

# SEALING & BONDING Sika Boom® CONSTRUCTION FOAMS





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# POLYURETHANE FOAMS

# **POLYURETHANES (PU) ARE A PARTICULARLY** versatile group of polymers used in many different areas of our daily life.

Their biggest global use is as the different forms of polyurethane foam materials and product components, which can be flexible, semi-flexible or rigid; their densities can also vary widely according to use. The vast majority of these materials are out of sight for most of the time, as these foams are used for different types of insulation in the structure, linings and fillings of refrigerators, freezers, furniture, car bodywork and seats, plus in the walls, roofs and other building components. Other polyurethane foam materials are more visible such as those used for packaging, footwear and cleaning sponges for example. Overall, polyurethane foams can therefore be seen to have many different applications and some of their most useful properties relate to insulation, cushioning and their stability of form.

# **FREEZER**



# **AUTOMOTIVE**



**FOOTWEAR** 



**FURNITURE** 



IN THE BUILDING AND CONSTRUCTION INDUSTRY, FOAMS ARE USED FOR ITS LIGHTWEIGHT, DURABLE PROPERTIES IN SEALING, BONDING AS WELL AS THERMAL INSULATION.

# **DOORS AND WINDOWS**



# THERMAL INSULATION



**PENETRATIONS** 



**NOISE REDUCTION** 



# ADVANTAGES OF PU FOAMS FOR CONSTRUCTION INDUSTRY

**THERE ARE SEVERAL GOOD REASONS** why polyurethane foams have become indispensable for the modern building industry. They are fast and easy to apply, they have many different application possibilities and are relatively low cost. They can also provide many other specific advantages in construction:



Polyurethane foams have excellent adhesion to most common building materials including concrete, cement, mortar, render, fibre-cement, masonry, wood, various plastics, and so on. They also provide excellent thermal and acoustic insulation and are resistant to mould growth, moisture penetration, corrosion and rot, plus they generally have high chemical resistance, including resistance to a wide variety of acids and alkalis. As a result, construction professionals and DIY enthusiasts have all found polyurethane foams to be extremely versatile and useful at helping them to insulate, install, assemble, fill, model, protect and isolate in all manner of different applications. Polyurethane foams are usually supplied in aerosol cans that are easy to use and portable e.g. in one step you can fix a window frame into its position, and also seal the gap around it.



# FOAM CLASSIFICATION

**THERE ARE MANY WAYS TO CLASSIFY** PU foams including in terms of: their physical characteristics and performance, their component parts, insulation properties and application possibilities. The following is a summary of where these different types of PU foam are used, not only in the construction industry, but elsewhere. Firstly, an overview of these different types of foams according to their number of components, and then in other ways:

#### **ONE-COMPONENT PU FOAMS**

With one-component foam systems, the chemicals are premixed and when they are applied, the material reacts with moisture in the air and/or the substrate and starts to cure. These PU foams cure inwards from the surface(s) in contact with moisture.

To achieve the optimum foam quality, it is generally recommended to pre-moisten the substrates with clean water before the application. Larger voids should be filled in more than one layer, with clean water sprayed on the surface before every layer. All PU foam types, belong to this group, except 2-component foams.





#### TWO-COMPONENT PU FOAMS

The two-component PU foams are produced in a reaction between what is known as the 'base component' and an usually differently colored 'hardener component', which already contains the water necessary for the curing reaction. A uniform coloured foam shows the success of the mixing process and these materials will cure very quickly and are generally much harder than the one component foams. It is for this reason that two component foams also generally belong to the rigid foams group.

In the construction industry, the hardener is normally supplied as an additional unit, either within the same can or separately packaged. The hardener component may need to be activated and then the two components are mixed and can be applied. The foam must be applied and used within the product's open time, which is usually just a few minutes. Two component foams do not need a wet substrate to react, since all the water required is included in the hardener component.

