temperature is below or expected to fall under 10°C.
- Unsuitable for areas of ponding water.
- Do not apply when rain is forecast within 8 hours of the coatings application

- Where old fixings are rusted a rust converter followed by an oil based rust primer are recommended to prevent further rusting.

Application:

For Best Results:

1. Use airless tip size 0.013” or 0.015” at 1500 to 2000 psi.
2. To achieve even film builds spray apply using the cross hatch method.
4. Do not exceed the recommended wet film thickness.

Substrate Maintenance: When the asbestos coating system has been applied at the specified film thicknesses, correct maintenance of the coating system is required to achieve the minimum 10 year plus life. The coating should be chemically washed for the removal of industrial dirt plus moss and mould annually.

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Encapsulation Coat

Description:

Encapsulation Coat has been specially formulated with a Nano particle size resin. It is designed for use as a sealer for Asbestos Encapsulation, but can also be used as a sealer for substrates such as degraded or porous concrete roof tiles and should be used in conjunction with specified system guide TDS information**. Encapsulation Coat** unique properties ensure even porosity over the whole surface and maximum adhesion for following finishing coats.

Physical Properties

Resin Type:	Modified Acrylic
Solvent:	Water
Colour:	Clear
Finish:	N/A
Drying time:	30 minutes @ 18°c
Recoat time:	60 minutes @ 18°c
Dry Film Thickness:	15 -20µ
No. of coats:	1
Theoretical Coverage:	7m_2 per litre
Primer Needed:	nil
Thinning & Cleaning:	Water

Performance:

- Excellent surface penetration into Asbestos surfaces.
- High adhesion to substrate and following coats
- Fast drying

Limitations:

- Do not apply when temperature is below or expected to fall under 10°C.
- Must not be used as a finish coat on exterior surfaces, or where in direct sunlight. Interior areas exposed to direct sunlight should have a finish coat of Hydrophobic U.V. Finish Coat applied.

Substrate Preparation:

Ensure all surfaces are clean and dust free. If mould and fungus is present use **Roof Wash Moss and Mould Kill.**

Never water blast an Asbestos roof. Water blasting causes Asbestos fibres to be removed into the atmosphere.

Application:

Encapsulation Coat has been formulated for spray application although it may be rolled. Ensure correct quantity is applied to attain recommended DFT and that drying times are adhered to.

Thinning is not recommended.

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High Build Subflex 1000 – Data Sheet

Description:

Subflex 1000 is a water based High Build Acrylic finish coat for exterior surfaces. Its unique formulation imparts a high degree of water resistance and elastomeric properties making it an ideal final finish over cementitious substrates including Asbestos systems, concrete blocks and EIFS. The elastomeric properties of Subflex 1000 will help minimize water ingress resulting from small substrate surface cracking.

Physical Properties

Resin Type	Acrylic Emulsion
Solvent	Water
Colour	White & Pastels. Dark Colours made to order
Finish	Silk
Drying time	1 hour at 18°C
Recoat time	3 hours
Dry Film Thickness	700µ minimum
No. of coats	2 minimum to attain 200µ
Theoretical Coverage	1-2m²per litre per coat to attain DFT of 700µ
Primer Needed	Yes, depending on substrate
Thinning & Cleaning	Does not require thinning, wash up with water.

Performance:

- Very good exterior durability, does not need finishing coat in some situations.
- Excellent crack filling properties.
- Very easy to apply.
- Minimizes mould and fungal growth.

Limitations:

- Do not apply at temperatures less than 10°C or when temperature will fall below 10°C during the drying time.
- Not formulated for ponding water
- Asbestos needs to sealed with Encapsulation Coat.

Substrate Preparation:

Ensure all surfaces are clean and dust free. If mould and fungus use **Roof Wash Moss & Mould Kill.**

Asbestos Surfaces Use **Encapsulation Coat**

Application:

Subflex 1000 may be applied by standard and airless spray, brush and roller.
Ensure that 2 coats are applied at the specified rate.

NB: To ensure complete water resistance on concrete blocks a 3rd coat is recommended. This is to overcome possible regional differences in the quality of the blocks.

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HYDROPHOBIC FINISH COAT

Hydrophobic Finish Coat is a coating that will resist water by the nature of its hydrophobicity. This specialist feature will increase the serviceable life span of the coating. The special oxide pigments incorporated in **Hydrophobic Finish Coat** provide high UV resistance and gloss retention. **Hydrophobic Finish Coat** also has an in film additive that will help to slow the build up of moss and mould.

Hydrophobic Finish Coat

Resin Type:	Modified Acrylic
Solvent:	Water
Colour:	White or Grey
Finish:	Available in Gloss only
Drying time:	2 hours @ 18**°**C
Recoat time:	3 hours @ 18°C
Dry Film Thickness:	200µ wet 1 coat
No. of coats:	1
Theoretical Coverage:	5m² per litre to attain 80µ DFT.
Primer Needed:	Yes
Thinning & Cleaning:	Does not require thinning, Water clean up.

Performance:

- Excellent adhesion, water and UV resistance.
- Very good mould resistance.

Limitations:

- Do not apply when temperature is below or expected to fall under 10°C.
- Unsuitable for areas of ponding water.
- Do not apply when rain is forecast within 8 hours of the coatings application