

RES-TEC

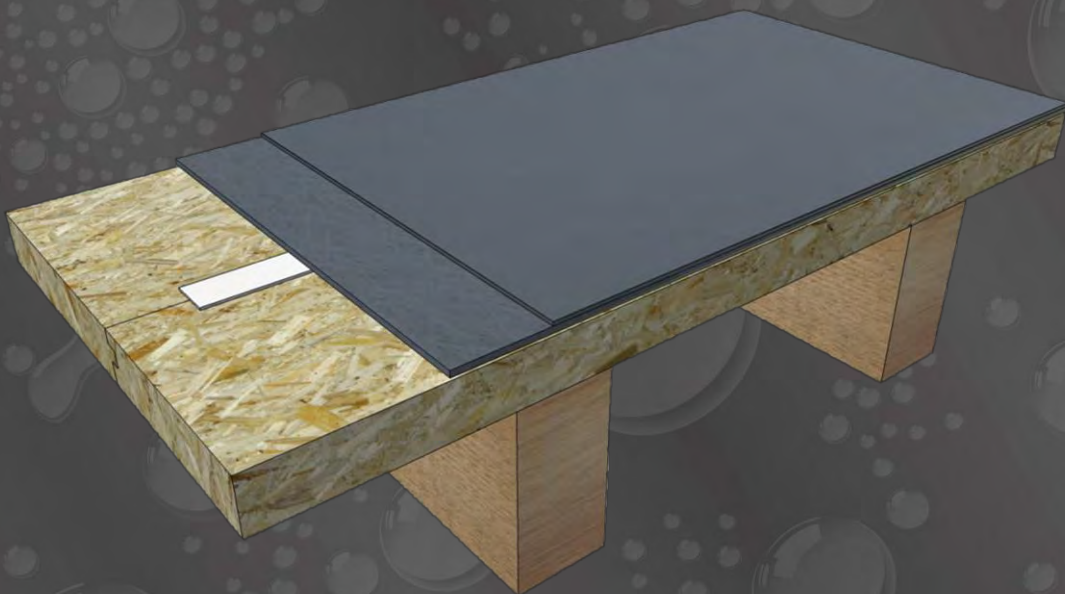
2020

FLEXITEC

Multi-surface GRP roofing system

Generic Specification:

New OSB3 TG4 Deck



overlays
roof surfaces



applies in
low temps



fire
retardant



trusted
guarantee



single resin
system



quality
assured



rapid
installation



made in
the UK

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1. Introduction

The following guideline specification is based on application of the unique, multi-surface Flexitec 2020 GRP roofing system to a new OSB3 TG4 deck. The Flexitec 2020 offers the following important benefits:

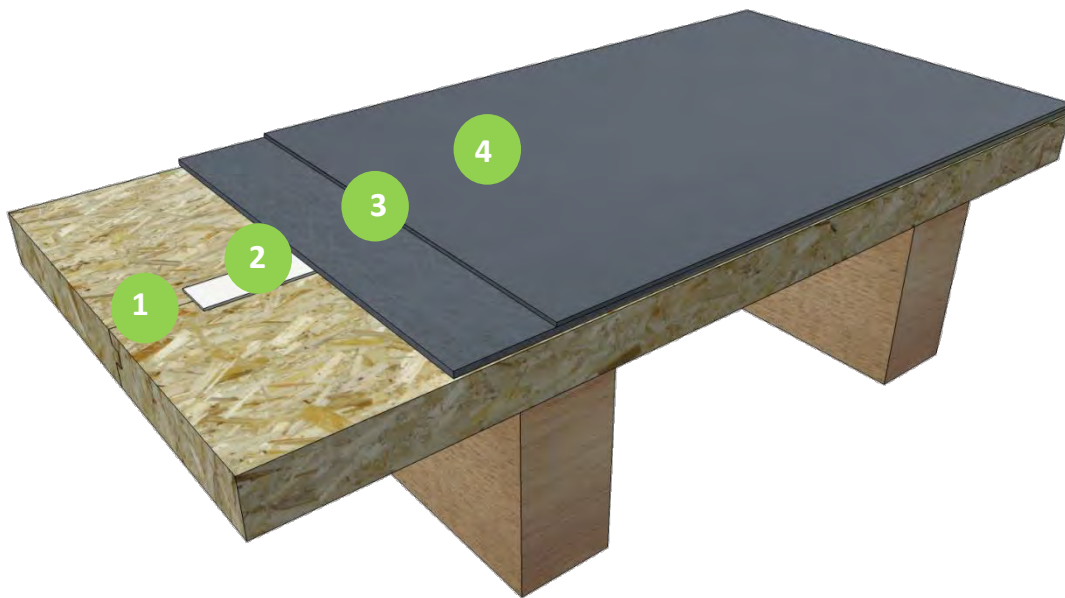
- Similar to GRP fibreglass, Flexitec 2020 is genuinely rapid-curing (30 – 60mins walk-over time) with an extra-tough finish. Similar to liquid overlay systems it's flexible and can coat a range of roof surfaces.
- Can be applied to almost any roof surfaces including felt, asphalt, concrete, GRP, PVC single-ply and metal details
- Single resin system that can be repaired / overcoated without grinding down
- Highly flexible and suitable for any size or shape roof without the need for expansion joints
- Extremely rapid installation with walk-on times of 30-60 minutes
- Uses 225g/m² fibreglass CSM for extra tough membrane that lasts decades
- Installations by trained installers of the two-coat system are supported by Res-Tec's trusted 20 year materials guarantee
- Anti-slip finish available for balconies and walkways
- Cold applied for maximum safety – no risks from open flames and other hot works
- Suitable for application in temperatures as low as 5°C or as high as 30°C
- Totally seamless membrane – no joints, no welds, no weak points
- Manufactured to ISO 9001 and ISO 14001 standards for consistent quality

2. Specification Summary

2.1. Overview

The following proposal is for a new waterproofing system only. The client/specifier should ensure that the performance of the insulation meets the required building regulations standards.

2.1.1. Proposed Construction



1. New OSB3 TG4 fixed in accordance with manufacturer's recommendations
2. Flexitec 2020 Primer applied to joints
3. 1st Coat Flexitec 2020 including 225g/m² CSM reinforcement
4. 2nd Coat Flexitec 2020

NB: Options for anti-slip finishes have been provided in Section 2.4.7

Important - No deviation to the proposed construction or substitution of materials will be permitted unless advanced approval is obtained from Res-Tec Roofing Limited.

2.2. Construction Notes

2.2.1. Preparation

For specific guidance on preparation of substrates please refer to the current application manual issued by Res-Tec Technical Services.

2.2.2. Falls & Drainage

Timber Firrings – Where required firrings are to be installed to create a minimum recommended 1 in 80 design fall using proprietary fixings applicable to the construction and environmental conditions.

NB: Although standing water is not detrimental to the Flexitec 2020 system it could be hazardous to foot traffic in icy conditions.

It has been assumed that the proposed / current drainage capacity is adequate.

2.2.3. Inspection / Removal (Refurbishment Projects)

The existing build up is to be stripped and removed from site.

Or,

The existing build up is to be inspected for defects, made good where required and retained. Any areas that are structurally unsound are to be removed and replaced on a like-for-like basis.

Any Chipboard decks must be removed. This specification assumes that all retained timber work is in good condition and free from any signs of wet/dry rot.

Any lightning conductors are to be temporarily lifted prior to commencing works and then reinstalled upon completion by competent personnel. IMPORTANT – Lightning conductors must not be fixed directly through the new waterproofing membrane.