As previously mentioned above, foams can also be classified in groups according to their characteristics and properties. The following is a subdivision of some of the most important of these additional groups:

# **FLEXIBLE FOAMS**

These PU foams have countless application possibilities and are present almost everywhere in our life. They are widely used for their cushioning and shape recovery properties in furniture and bedding, as well as in and all around our cars,



# FOAM CLASSIFICATION



homes, work and leisure places. Flexible foams are also used in our clothing and accessories, including by the luggage, footwear and textile industries, as well as for cleaning applications. Today, flexible PU sponges have largely replaced natural sponge materials because of their performance capacity and durability, as well as for sustainability of the natural environment.

# RIGID FOAMS

Rigid PU foams are mostly used as insulation products, particularly when temperature insulation is needed, or a high compressive strength is necessary. These materials are produced directly for use as insulation panels, composite or sandwich wall and roof panels, plus as many other different liquids applied foams for insulation in all types of refrigeration and heating appliances and countless other applications in both new construction and building refurbishment works.

In recent years the rigid foam materials have had a strong growth in the construction industry as both an insulation material, but also with the liquid applied materials because of their expanding and rapid curing properties. This means that



rigid foams are also ideal for the fast and secure installation and fixing of window and door frames, etc., where it easily expands and fills the gaps between the frames and the structure, as well as efficiently sealing and insulating all around the frames at the same time.



# **ADHESIVE FOAMS**

To make a building more energy efficient, the most important step is to insulate well against heat and cold. This is usually achieved by installing insulation panels. Adhesive foams are a fast, efficient and economical solution to get this job done. The foams can be used for almost all types of insulation boards made of XPS, EPS, wood fiber or cork. Bonding insulation boards with adhesive foams can be executed almost everywhere, on the roof, below or above the ground, interior and as well as exterior.





# FOAM CHARACTERISTICS

**THERE ARE SEVERAL PERFORMANCE** characteristics to describe and classify or categorise a polyurethane foam and its properties. Some of the most important are outlined below:

#### **FLEXIBILITY**

The flexibilty of the cured foam has an important function on window installation. Large windows are more exposed to the wind and to larger temperature fluctuations than small windows as they are heated in summer and cooled in winter, meaning the frames will expand or contract accordingly. The smaller windows may tolerate rigid foams, however larger windows and any that are installed on the weather-side of the building, will demand that a flexible foam is used to safely accommodate their thermal movement, whilst simultaneously maintaining a secure bond and seal.

#### **YIELD**

This is generally a very important value for every foam, since it means a lot to the customer and is easy to compare. There are foams with a higher expansion rate than others, depending on the total content of isocyanate. Foams using other technologies such as STP/SMP have generally less yield than Polyurethane foams.

Nozzle applied foams will generally have a yield of from 30 to a maximum 35 liters, whilst the yield from gun applied foams can have a wider range of from 35 to a maximum of 50 liters.

# POST EXPANSION

The post expansion volume is the difference in expansion volume from when a foam is freshly applied as a froth until it is cured as a compound. This means, the post expansion and the yield of a foam are two different properties. Foams with a low post expansion usually also have a low curing pressure. The post expansion range possibilities with different foams can be

between 20 and 300%, where nozzle applied foams will generally have a higher post expansion than gun applied foams.

For window and door frame applications we know that a high post expansion together with a high curing pressure should be avoided. This is because it could impart excessive stress and force on the surroundings. Foams with a lower post expansion are predominantly used for window and door frame installations, due to the lower stress they exert on the frames. Low expansion foams do not necessarily have increased flexibility, but frequently they do, yet another reason to be used on window installation for windows.

#### SOUND INSULATION

Polyurethane foams generally have very good sound insulation properties. Conventional PU foams will have a sound insulation value of approximately 57 decibels, whilst special sound insulation foams can provide up to 63 decibels in the same common joint dimensions.

# THERMAL INSULATION

Since PU foams are more or less the same material when hardened as thermal insulation boards, they also have excellent thermal insulation properties. The value of this is approximately 0.04 W/mK.

# **ADHESION**

PU foam adheres well to most common building materials. There are only a very few notable exceptions such as: PP (polypropylene), PE (polyethylene), Teflon® or silicones.





