



**Exposed Roofs with Self-adhering
Sika[®] Single Ply Membranes,
fully bonded**
Refurbishment of old bituminous Roofs



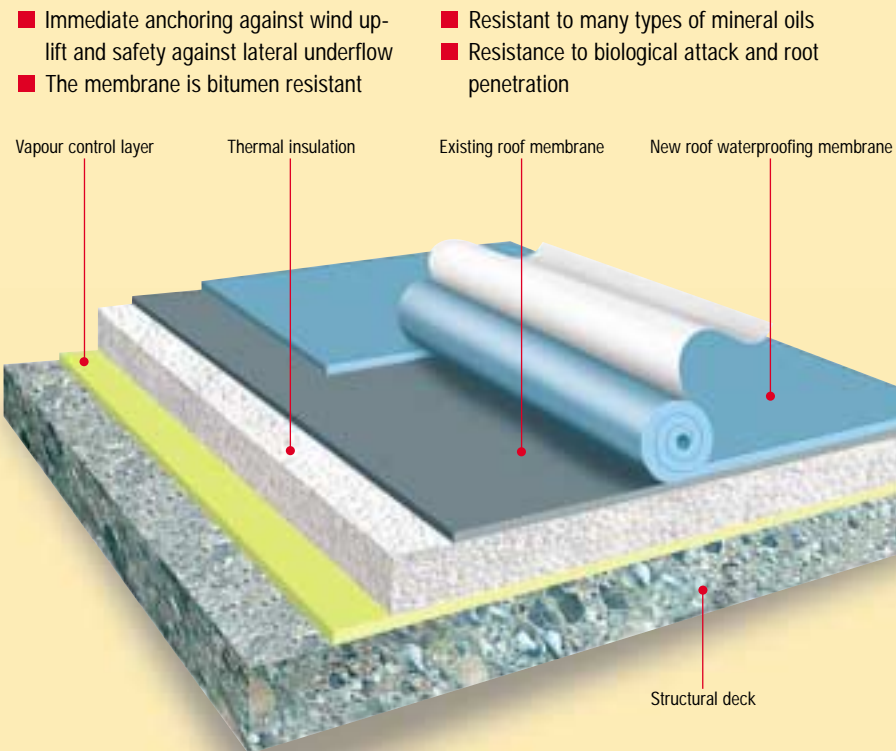
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Continuously bonded System for Refurbishment

Bitumen membranes which have reached the end of their service life are easily refurbished with Trocal® RV-s membranes. Particularly when no additional thermal insulation is required and drilling into the deck is not allowed due to dust, noise or structural reasons, Trocal® RV-s is a very efficient, fast track refurbishment system. Full surface recovering or a patchwork for temporary repairs is possible due to the continuous bond of the integral adhesive without the need for open flames.

Trocal® RV-s

- Produced by calendaring and laminating
- Two-layer PVC waterproofing membrane of 1.5 mm thickness
- 0.7 mm black, UV resistant top layer
- Intermediate glass grid inlay
- Self-adhesive backing for continuous bonding



- Immediate anchoring against wind uplift and safety against lateral underflow
- The membrane is bitumen resistant
- Resistant to many types of mineral oils
- Resistance to biological attack and root penetration



Application of Trocal® RV-s

Positioning and Aligning

The Trocal® RV-s sheet is rolled out on the tacky surface of the primed substrate. The sheet is aligned to the correct seam overlaps. The end of the sheet is then bonded in place as the separating foil is removed from the adhesive film.

Surface Bonding

The roofing sheet is bonded whilst removing the separating foil by pulling it in the direction of the installation. Press the roofing sheet onto the substrate with a brush or roller and it is anchored straight away.

Welding and Detailing

The seam overlaps are welded using automatic hot air machines or solvent cold welding. Butt joints of the sheets must be covered by Trocal® RV straps to ensure continuous waterproofing. Trocal® R homogeneous roofing sheet membrane is used for detailing and reinforcing where necessary. The seam joints must be inspected thoroughly and then Sika-Trocal® liquid PVC type R is used to secure the seams.

Trocal® RV-s black

Sikaplan® Walkway red

Sikaplan® Walkway slate grey

Sikaplan® Walkway grey

Sikaplan® Protection

Sikaplan® Protection DIA

Renovation Technology Experience

Sika's Experience

In developing this modern technology of self-adhesive membranes for refurbishment, Sika has used the experience from the first bitumen resistant PVC sheet for roof waterproofing – Trocal® Rk – launched in 1983. After 12 years of successful use, the formerly polyester fleece-backed membrane for hot bitumen bonding was redesigned and reintroduced as Trocal® RV-s in 1995 for “clean installation” without bitumen or open flames on refurbishment projects.

Approvals

- ISO 9001:2000
- ISO 14001
- Responsible Care

Membrane Performance

The bitumen resistant design of the PVC membrane allows direct contact to bitumen. The self-adhesive film for continuous bonding is supplied as an integral part of the roofing sheet. This membrane provides outstanding resistance to chemical and biological attack.

Self-adhesive Film Performance

- Covered with a separating foil for transport and handling
- No liquid adhesive resin
- Controlled adhesive layer thickness
- Also acts as a cushion for improved resistance to mechanical damage
- No lateral underflow
- Immediate bonding for resistance to wind uplift

Fire Resistance

Trocal® RV-s is self-extinguishing in fire and does not spread burning droplets. Additionally, the low ignition characteristics and its installation without flames greatly reduces the risks of fire during both application and service.