2.3. OSB3 (TG4) Substrate and Fixing Guidance

2.3.1. OSB3 (TG4) Suitable Grades

Name	Grade	3 rd Party Approval
Smartply Europe Ltd	Smartply OSB 3 / Smartply Roof (OSB 3)	BBA Cert (98/3488)
Norbord Ltd	Smartply OSB 3 / Smartply Roof (OSB 3)	BBA Cert (01/3857)
Kronospan Ltd	Kronospan OSB 3 Board	BBA Cert (07/4498)
Egger	Eurostrand OSB 3 Board	BBA Cert (08/4546)
Norboard NV	Sterling OSB3 - Conti	BBA Cert (10/4802)
Kronofrance SA	Kronoply OSB / 3	BBA Cert (04/4093)

2.3.2. Fixing Schedule

18mm OSB3 (TG4) to Timber Joists

Fixing Type	EJOT TKR Range
Min Penetration into Timber Joists	40mm
Minimum Fixings per Board	20 Nr (2400mm x 600mm board)

NB: All fixings to be capable of withstanding necessary wind uplift pressures and environmental conditions.

2.3.3. OSB3 (TG4) Fixing Guidance

Lay approved boards staggered (brick pattern) with the larger gap in the T&G joint face up (writing side up on most boards). A minimum 20mm expansion gap should be provided at wall abutments.

Approved boards should be fixed at a maximum of 200mm centres (4 fixings across the board width) and into every joist. A minimum of 20 fixings per 2400mm x 600mm board will be required. Fixing heads must always be counter sunk into the decking and to finish flush with the surface. (NB: Do not drive fixings further than 1-2mm below the face of the boards).

IMPORTANT: Expansion trims will be required for any roof area in excess of 50m² or roofs greater than 10m in length. A 20mm allowance should be made in the OSB3 (TG4) board joints at these positions. For expansion trim positions refer to the Appendix.

NB: OSB3 (TG4) boards should be overcoated as soon as possible, ideally the same day. If the boards cannot be waterproofed then they should be suitably protected from the weather at all times to avoid the possibility of becoming wet.

2.4. Flexitec 2020 Application

2.4.1. Overview

The Flexitec 2020 waterproofing system consists of reinforced hybrid polymer resin, cold applied on site by hand lay giving a seamless, joint-free construction. The system should be applied in accordance with the current application manual issued by Res-Tec Ltd.

2.4.2. Weather Considerations

The system should not be applied if the air temperature is outside the range of 5degC - 30degC. The system must not be applied in damp or cold conditions which could cause surface condensation; during frost or if there is a risk of rain.

2.4.3. Primer Coat

OSB3 TG4 Board Joints – Apply by brush catalysed Flexitec 2020 Primer to all board joints ensuring they are flooded with primer resin. Allow to cure.

NB: For priming of any other surfaces please refer to the Flexitec 2020 Application Manual.

2.4.4. Detailing

GRP Trims: GRP edge trims are to be installed at all roof perimeters including exposed edges, wall abutments and at joints to adjacent pitched roofs. Refer to the Flexitec 2020 Application Manual for detailed instructions.

Other Details: To any other details requiring local reinforcement apply Flexitec 2020 Resin and 75mm wide Polymat 450. Allow to cure. NB: Apply 25mm dis-bondment tape to any joints subject to movement prior to application of local reinforcement.

2.4.5. First Coat Application

Apply 1st coat of Flexitec 2020 Resin and 225g/m² Res-Tec CSM reinforcement at a minimum coverage rate of 0.85 Litres/m². Allow to cure.

NB: Please note that all coverage rates are indicative only and it is the contractors' responsibility to ascertain the exact coverage rates on site.

2.4.6. Second Coat Application

Apply 2nd coat of Flexitec 2020 Resin at a minimum coverage rate of 0.5Litres/m² (2.0m²/Litre). Allow to cure.