# FOAM APPLICATION

**POLYURETHANE FOAMS HAVE MANY** different applications and over time both the foams and their application techniques have been improved to continually increase ease of use and performance. As previously described, there are many different types of foam and many different methods of application according to the specific requirements.

#### **GAP FILLING FOAMS**

So called standard gap filling, filling foams are used where gaps, voids, joints or holes in a structure must be closed. Typically, these gaps are those around ducts or wall openings for service pipes and other penetrations. The main requirements and advantages are that these foams can be quickly and easily applied, they bond well to most building materials and can be covered by plaster and other finishing's after a short time.

# WINDOW AND DOOR FRAME FIXING FOAMS

For window and door frame fixing, a different type of foam is needed with a lower expansion pressure and more flexibility. The low expansion pressure is required to prevent the frames being bent and damaged under high pressure, so they can no

longer be used. Additionally, and partially due to the increasing trend for larger windows, the requirements for their frame fixing and perimeter joints have also become higher, because more flexibility is necessary whilst still holding the frames firmly in position.

# **ADHESIVE FOAMS**

A modern alternative to traditional adhesives for thermal insulation systems is now adhesive PU foams. This is because they allow clean and fast installation, with excellent bond to various substrates. When using PU foam adhesive for bonding the insulation panels, additional mechanical fixings are also unnecessary.









# SPECIAL TYPES OF FOAMS

#### **ALL SEASON FOAMS**

These foams have been developed for application all over the year as they can be used during temperature range from  $0^{\circ}$ C until +40°C.

#### **COLD WEATHER FOAMS**

Winter grade foams are special grades formulated to ensure they can be applied and expand at temperatures below 0°C. Standard foams tend to be designed for use only above +5°C, but these cold weather grades can be used even down to -20°C and still provide an excellent result.

# **FIRE RETARDANT FOAMS**

Fire retardant foams were developed for filling and sealing joints that are required to have a certain behaviour or reaction to fire. Specific approvals and certification are generally required for fire retardant foams e.g. in accordance with EN 13501-1 (similar to Class B1 according to the earlier German DIN 4102-1).

#### **FIRE RESISTANT FOAMS**

Fire resistant foams are typically used for filling and sealing joints, around fire around fire doors as well as pipe penetra-

tions or ductwork etc., where a specific fire resistance is needed e.g. The products are certified according to the performance reached during fire testing, e.g. fire-resistance class EI240, according to EN 1366-4 / EN 13501-2.

#### MANHOLE FOAMS

The so-called 'manhole foams' were specially created to bond and seal concrete pipe rings used for water pipes, shafts, manholes, etc. Independent testing is required to confirm adequate resistance to water pressure, oils, chemicals and bacteria from the soil.

# **LOW MONOMER FOAM**

Due to increasing EHS regulations, there is also more and more demand for PU foams with a lower content of isocyanate. They have the same performance as PU foams and are used for all type of applications.

#### STP FOAM

In some countries with strict regulations such as Scadinavian countries, these STP foams are very popular. STP foams do not contain isocyanates so they are safer for use by both, professionals and non-professional users.





# REPRESENTATION OF PRODUCT PERFORMANCE



# **USING OFFICIAL TEST METHODS**

FEICA test methods has been approved as CEN standards and published as EN 17333-1 to 17333-5 in the year 2020. Sika only publishes values that have been tested according to the officially designated standard EN 17333. The test methods include product properties such as foam yield, post-expansion, thermal conductivity and many others. These standardised test methods make a comparison of the performance construction foams possible, allowing customers to buy with confidence.







