

PRODUCT DATA SHEET

Sika Boom[®]-463 Evolution

PU foam - no isocyanate/epoxy training required



DESCRIPTION

Sika Boom[®]-463 Evolution is a white, 1-part, self-expanding, polyurethane foam with very low content of monomeric isocyanates. The combi-valve allows the application by either gun or nozzle. It is free of chlorinated paraffins, plasticizers and halogens. Its low curing pressure and flexibility makes it suitable for window and door frame installation.

USES

The Product is designed for:

- Insulating against cold and draughts
- Filling joints around window and door frames
- Filling around pipes or conduit penetrations
- Insulating and filling cavities and voids

The Product can be used for interior and exterior applications.

CHARACTERISTICS / ADVANTAGES

- No requirement for an DK epoxy/isocyanate course
- Combi-valve for gun or nozzle application
- Flexible
- Low curing pressure
- 1-part ready to use
- Good thermal insulation
- Safety-valve for extended shelf life
- Effective sound dampening
- Can be cut, trimmed, sanded and painted
- No training on safe use of diisocyanates (REACH) required due to very low monomer content

PRODUCT INFORMATION

Composition

Sika[®] Purform[®] polyurethane with a monomeric diisocyanate content of less than 0.1 % by weight. Therefore, users do not require a training on the safe use of diisocyanates according to Commission Regulation (EU)

SUSTAINABILITY

- VOC emission classification GEV-Emicode EC1^{PLUS}
- VOC emission classification of building materials RTS M1
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)
- Conforms with DGNB 2020 Quality Level 1-4 (Product Group No. 38)

APPROVALS / CERTIFICATES

- Joint sound reduction of filling material EN ISO 10140-1, ift Rosenheim, Test report No. 12-001850-PR06
- Thermal conductivity EN 12667, FIW München, Test report No. 12-001850-PR09
- Air permeability DIN 18542, ift Rosenheim, Test report No. 12-001850-PR03
- Water vapour permeability DIN EN ISO 12572, ift Rosenheim, Test report No. 12-001850-PR05
- Reaction to Fire Classification DIN 4102-1, Sika Boom[®]-463 Evolution, MPA Hannover, Report No. P-NDS04-1378

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Packaging	Box content	Canister specification	
	12 canisters per box	500 ml, safety valve	
Colour	white		
Shelf life	18 months from date of production		
Storage conditions	<p>The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +25 °C. Store in an upright position. Protect the canister from direct sunlight and temperatures above +50 °C (danger of exploding). Always refer to packaging.</p> <p>Refer to the current Safety Data Sheet for information on safe handling and storage.</p>		
Density	Cured product	~20 kg/m ³	(FEICA TM 1019)

TECHNICAL INFORMATION

Compressive strength	Gun applied	~2.0 N/cm ²	(FEICA TM 1011)
	Nozzle applied	~2.5 N/cm ²	
Tensile strength	Dry	~10.0 N/cm ²	(FEICA TM 1018)
	Wet	~8.0 N/cm ²	
Elongation at break	Dry, gun applied	~30 %	(FEICA TM 1018)
	Dry, nozzle applied	~35 %	
	Wet, gun applied	~28 %	
	Wet, nozzle applied	~27 %	
Shear strength	Wet	~5.5 N/cm ²	(FEICA TM 1012)
Dimensional stability	Dry	~ ± 5 %	(FEICA TM 1004)
	Wet	~ ± 5 %	
Post expansion	Gun applied	~340 %	(FEICA TM 1010)
	Nozzle applied	~290 %	
Curing pressure	~0.1 N/cm ²		(FEICA TM 1009)
Reaction to fire	Class B2		(DIN 4102-1)
Resistance to UV exposure	Not permanently UV stable		
Diffusion resistance to water vapour	μ = 41		(DIN EN ISO 12572)
Equivalent air layer thickness for water vapour	S _d = 0.9 m		(DIN EN ISO 12572)
Thermal conductivity	λ ₁₀ = 0.035 W·m ⁻¹ ·K ⁻¹		(EN 12667)
Permeability to air	No measurable air flow		(DIN 18542)
Sound insulation	Joint sound reduction, 10 mm joint width	≥ 64 dB	(ISO 10140-2)
	Joint sound reduction, 20 mm joint width	≥ 64 dB	
Service temperature	Minimum	-40 °C	
	Maximum	+60 °C	