2.4.7. Anti-Slip Finish (Optional)

Flexitec 2020 is designed to accept pedestrian foot traffic associated with normal maintenance operations; however, optional anti-slip finishes are available as described below:

Anti-slip finishes can be achieved by dispersing grit or chippings into an extra layer of wet Flexitec 2020 Resin applied at a coverage rate of 0.5 Litres/m² (0.7 kg/m²)

When using anti-slip you should mask off areas that are not to be trafficked. These areas could include trims and upstands. In the instance where a maintenance pathway is being formed, you should use masking tape to create the designated walkway area. IMPORTANT – remove masking tape before the third coat of Flexitec 2020 resin has cured.

The most commonly used anti-slip finish is achieved using Mineral Slate Chippings as follows:

- Mask of designated area
- Whilst wet broadcast clean dried mineral slate grit at a minimum coverage rate of 2.5kg/m². Remove masking tape.
- Once the Flexitec 2020 resin has cured remove loose grit.
- Approximate retained grit will be 1.5kg/m² and the remaining grit may be recovered for future use.



Speak to your distributor if alternative anti-slip finishes are required.

2.4.8. Inspection

On completion of each coat check for pinholes / misses and rectify accordingly.

2.4.9. Protection of Finished Membrane

In the event of other trades working on or adjacent to the roof area, the client must make adequate provision to prevent damage to the roofing system, by other trades. Site specifics should be discussed with the Approved Contractor.

2.4.10. Additional Items

Should the client wish to install additional items such as paving slabs or timber decking please consult Res-Tec Ltd prior to the commencement of any project.

NB: Please note that should an inspection of the Flexitec 2020 system ever be required in the future it would be the client's responsibility to remove the additional items back to the membrane.

2.5. Roof Details

Please note site investigation may be required to identify all roof details and to determine the required action to ensure they are left in a fully watertight condition.

Detailing Notes:

- All redundant roof details are to be removed prior to the commencement of works. The roof area underneath is to be made good as required, ensuring that it matches the build-up of the surrounding roof area.
- Roof termination details should have a minimum 150mm upstand height above the finished surface of the roof and should be terminated into a chase or have a suitable cover flashing or weathering flange. Any details where this cannot be achieved will require periodic inspection and maintenance.
- Care should be taken to ensure all roof details are fully prepared and primed in accordance with the Flexitec 2020 Application Manual.

3. Health & Safety

3.1. Risk Assessments / Method Statements

It is the responsibility of the installer to ensure that adequate risk assessments (including COSHH assessments), and method statements are carried out prior to commencement of works.

3.2. Materials Safety Data Sheets

It is the installer's responsibility to ensure that all relevant material safety data sheets are on site at all times. Additional copies of these sheets are available on request from Res-Tec Ltd.

3.3. Solvent Control

Many solvents are subject to Workplace Exposure Limits (WEL) set by environmental legislation. This is the maximum level of solvent in the air usually measured in parts per million to which any individual should be exposed over an 8 hour period.

Tests carried out on site have indicated that neither the operatives fitting our systems, nor people in the building below should experience solvent levels within 10% of the WEL. The installer carrying out the work is obliged to carry out a risk assessment to ensure sensible precautions are taken such as the isolation of air intakes to the building and the avoidance of working within confined spaces which could increase the exposure levels beyond those of our testing.

It should be born in mind that solvent odour is very strong. It takes only a few parts per million within the air to detect the odour. To assure occupants of the building who may be concerned about an unfamiliar smell we advise the pro-active measures of advising that there is a likelihood of the odour being present.

3.4. Solvent Measuring

In sensitive areas it is usually possible to monitor the atmosphere for levels of solvents, and potentially hazardous fumes by using specialist testing equipment. With most products portable site testing equipment may be used that will give an immediate indication of the concentration of specific solvents in the atmosphere. This can show that the appropriate Workplace Exposure Limit is not being exceeded. In rare circumstances the services of specialist industrial hygiene companies may be required.

The installer's risk and COSHH assessments should identify if there is a need for atmospheric monitoring.