# Sika Boom® PRODUCT COMPARISON

Type of applicatio	Nozzle application												
		Sika Boom°-150 Fix & Fill	Sika Boom®-151 Multiposition	Sika Boom®-152 Foam Fix	Sika Boom®-155 Stone Fix	Sika Boom <sup>®</sup> - 156 2C	Sika Boom®-157 All Seasons	Sika Boom <sup>®</sup> -162 Foam Fix Plus	Sika Boom <sup>®</sup> -163 Evolution	Sika Boom <sup>©</sup> -180 Fix & Fill	Sika Boom®-182 Foam Fix	Sika Boom°-187 All Seasons	
Sealing	Windows & doors	0	0	-	-	X	0	-	X	0	-	0	
	Pipe penetrations	Χ	Χ	-	-	Χ	Χ	-	Χ	Χ	-	Χ	
	Cavities & voids	X	Χ	-	-	Χ	Χ	-	Χ	Χ	-	Χ	
	Hollow spaces	X	Χ	-	-	Χ	Χ	-	Χ	Χ	-	Χ	
	Joints	0	Χ	-	-	Χ	Χ	-	Χ	0	-	Χ	
Bonding	EPS & XPS boards	-	-	Χ	-	-	-	Χ	-	-	Χ	-	
	Cork & wood fibre boards	-	-	Χ	-	-	-	Χ	-	-	Χ	-	
	Mineral wool boards	-	-	Χ	-	-	-	Χ	-	-	Χ	-	
	Plaster & gypsum boards	-	-	Χ	-	-	-	Χ	-	-	X	-	
	Bricks & stones	-	-	-	Χ	-	-	-	-	-	-	-	
Fixing	Bath & shower tubes	-	-	-	-	Χ	-	-	-	-	-	-	
	Door frames without mechanical fastening	-	-	-	-	Χ	-	-	-	-	-	-	
Characteristics	General purpose	Χ	X	-	-	-	-	-	-	Χ	-	Χ	
	Multi-position application	-	Χ	-	-	-	-	-	-	-	-	-	
	Fast curing	-	-	-	-	Χ	-	-	-	-	-	-	
	Solid	-	-	-	-	Χ	-	-	-	-	-	-	
	Wide application temperature range	-	-	-	-	-	Χ	-	-	-	-	Χ	
	Especially user-friendly	-	-	-	-	-	-	-	0	-	-	-	
	Low post expansion	-	-	-	-	-	-	-	-	-	-	-	
	Low curing pressure	-	-	-	-	-	-	-	Χ	-	-	-	
	Very high yield	-	-	-	-	-	-	-	-	-	-	-	
	Highly flexible	-	-	-	-	-	-	-	0	-	-	-	
	Very high bonding strenght	-	_	_	X	_	_	Χ	_	_	_	_	
Special features	Low content of free isocyanates (< 0.1%)	-	_	_	_	_	_	_	X	_	_	_	
opecial reatures	Isocyanate free	-	_	_	_	_	_	_	_	_	_	_	
	Chlorinated paraffin free	X	Χ	_	_	X	X		Χ	_	_	_	
Certificates	Bonding below ground (exterior)	^	_			_	-	X	_				
	Resistance to fire	_	_		_	_	-	_	_	_	_	_	
	Pageris safety valve		X			X			X				
			^	_					^				
	Combi application (gun and nozzle)	X	-	-	-	-	-	-	-	-	-	-	
	EC1plus (emicode)	X	X	X	X	X	X	X	X	-	-	-	
	M1 (emission class)	-	-	-	-	-	X	-	-	-	-	-	
	Class e (reaction to fire - EN 13501-1)	-	-	-	-	-	-	-	X	-	-	-	
	Class B2 (reaction to fire – DIN 4102-1)					X		X					
	Class B1 (reaction to fire - DIN 4102-1)	-	-	-		-	-	-	_		-	-	
	Resistance to fire acc. EN 13501-2	-	-	-	-	-	-	-	-	-	-	-	
	ETA and CE marking	-	-	-	-	-	-	-	-	-	-	-	
Accessories	Cleaner for uncured foam	-	-	-	-	-	-	-	-	-	-	-	
	Application gun	-	-	-	-	-	-	-	-	-	-	-	

