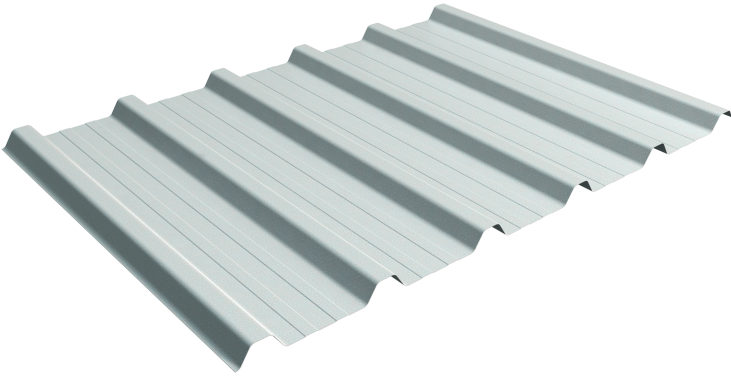

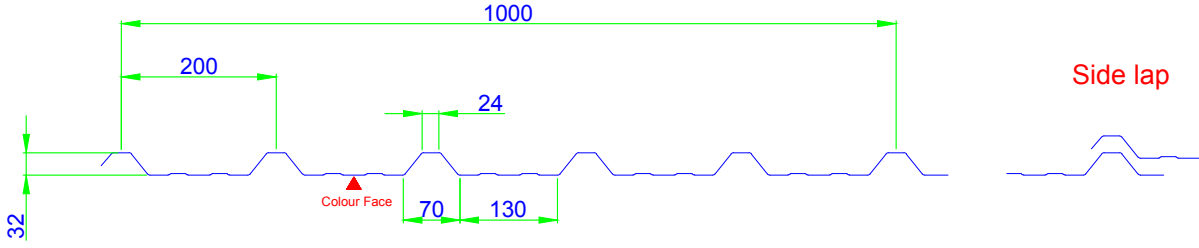


TF32/1000-5-L

Description	
Application	A walkable liner profile for use within twin skin metal roofing and walling. When fully fixed and sealed, TF32/1000-5-L provides the vapour control and air barrier layer. TF32/1000-5-L is non-fragile and walkable, acting as a working platform. For under purlin liner applications refer to Trimform Products.
Profile depth	32mm
Profile cover width	1000mm
Profile pitch	200mm
Nominal profile weight	0.7mm = 6.7kg/m ²
Pack weight	Max 2.0t
Lengths	Minimum length 1.00m Maximum length 10.00m
Curve options	N/A
UKCA reference	TF32/1000-5-L (Roof profile - Trapezoidal): BS EN 14782:2006
	
<p>Direction of lay </p> 	
Materials	<p>Substrate: 0.7mm steel, Class1, S220GD+AZ100</p> <p>Paint finish options: Polyester SP, 20µm, bright white (notionally RAL9010, for internal use only). For other materials such as 0.5mm steel, aluminium, 200µm PVC or double sided PVC, enquire with Trimform Products.</p>

TF32/1000-5-L

Installation

TF32/1000-5-L: liner sheet: fixing guide

Standard fixing positions



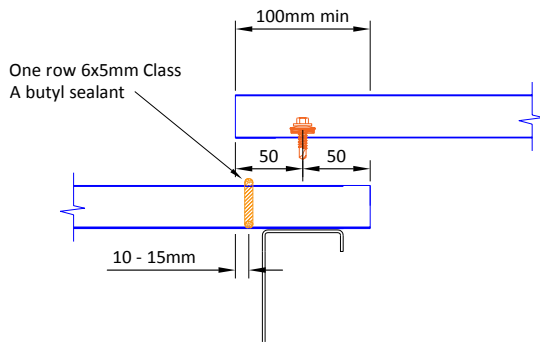
End lap fixing positions



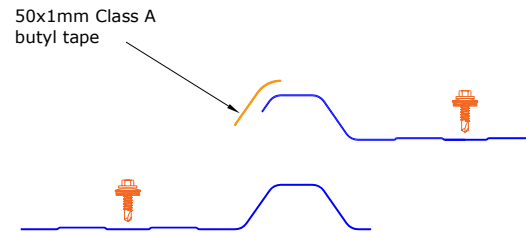
Eaves and ridge fixing positions



End lap - Liner



Side lap - Liner



Laps/Sealants

Roof/ wall:
 End laps: Minimum 100mm, 1 line 5x6mm butyl sealant within end lap.
 Side laps: one full rib overlap, 1 line 50mm x 1mm butyl side lap sealant over side lap.
 Filler blocks: Minimum 25mm thick PEL or EPDM, bedded in gun applied sealant to the top and bottom faces.
 When fully fixed and sealed, TF32/1000-5-L provides the vapour control and air barrier layer. To enable this, laps, perimeters and penetrations need to be robustly sealed.
 Sealant strips should be overlapped by 25mm, avoid stretch of sealant at profiles corners etc.
 Do not use 50mm x 1mm butyl strips for end laps.
 Always apply to dry, clean and grease free surfaces.
 Do not apply in temperatures < 5°C
 Bed filler blocks in sealant to ensure best seal.