- Germany: DIN 4102 part 1-B2
- Germany: DIN 4102 part 7-ABP
- Switzerland: SIA 183/2-Class 4.1
- Belgium: prEN 1187-1

Additional Approvals

- DIN 16735: External Monitoring
- UEAtc: UBAtc, IAB
- FLL Certificate for Roof Gardens

Refurbishment

Basic Principles

In refurbishment work, the roof build-up under the Trocal® RV-s roof waterproofing membrane should always be checked to ensure that it is properly anchored; this must be by bonding or with sufficient mechanical fixings. Dependent on the substrate, a primer which contains solvents must be applied and the solvents must have fully evaporated to leave a “tacky” surface before the Trocal® RV-s roofing sheet is bonded. To ensure adequate bonding, the outdoor temperature must be at least +5 °C and the substrate must be sound, clean and dry.

Suitable Substrates

For a continuous Bond on different Substrates

With appropriate priming the membrane is suitable for use on:

- In-situ concrete
- Expanded PS board laminated with bitumen sheets
- Mineral fibre board (Rockwool bondrock)
- Foamed glass with bitumen top layer
- Bitumen sheets with mineral surfacing
- Bitumen with stone chips or sand surfacing
- Old bituminous membranes and asphalt

Recovering of an existing single ply membrane may also be possible with this system. However, the condition of the existing membrane must be checked by Sika's Technical Service Department to confirm its suitability for continuous bonding. Generally, additional measures for its

Specialities

renovation will also have to be considered.

Additional Multi-purpose Applications

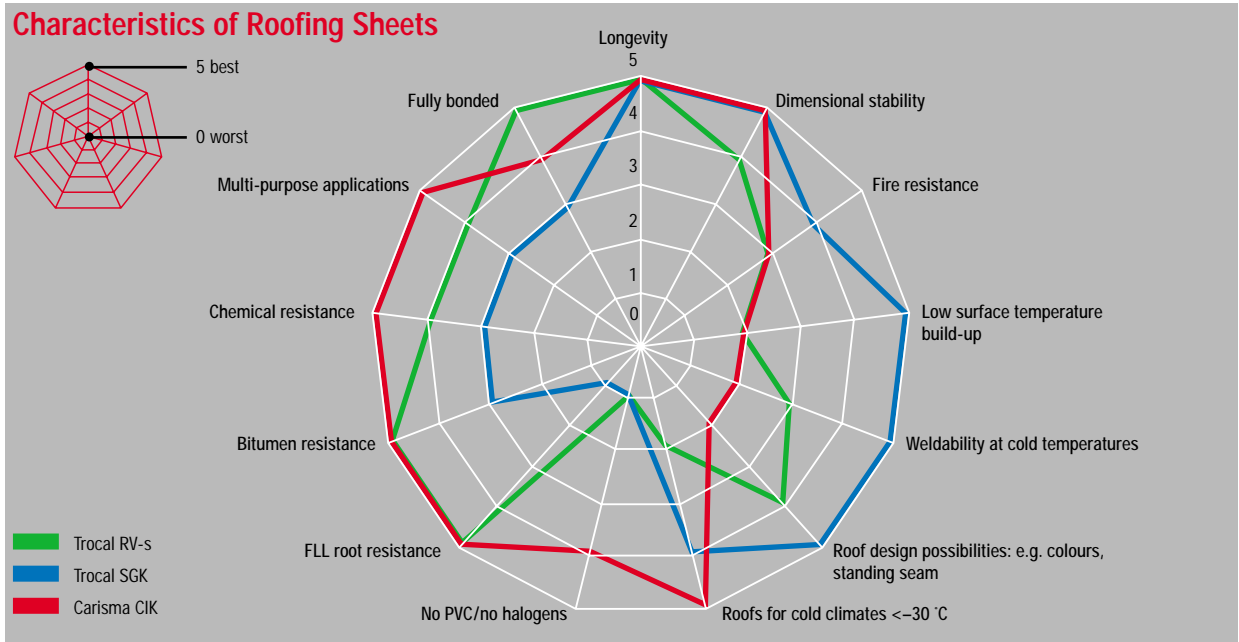
- Additional thermal insulation can be installed
- Later changes to the roof surfacing are possible (e.g. slip resistance/walkways, etc.)
- Can be used in roof gardens for improved water retention
- Can be used with ballast for increased fire resistance
- Can be used for inverted roofs or terraces for energy saving

Sikaplan® Walkway

For “limited access” to the exposed roof surface, Sikaplan® Walkway should be installed on the Trocal® RV-s surface for demarcation and protection of the membrane in the trafficked areas.



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Accessories for Installation

For Installation		For Roof Buildup
Trocal® RV straps for butt joint coverage	Sika-Trocal® CV 705/733 thinners for contact adhesive	Sikaplan® protective layer for protection of waterproofing membrane
Trocal® R homogeneous sheet for detailing	Sika-Trocal® Cleaner 2000 cleaner for hot air welding seam overlaps	Sikaplan® Walkway for protection and demarcation of service walkways
Trocal® prefabricated corners, angles and pipe flashings for detailing	Sika-Trocal® Cleaner L100 cleaner for cold welding seam overlaps	Sika-Trocal® SE profiles for the special effect of standing seam on inclined roofs
Sika-Trocal® laminated metal sheet type R for terminations and junctions	Sika-Trocal® welding solvent for cold welding	
Sika-Trocal® C 733 contact adhesive for up-stands and roof light terminations	Sika-Trocal® liquid PVC type R: PVC solution to seal welded seam overlaps	

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