X Recommended O Possible application – Do not use

Combi			Gun ap	plication	1												Acceso	ries	
Sika Boom°-400 Fire	Sika Boom®-420 Fire	Sika Boom®-461 Top	Sika Boom®-550 Fix & Fill	Sika Boom®-551 Multiposition	Sika Boom®-552 Foam Fix	Sika Boom®-553 Low EXpansion	Sika Boom®-555 Stone Fix	Sika Boom®-557 All Seasons	Sika Boom®-558 Flex	Sika Boom®-562 Foam Fix Plus	Sika Boom®-580 Fix & Fill	Sika Boom®-582 Foam Fix	Sika Boom®-583 Low Expansion	Sika Boom®-585 Stone Fix	Sika Boom®-587 All Seasons	Sika Boom®-590 High Yield	Sika Boom® G Dispenser	Sika Boom <sup>®</sup> Dispenser	Sika Boom <sup>®</sup> Cleaner
-	Χ	Χ	0	0	-	Χ	-	0	Χ	-	0	-	Χ	-	0	0	-	-	-
-	-	Χ	Χ	Χ	-	Χ	-	Χ	Χ	-	Χ	-	Χ	-	Χ	Χ	-	-	-
-	-		Χ	Χ	-	Χ	-	Χ	Χ	-	Χ	-	Χ	-	Χ	Χ	-	-	-
-	-		Χ	X	-	X	-	X	Χ	-	Χ	-	Χ	-	X	Χ	-	-	-
X	Χ	Χ	0	X	-	X	-	X	Χ	-	0	-	Χ	-	Χ	Χ	-	-	-
-	-	-	-	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-
-	-	-	-	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-
-	-	-	-	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-
-	-	-	-	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-
-	-	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	Χ	X	-	-	-	Χ	-	-	Χ	-	-	-	Χ	Χ	-	-	-
-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	Χ	Χ	-	-	-	-	-	Χ	-	-	-	-
-	-	Χ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	X	-	-	X	-	-	-	X	-	-	-	-	-	-
-	-	Χ	-	-	-	X	-	-	Χ	-	-	-	Χ	-	-	-	-	-	-
-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	Χ	-	-	-
-	-	0	-	-	-	-	-	-	Χ	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	Χ	-	-	X	-	-	-	X	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	Χ	-	_	-	-	-	-	-	_	-	-	-	-	-	-	_	-	-
X	Χ	Χ	Χ	Χ	-	-	-	Χ	Χ	Χ	-	-	-	-	-	-	-	-	_
-	-	-	-	-	-	-	-	-	-	Χ	-	-	-	-	-	-	-	-	-
X	Χ	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-	-
X	Χ	Χ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X	Χ		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Х	Χ		Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	-	-	-	-	-	-	-	-	-
-	X	Χ	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
-	Χ		-	-		-		-	Χ	Χ	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-	-	-
X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X	Χ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Χ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	_	-	-	-	_	-	-	-	_	X
-	-	-	-	_	_	_	_	_	_	_	_	_	_	-	_	-	X	X	-
																	**	**	





# Sika Boom®-150 Fix & Fill

# General purpose PU foam

Sika Boom®-150 Fix & Fill is a nozzle applied self-expanding polyurethane foam, designed for multipurpose use.



# **APPLICATION TYPE**Nozzle

# **USES**

- Filling cavities & voids
- Fixing door & window frames
- Insulating thermal & acoustic
- Sealing gaps & joints Wherever a versatile foam is needed.

# **ADVANTAGES**

- Supplied ready to use
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials
- Cured foam can be cut, trimmed, sanded and painted

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- 500 ml canister, 12 pcs/box
- Light yellow













# Sika Boom®-151 Multiposition

# General purpose PU foam

Sika Boom®-151 Multiposition is a self-expanding polyurethane foam. Unlike other foams, its special formulation allows the application in any position of the canister.



# **APPLICATION TYPE**Nozzle

#### **USES**

- Filling cavities & voids
- Sealing gaps & joints
  Places that are difficult to
  access, where the canister
  cannot be hold upside down for
  application.