Fastener frequency

Roof/ wall:
 End laps and perimeters (ridge/eaves, top/bottom of walls, penetrations): 5No/m (every trough) central to a 100mm end lap.
 Edge distance minimum 30mm.
 Intermediate supports: 5No/m (every trough) or 3No/m, subject to wind load design.
 Side laps: When specified, stitch at max 500mm centres.

Fastener types

A2 stainless steel or carbon steel 5.5mm Ø, 16mm or 19mm Ø sealer washer.
 Stitches: A2 stainless steel or carbon steel 5.5mm or 6.3mm Ø, 16mm Ø sealer washer.
 Minimum embedment to timber 40mm.

Sealant types

End laps: 5 x 6mm Class A butyl, compressed within end lap
 Side laps: 50mm x 1mm butyl side lap sealant, laid over side lap
 Filler blocks: Minimum 25mm thick PEL or EPDM, bedded in gun applied sealant to the top and bottom faces.

TF32/1000-5-L

Delivery	<p>Load direct to roof or store at ground level in a protected area, on bearers (placed above each other), at a slope to drain, under tarpaulin if to be stored for longer than a week.</p> <p>Lift with care (do not drag sheets): <6m- by site telehandler or forklift with tines set apart, 1 pack at a time, >6m by crane using slings (not chains).</p> <p>Load to rafter backs.</p> <p>Inspect packs and record any damage/shortages on delivery paperwork, backed by photos to be sent to Trimform with a report within 48 hours.</p>							
Site work	<p>The installer must comply with current safety and CDM regulations. Guidance is available at www.mcrma.co.uk, CDM2015 tab and Roof Safety tab.</p> <p>Side laps should face away from the prevailing wind</p> <p>Before installation check that the supporting structure is in a fit condition and to an acceptable installation tolerance to receive the roof and wall construction.</p> <p>Fully fix as work proceeds, TF32/1000-5-L is walkable and non-fragile when fixed.</p> <p>Do not over drive fasteners causing washer dishing.</p> <p>Where profiles have to be cut on site:</p> <ul style="list-style-type: none"> • Use a powered nibbler, reciprocating saw or circular saw. Do not use an abrasive wheel. • Support the profile along the line of the cut. • Protect the pre-coated finishes of the profile. • Clean any swarf or debris from the pre-coated finish of the profile immediately. <p>Minor scuffing of the colour coating should not be treated.</p> <p>Deeper scratches which reach the substrate should be repaired with touch-up paint.</p> <p>The touch-up paint should only be applied to the original scratch using a fine paint brush.</p> <p>As touch-up paint will dry to a slightly different colour than the original coating the area which is touched up should be kept as small as possible.</p>							
Performance								
Structural	<p>The loads shown are kN/m², permissible for the profiles at the spans shown (ie load factors are within the tables, compare with unfactored loads).</p> <ul style="list-style-type: none"> • The designer must separately check fastener capacity under negative loads (wind uplift/suction). • Minimum bearing width 40mm. • “Single” = spanning over 2 purlins, “double” = 3 purlins, “multi” = 4 or more purlins. • Avoid single spans wherever possible. • In general, for foot traffic, use crawl boards or additional protection on support centres greater than 1.8 m. • Consider crawl boards or additional protection in all cases where the sheets are single spanning. • For spans exceeding 1.8m refer to Trimform. <p>BS 5427:16: Appendix C.5.6.4: Partial safety factors for limit state design. Load factors included within the load/span tables:</p> <ul style="list-style-type: none"> • Variable loads factor 1.5 • Permanent load factor 1.35 • Accidental load factor 1.0 • Serviceability load factor 1.0 <p>Table 10: Deflection:</p> <ul style="list-style-type: none"> • Roofs – imposed loads- L/200 • Roofs/Walls –wind L/90 							
Section Properties	f_u = 220N/mm²		E = 210kN/mm²		Broad flange in compression		Narrow flange in compression	
	t_N mm	Weight kg/m²	Web crushing R_{w,Rd} kN/m		M_{n,Rd} kNm/m	I_{n,Rd} cm⁴/m	M_{b,Rd} kNm/m	I_{b,Rd} cm⁴/m
	0.7	6.70	10.95		0.974	9.75	0.994	10.48
TF32/1000-5-L: Roof liner 0.7mm steel Positive/imposed downward kN/m²	Span		1.20	1.30	1.40	1.50	1.60	1.70
	Single		3.68	3.14	2.70	2.36	2.06	1.72
	Double		2.59	2.28	2.03	1.81	1.63	1.48
	Multi		3.10	2.74	2.44	2.18	1.97	1.78

TF32/1000-5-L

<p>Non Fragility</p>	<p>ACR[M]001:2015 - Test For Non-Fragility of Large Element Roofing Assemblies [fifth edition] 0.7mm: Class B when screw fixed as described in the Installation section</p>
<p>Durability</p>	<p>Liner grade polyester painted steel will last the lifetime of the building, excluding aggressive or high humidity internal environments. TF32/1000-5-L liner is not suitable for external exposure.</p>
<p>Fire properties</p>	<p>Polyester coated (PE) steel: A1 (CWFT Commission Decision 2010/737/EU table 1) National: notional designation of AA and has a Class 0 or 'low risk' surface as defined in the various national Building Regulations.</p>

