



DACO-KSU+

Self-Adhesive, SBS Modified Bituminous Underlay with Integrated Safe-Seal Laps

Introduction

DACO-KSU+ is a cold-applied, self-adhesive bituminous underlay which is saturated and coated with high quality SBS (Styrene-Butadiene-Styrene) modified bitumen. It has a tough 200g/m² glass fibre reinforcement and is manufactured with a single layer release film on its underside. In addition, the product features integrated 'safe-seal' lap technology, facilitating secure, safe and efficient sealing of side-laps.

Product Description

DACO-KSU+ is designed for use as a high-performance underlay membrane, and is ideal for use within cold-applied roofing systems. Compatible with a wide range of substrates, the product is typically used within BÖRNER's self-adhesive or torch-safe specifications and is compatible with **DACO-KSO+** self-adhesive cap sheet.

Product Features

- Flame free, self-adhesive application
- Tested as part of a system to achieve Broof Test 4 fire classification as certified by Warringtonfire
- Excellent low temperature flexibility at -25°C
- Tough 200g/m² reinforcement
- SBS modified bitumen
- Versatile, long-lasting material
- Manufactured for exceptional quality using German engineering
- Integrated 'Safe-Seal' laps to enable homogenous, efficient sealing of side laps



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Application Overview

DACO-KSU+ should be installed in accordance with manufacturer recommendations and all relevant national standards and codes of practice, including BS 8217: 2005 – the code of practice for reinforced bitumen membranes for roofing.



Roofing contractors should also be fully conversant with the guidelines set out in the National Federation of Roofing Contractors (NFRC) 'Safe2Torch' campaign. If hot air guns are used during application, operatives should be competent, conversant and capable of using such items in a safe and responsible manner. Care must also be taken when using hot air guns in close proximity to combustible materials, decorative coatings and heat sensitive materials.



Preparation

In order to install the **DACO-KSU+** membrane correctly, ensure that the surface is dry, free of oil, fat and dust and other impurities. All substrates (including thermal insulation) and detailing areas should be primed with **Sprayfix Universal Primer** which has been specially formulated to react with the self-adhesive coating in order to create a strong bond.

We recommend that self-adhesive membranes such as **DACO-KSU+** are rolled into position and allowed to settle prior to their application. The membrane should always be installed with a minimum 80mm joint overlap. Ambient and surface temperatures during the application should be at least + 5°C.

Installing the Membrane

The membrane is applied by pulling off the bottom separating film while simultaneously rolling out the sheet. The release film should be removed by hand and disposed of responsibly to prevent it blowing across the roof.

Any overlapping membrane at a t-joint connection must have a diagonal cut over the width of the overlapping. The diagonal sheet edge must be cut off with a knife at approximately 45°.

During the application of **DACO-KSU+** we recommend using a weighted roll bar or tube in order to help provide a uniform, strong bond. After application, the installed membrane should be rolled again to remove any entrapped air and further consolidate the bond with the substrate

Following the application of **DACO-KSU+** within a multi layered roofing system, a suitable self-adhesive cap sheet (e.g. **DACO-KSO+**) must be installed immediately. If it is not possible to apply the next layer immediately then the overlaps of the **DACO-KSU+** membrane must be thermally activated and pressed down thoroughly. When using the membrane as part of a temporary or provisional roof construction the joint overlap must be thermally activated (e.g. with hot gas or hot air).

Safe-Seal Lap Methodology

The product's 80mm wide side selvedge effectively consists of two key elements: The first 40mm of selvedge (the inner element) features a self-adhesive release film which, once removed, enables the adjacent membrane to be securely bonded without the need for heat – only a pressure roller is required. The outer 40mm of the selvedge is then bonded in a traditional manner using either hot air or naked flame, depending on the type of system being installed.

This 'safe-seal' lap technology not only dramatically reduces the risk of any naked flame or heat penetrating through to a potentially combustible substrate (e.g. insulation), it also allows for more efficient installation as only half of the selvedge needs to be manually welded using a hot air gun or torch.

Any overlaps on the mineral chippings must be sealed with a hot air blow dryer (>3000 W). All joint overlaps should be unrolled with a draw roll.

During installation it is important to ensure that a visible bead of bitumen exudes from all side and end laps. In addition, all end joint overlaps must be at least 10 cm

Chemical Resistance

DACO-KSU+ is water-resistant and is resistant to watery solutions of salt, diluted non-oxidising acids and bases. Aliphatic and aromatic hydrocarbons, as well as chlorine hydrocarbons, oils and greases may loosen the product and should therefore be avoided.

Storage

The performance of self-adhesive membranes can be compromised if they are stored incorrectly. In general terms, self-adhesive membranes should be stored in a cool, dry place and protected from direct sunlight.

The product should never be stored on any roofs where the temperature is expected to drop to 5°C or less. If this is not the case there may be installation issues, with shrinkage / ruckling of the membrane potentially occurring as the temperature rises. It is equally important not to store the rolls in direct sunlight, as this can activate the tack within the self-adhesive coating, making it difficult to remove the release film during application.

The product should also be installed within 3 months of delivery, otherwise the surface must be primed with a suitable primer (please contact BÖRNER for further details).

Health and Safety

Health and Safety should be observed at all times in accordance with HSE and industry guidance. Specific Risk Assessments and Method Statements should be produced by contractors where necessary to ensure Working at Heights, Fire Safety and Manual Handling rules are compliant with current law and regulations. Health and safety data sheets are available for all materials on request from BÖRNER Technical Service Department.

Availability

Product Name	Product Code	Roll Dimensions (m)	Weight (kg/m ²)
DACO-KSU+	TN670473	7.5 x 1.08	4.4

Performance and Key Properties

Properties	Test Method		Declared Performance
Length	DIN EN 1848-1	m	≥ 7.50
Width	DIN EN 1848-1	m	≥ 1.08
Straightness	DIN EN 1848-1	mm/10 m	< 20
Mass per unit area	DIN EN 1849-1	kg/m ²	4.4 (± 5%)
Thickness	DIN EN 1849-1	mm	3.00 (± 0.2)
Water tightness	DIN EN 1928 Method B	-	passed
Tensile properties: maximum tensile force	DIN EN 12311-1	N/50mm	≥ 1000 / 1000
Tensile properties: elongation	DIN EN 12316-1	%	≥ 2/2
Flexibility at low temperatures	DIN EN 1109	° C	≤ - 25
Resistance to thermal distortion	DIN EN 1110	° C	≥ + 100
External fire performance	Fire tested as part of a system in accordance with EN 13501-5 and ENV 1187:2002, Broof Test 4 as certified by Warringtonfire*		
Reaction to fire	DIN EN 11925-2	-	Class E according to DIN EN 13501-1

*As outlined in Warringtonfire Classification Report Nos. 19901D & 19901H

Quality Assurance

DACO-KSU+ is manufactured following ISO 9001: 2008 Quality Management System and Environmental Management System approved to ISO 14001: 2004.

Technical Service and Other Products

Specialist advice and information on other compatible products can be found at <http://www.borner.ie>