# **ADVANTAGES**

- Multi-positioning (applicable at any angle)
- Safety-valve for extended shelf life
- Does not contain chlorinated paraffins
- Easy application with nozzle
- Good adhesion to many construction materials
- Good thermal and acoustic insulation
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow















# Sika Boom®-152 Foam Fix

# PU foam for bonding insulation boards

Sika Boom®-152 Foam Fix is a nozzle applied polyurethane foam adhesive, for bonding insulation boards.



# **APPLICATION TYPE**Nozzle

# **USES**

Interior and exterior bonding of insulation boards made of:

- Plaster & Gypsum
- XPS (Extruded polystyrene)
- EPS (Expanded polystyrene)
- Wood fibre
- Fibrocement

#### **ADVANTAGES**

- Good adhesion to many construction materials
- Moisture resistant when
- Good thermal insulation
- Easy application with nozzle
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow













# Sika Boom®-155 Stone Fix

# PU foam for bonding bricks and stones

Sika Boom®-155 Stone Fix is a nozzle applied polyurethane foam adhesive, for bonding of porous substrates such as grinded bricks, natural stones and aerated concrete blocks, etc., to form non-load-bearing walls.



# **APPLICATION TYPE**Nozzle

# **USES**Bonding of porous substrates

- Bricks
- Lime stones
- Natural stone blocks
- Aerated concrete blocks

Interior and exterior bonding to form

- Walls for privacy protection
- Retaining and protective walls
- Room partition walls

# **ADVANTAGES**

- Very good adhesion to many porous construction materi-
- High adhesive strength
- Moisture resistant when cured

- Fast curing
- Easy application with nozzle
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Grey













# Sika Boom®-156 2C

# Solid, fast curing, 2-part PU foam for fixing purposes

Sika Boom®-156 2C is a 2-part PU foam that cures fast and results in a solid foam, what allows interior doors installation without additional fastening. It can also be used for fixing all kinds pipes, penetrations, etc.

# **APPLICATION TYPE**

Nozzle

#### **USES**

- Filling cavities & voids
- Fixing door & window frames Wherever a solid and fast curing foam is required.

#### **ADVANTAGES**

- Very fast curing
- Safety-valve for extended shelf life
- High stability when cured
- Good adhesion to many construction materials
- Good thermal and acoustic insulation
- Supplied ready to mix with integrated activator

# **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup> (very low emissions)
- Reaction to fire class B2 (DIN 4102-1)

# **STANDARDS**

■ Tested according to EN 17333

- 400 ml canister, 12 pcs/box
- Light blue

















# Sika Boom®-157 All Seasons

# PU foam for all seasons

Sika Boom®-157 All Seasons is a polyurethane, self-expanding foam usable in a temperature range from -10°C to +40°C



# **APPLICATION TYPE**Nozzle

# **USES**

- Filling cavities & voids
- Fixing door & window frames Usable in every season of the year.

# **ADVANTAGES**

- Wide temperature range of application (-10°C to +40°C)
- Does not contain chlorinated paraffins or halogens
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials

# **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup> (very low emissions)
- M1 emission class for building materials

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- 500 ml canister, 12 pcs/box
- 250 ml canister, 20 pcs/box
- Light yellow















# Sika Boom®-162 Foam Fix Plus

# PU foam for bonding insulation boards

Sika Boom®-162 Foam Fix Plus is a nozzle applied polyurethane foam adhesive, for bonding insulation boards above and below ground.



# **APPLICATION TYPE**Nozzle

# **USES**

Interior and exterior, above and below ground bonding of insulation boards made of:

- Plaster & Gypsum
- XPS (Extruded polystyrene)
- EPS (Expanded polystyrene)
- Wood fibre
- Fibrocement

#### **ADVANTAGES**

- Good adhesion to many construction materials
- Very high adhesive strength
- Moisture resistant when cured
- Good thermal insulation
- Easy application with nozzle
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup> (very low emissions)
- Reaction to fire class B2 (DIN 4102-1)

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow















# Sika Boom®-163 Evolution

# PU foam with very low content of monomeric isocyanates

Sika Boom®-163 Evolution is a new generation of PU foam technology with very low content of monomeric isocyanates. Its low curing pressure and flexibility makes it suitable for window and door frame installation.