TF32/1000-5-L

<p>Safety data</p>	<p>COMPOSITION/INFORMATION ON INGREDIENTS</p> <p>Single skin coated steel profiled sheets products used for roof and wall cladding industrial and commercial buildings. Refer to Trimform and industry standard installation guidance for use. To be used in accordance with industry standard practices, Building Regulations and site RAMS. If any other use is to be considered, please contact Trimform.</p> <p>HAZARDS</p> <ol style="list-style-type: none"> Under normal conditions of storage and when fixed, the products do not constitute a hazard. During the fixing operation or whilst handling, laceration of the skin is possible on the edges of the sections, and if oil is present on the material skin contamination may occur. When breaking open strapping which is used to secure bundles of sections, there is a risk of skin or eye injury. Some components are heavy and injury may result from incorrect lifting or handling. Cutting the product may cause flying swarf, which could injure skin, particularly eyes. When subjected to elevated temperatures, e.g. during welding or flame cutting, fumes containing oxides of iron and zinc may be produced, which can cause metal fume fever if inhaled. This is a short lasting condition with symptoms similar to influenza. If involved in a fire, any plastic components could degrade and generate smoke and fumes, which could be toxic if inhaled. <p>FIRST AID MEASURES</p> <ul style="list-style-type: none"> Inhalation: N/A Skin: Wash with soap and water Eyes: If dust makes contact with eyes, rinse with clean water Ingestion: N/A Other: Seek medical attention if any symptoms persist <p>FIRE-FIGHTING MEASURES</p> <p>These products do not pose a fire hazard. However, packaging, rubber elements and protective coatings may be combustible and emit hazardous fumes. No special fire fighting procedures or extinguishing media's are required to deal with burning products.</p> <p>ACCIDENTAL RELEASE MEASURES</p> <p>Product discarded in an unaltered form is classified as a non-hazardous waste.</p> <p>HANDLING/STORAGE</p> <ol style="list-style-type: none"> Store in a location free from ignition hazard, such as open flames, cutting and welding torches, high surface temperatures, electric heaters and other forms of direct radiant heat. Ensure stability of stack and provide adequate aisle space for access between stacks. Store packs off the ground and on a slope so that should rain water penetrate the wrapping, water will drain away. Support the packs evenly with bearers spaced at 2m. Bearers should always be placed one directly above another. During the fixing operation or whilst handling, laceration of the skin is possible on the edge of the sheet. Product is supplied in heavy bundles and injury may result from incorrect lifting or handling.
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TF32/1000-5-L

	<p>7. Cutting the product may cause flying swarf, which could injure skin, particularly eyes. Cutting can also produce dust, which can cause irritation if inhaled.</p> <p>EXPOSURE CONTROL/PERSONAL PROTECTION</p> <ol style="list-style-type: none"> 1. Protective clothing, particularly gloves, should be worn to avoid skin laceration. 2. Eye and ear protection should be used when cutting. 3. Handling sheets and bundles should be in accordance with HSE recommendations. 4. Do not use flame cutting equipment, blow lamps, or any high temperature equipment or process near the panels. 5. If subject to abnormally high temperatures ensure adequate ventilation. 6. In a fire, breathing apparatus should be worn. <p>PHYSICAL AND CHEMICAL PROPERTIES</p> <p>Coated steel sheets rolled to various profiles. Steel is hot-dip galvanised or Aluzinc coated.</p> <p>STABILITY AND REACTIVITY</p> <p>Stable and un-reactive under normal conditions.</p> <p>TOXICOLOGICAL INFORMATION</p> <p>N/A</p> <p>ECOLOGICAL INFORMATION</p> <p>Non-hazardous product with no known adverse environmental effects.</p> <p>DISPOSAL INFORMATION</p> <p>Dispose at an authorised metal recycling facility in accordance with the Waste Management Licensing Regulations. Observe usual safety precautions with polythene bags, wrapping and packaging. Waste product should be disposed of in accordance with local laws and regulations. Clean, undamaged product may be re-used.</p> <p>TRANSPORT INFORMATION</p> <p>Not classed as hazardous for transportation. Ensure security of load securing straps with edge protectors should be used. It is recommended that mechanical lifting equipment is used when moving bulk quantities</p> <p>REGULATORY INFORMATION</p> <p>N/A</p>
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References		
Reference Standards	<p>BS EN 508-1:2014 BS EN 14782:2006 BS EN 10346: 2015 BS 5427:2016 MCRMA GD 20 Guidance document on serviceability states and deflection criteria</p>	<p>BS EN 1991-1-3:2003+A1:2015 BSEN13501-1:2016 BSEN13501-5:2016 ACR[M]001:2014 :5th Edition. MCRMA Guidance Documents and Design Guides (www.mcrma.co.uk)</p>

TF32/1000-5-L**Trimform Products**

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