
TROVEX DIAMOND SAFE

OVERVIEW AND STRUCTURE

Trovex Diamond Safe is an extruded semi-rigid PVC sheet. It is supplied with a peelable film providing protection throughout installation. The system provides a hygienic, easy to clean and almost maintenance free surface finish. The system has an effective anti-ligature joint system – SafeJoint – to minimise self-harm ability.

Description

Colour:	Over 50 standard colours
Surface Finish:	available Semi-Matt and Gloss
Thickness:	2.5mm
Size:	2440 x 1220 3000 x 1220
Maximum Service Temp:	60°C

Preparation

Surface preparation of walls prior to installation is normally minimal, depending on substrate type/condition. Surfaces must be dry, free of dust, grease, or other contaminants to ensure thorough bonding of the adhesive.

For specific advice, please contact technical services on 01707 254170 or contact a member of the team as found on our website: <https://trovex.com/support-resources/technical-support/>

Base substrate

Sand and cement render 1:3
Plasterboard with plywood underlay
WBP Plywood (minimum 18mm thickness)

Installation

Trovex Diamond Safe can be fixed directly to most substrates using one of the following methods.

1. Trovex Bond 2
A 2 part polyurethane full coverage adhesive for most substrates.
2. Trovex Bond W
A single part, water based full coverage adhesive for porous substrates only.

Cutting

The sheet can be cut with a jigsaw, circular saw, electric nibblers, or fine toothed handsaw.

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Jointing

Trovex SafeJoint Anti-ligature system with colour-matched, hot-welded joint incorporating anti-penetration reinforcement that will withstand sustained attack with a small metal object for over 25 minutes. This makes Trovex SafeJoint the first and only hot-welded joint approved for use in secure environments.

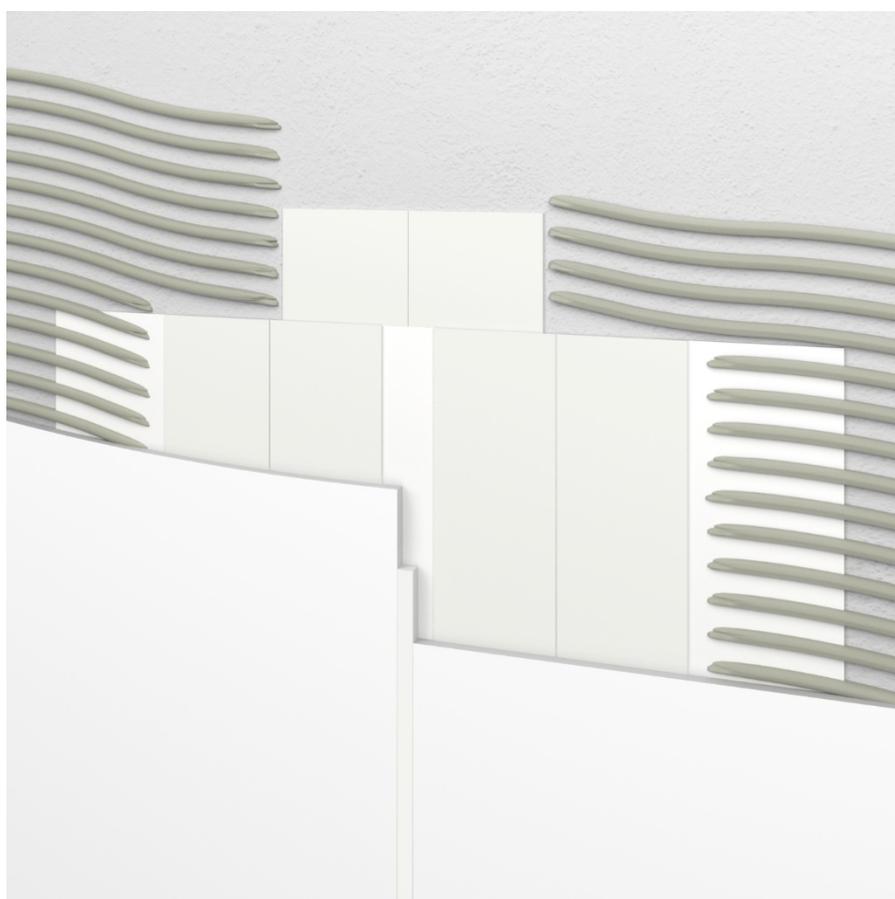


illustration of the SafeJoint system

Tested in accordance with Department of Health Environmental Design Guide, Adult Medium Secure Services (2011), Annexe B: Testing Levels 1, 2, 3 and 4.

Joint must be installed by an approved installer in order to meet the required standards.