APPLICATION INFORMATION

Yield	Foam (box) yield, 500 ml canister, gun applied	~23 L	(FEICA TM 1003)
	Foam (box) yield, 500 ml canister, nozzle applied	~21 L	
	Joint yield, 500 ml canister, gun applied	~19 m	(FEICA TM 1002)
	Joint yield, 500 ml canister, nozzle applied	~20 m	
Material temperature	Optimum	+20 °C	
	Minimum	+5 °C	
	Maximum	+30 °C	
Ambient air temperature	Optimum	+20 °C	
	Minimum	+5 °C	
	Maximum	+30 °C	
Substrate temperature	Optimum	+20 °C	
	Minimum	+5 °C	
	Maximum	+30 °C	
Cutting time	~70 minutes		(FEICA TM 1005)
Tack free time	~14 minutes		(FEICA TM 1014)

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, sound, firm, free from oils, grease, dust and loose or friable particles. Paint, cement laitance and other poorly adhering contaminants must be removed. The Product adheres without primers and/or activators to most building materials such as wood, concrete, brick, metal or aluminium. For non-conventional substrates a preliminary adhesion test is recommended.

APPLICATION

IMPORTANT

The Product does not bond onto polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE / Teflon), and silicone, oil, grease or release agents.

IMPORTANT

Do not use the Product for mechanical or structural fixing purposes.

IMPORTANT

When used for bonding vertical / horizontal building components, they must be supported until the Product has developed sufficient strength.

IMPORTANT

Moisture is necessary to cure the foam. Insufficient moisture may lead to subsequent unintended foam expansion (post-expansion).

NOZZLE APPLICATION

IMPORTANT

Be careful when attaching or removing the nozzle. If pressure is applied to the valve, foam splashes may occur.

1. Pre-dampen the substrate with clean water. This ensures that the foam cures properly and also prevents unwanted foam expansion.
2. Shake the canister well for a minimum 20 times before use. Note: Repeat shaking after long interruptions of use.
3. Remove the cap and the application gun adapter ring from the canister.
4. Screw the nozzle firmly onto the thread of the valve without pressing the trigger or the valve.
5. **IMPORTANT:** To ensure proper flow, hold the canister upside down while dispensing. Dispense the foam by pressing the trigger. Note: The amount of foam extruded can be regulated by applying more or less pressure on the trigger.
6. **IMPORTANT:** Allow each layer to expand and harden sufficiently before pre-dampening with water again for next layer application. Fill deep joints in several layers. Note: Fill voids / cav-

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ities only partially as the foam expands during curing.
Note: Small gaps can be filled using an extension tube, this will however reduce the foam flow rate.

GUN APPLICATION

1. Pre-dampen the substrate with clean water. This ensures that the foam cures properly and also prevents unwanted foam expansion.
2. Shake the canister well for a minimum 20 times before use. Note: Repeat shaking after long interruptions of use.
3. Remove the cap from the canister but leave the application gun adapter ring on the canister.
4. Screw the canister onto the thread of the application gun.
5. **IMPORTANT:** To ensure proper flow, hold the canister upside down while dispensing.
Dispense the foam by pressing the trigger. Note: The amount of foam extruded can be regulated by applying more or less pressure on the trigger or by using the application gun flow-adjustment-screw.
6. **IMPORTANT:** Allow each layer to expand and harden sufficiently before pre-dampening with water again for next layer application.
Fill deep joints in several layers. Note: Fill voids / cavities only partially as the foam expands during curing.
Note: Small gaps can be filled using an extension tube, this will however reduce the foam flow rate.

IMPORTANT

Before removing the canister from the application gun, expend any material left in the canister into a container for safe disposal. Removing the canister without emptying it first may lead to foam splashes.

IMPORTANT

Clean the application gun with Sika Boom® Cleaner directly after use. Removing the canister without thorough cleaning with Sika Boom® Cleaner may damage the application gun.

CLEANING OF EQUIPMENT

1. Clean the application gun by screwing Sika Boom® Cleaner onto the thread of the application gun.
2. **IMPORTANT:** Do not leave the Sika Boom® Cleaner screwed on the application gun, as the valve could be damaged.
Press the trigger to clean it.

Clean any other tools or application equipment with Sika Boom® Cleaner or Sika® Remover-208 immediately after use. Hardened material can only be mechanically removed.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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