Internal / External Corners

Trovex Diamond Safe can be thermoformed on site to ensure internal and external corners, including window and door reveals are neatly clad without an edge joint.

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Maintenance

Regular cleaning with a mild liquid detergent and warm water using a soft, non-abrasive cloth will ensure quality of performance. The sheet is resistant to certain solvent cleaning if necessary. (Trovex IPA Cleaner T309).

A non-abrasive domestic type of cream cleaner can be used for stubborn marks. Do not use abrasive cleaners or pads. **Chemical resistance**

Trovex Diamond Safe has a smooth non-porous surface with dimensional stability and excellent chemical resistance. A full chemical resistance chart is available on request.

Storage and conditioning

Sheets should be stored flat and fully supported.

Leave for 24 hours to attain the ambient room temperature (min 14°C)

Limitations of use

Trovex Diamond Safe has a maximum service temperature of 60°C. For temperatures above this and in all open flame areas, use stainless steel. For advice on the best combinations of materials to use, please contact technical services on 01707 254170 or contact a member of the team as found on our website:

<https://trovex.com/support-resources/technical-support/>

Materials Conformity Declaration

Trovex Diamond Safe conforms to material safety data specified within European Union Directive EC 91/155/EEC.

Fire Resistance and Classification

Trovex Diamond Safe Wall Cladding achieves the following standards.

BS476 Part 7 (Surface Spread of Flame)	Classification 1
BS476 Part 6 (Fire Propagation)	Classification 0
EN150 13501	Classification Bs3d0

Volatile Organic Compound (VOC) Content

Samples of Trovex and adhesive have been tested by Building Research Establishment in accordance with ISO16000-10:2006, report number w12/09/02a. The samples tested were intended to imitate real-life installation and, as such, were wiped with a cleaning agent prior to ponding the panels to plasterboard using Trovex Bond TB300/25 2 component polyurethane adhesive and Trovex Bond TB301/12 single component acrylic adhesive. The results confirm that the VOC content, formaldehyde, and vinyl chloride monomer release are all low or non-existent. Heavy metals are not present and therefore migration of these elements cannot occur.

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Typical Physical Properties

Property	Value	Unit	Standard	Test Method
GENERAL PROPERTIES:				
Density*	1.4	1.4	-	-
MECHANICAL PROPERTIES:				
Tensile Modulus	-	MPa	ISO 527	23°C 1mm/min
Yield stress	35	MPa	ISO 527	23°C 50mm/min
Elongation at Yield	-	%	ISO 527	23°C 50mm/min
Elongation at Break	-	-	ISO 527	23°C 50mm/min
Drop Weight Impact	70	J	ISO 6603-1	A 23oC
THERMAL PROPERTIES:				
VICAT softening Point	75	°C	ISO 306	A/50
HDT	60	-	ISO 75	A, 1.8 MPa
Thermal Expansion	0.0000600	mm / °C	-	-
BURNING BEHAVIOUR:				
Burning Rate	-	-	-	-
Flammability Rating	Class 1	-	BS 476 part 7	1.0 mm and above
Flammability Rating UL	V0	-	-	1.0 mm and above
Flammability Rating	M1	-	Epiradiateur CSTB	1.0 mm and above
Flammability Rating	Bs3d0	-	EN 13823	2.0 mm and above
SURFACE VOLUME:				
MISCELLANEOUS:				
Mould Shrinkage	-	%	-	-
Thermoforming Temperature	80	°C	-	-

* The density quoted should only be used as a guide. This value can change depending upon the type and quantity of pigments or additives used.

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Dimensional Tolerances

Standard tolerances are subject to the local standard tolerance set. Extra tolerance requirements may be possible on request and by special agreement.

Product Modification

Product code nomenclature considers selected primary features of a product. The suffix may indicate a primary additional functionality; however, further multiple modifications are almost always possible and may be agreed upon and specified prior to our technical and commercial offer. Such enhancements are a normal part of our service capability and they do not affect the general characteristics listed in technical data sheets.



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DISCLAIMER:

Suitability for use - Trovex sells PVCU sheet and laminated products. The above information describes the basic features of our products. However, these are largely influenced by their specific application, the application environment, final processing, and the customer's intended usage. We recommend that in each case the suitability of our products for the intended usage is thoroughly listed and evaluated. We do not give any warranty or guarantee for any quality required by a customer or for the usability of our products in any particular customer environment. Trovex will under no circumstance be liable for wear and tear, for damages resulting from disregard of product instructions – including those contained in this technical data sheet – operating instructions, disregard of other instructions, misuse, alteration or unauthorised repairs or processing. All deliveries shall be subject to the Terms and Conditions of Trovex.

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