# **APPLICATION TYPE**Nozzle

#### **USES**

- Thermal & acoustic insulation
- Sealing joints around door & window frames
- Filling cavities & voids Wherever a user-friendly foam is required!

#### **ADVANTAGES**

- Very low content of monomeric isocyanates (< 0.1 %)
- Free of chlorinated paraffins, plasticizers and halogens
- Low curing pressure
- Flexible
- Safety-valve for extended shelf life
- Excellent thermal and acoustic insulation

#### **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

- Conforms to DGNB Quality Level 4 (2018)
- Class A+ (Emission dans l'air interieur, France)
- Reaction to fire class E (EN 13501-1)

# **STANDARDS**

■ Tested according to EN 17333

- 500 ml canister, 12 pcs/box
- White





















# Sika Boom®-180 Fix & Fill

# General purpose PU foam

Sika Boom®-180 Fix & Fill is a nozzle applied self-expanding polyurethane foam, designed for multipurpose use.



# **APPLICATION TYPE**Nozzle

# USES

- Filling cavities & voids
- Fixing door & window frames
- Insulating thermal & acoustic
- Sealing gaps & joints Wherever a versatile foam is needed.

# **ADVANTAGES**

- Supplied ready to use
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials
- Cured foam can be cut, trimmed, sanded and painted

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- 500 ml canister, 12 pcs/box
- Light yellow











# Sika Boom®-182 Foam Fix

# PU foam for bonding insulation boards

Sika Boom®-182 Foam Fix is a nozzle applied polyurethane foam adhesive, for bonding insulation boards.



# **APPLICATION TYPE**Nozzle

# **USES**

Interior and exterior bonding of insulation boards made of:

- Plaster & Gypsum
- XPS (Extruded polystyrene)
- EPS (Expanded polystyrene)
- Wood fibre
- Fibrocement

# **ADVANTAGES**

- Good adhesion to many construction materials
- Moisture resistant when
- Good thermal insulation
- Easy application with nozzle
- Supplied ready to use

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Purple











# Sika Boom®-187 All Seasons

# PU foam for all seasons

Sika Boom®-187 All Seasons is a polyurethane, self-expanding foam usable in a temperature range from -10°C to +35°C.



# **APPLICATION TYPE**Nozzle

# USES

- Filling cavities & voids
- Fixing door & window frames Usable in every season of the year.

# **ADVANTAGES**

- Wide temperature range of application (-10°C to +35°C)
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- 500 ml canister, 12 pcs/box
- Light yellow











# Sika Boom®-400 Fire

# Fire resistant expansion foam for linear seals

Sika Boom®-400 Fire is a 1-part, polyurethane self-expanding foam which meets the highest fire resistance class, El 240 according to EN 1366-4 / EN 13501-2. The combi canister packaging allows the application by either gun or nozzle.



# **APPLICATION TYPE**

Nozzle & application gun

#### USES

■ Joints in fire compartment

#### **ADVANTAGES**

- Can be used with straw or application gun
- Up to 4 hours fire resistance
- Highest fire resistance class EI240, according to EN 1366-4 / EN 13501-2
- No need for secondary insulation / materials like mineral wool, acrylic or paint
- For joints 10 45 mm wide and 100 – 200 mm deep
- Safety-valve for extended shelf life

# **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup> (very low emissions)
- EN 13501-2
- EN 1366-4
- Reaction to fire class B1 (DIN 4102-1)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Red

















# Sika Boom®-420 Fire

# Fire resistant expansion foam with CE marking for linear seals

Sika Boom®-420 Fire is a 1-part, fire resistant, polyurethane self-expanding polyurethane foam, which meets fire resistance requirements up to 180 minutes according to EN 1366-4 / EN 13501-2. The combi canister packaging allows the application by either gun or nozzle.



# APPLICATION TYPE

Nozzle & application gun

#### USES

Joints in fire compartment walls

# **ADVANTAGES**

- Can be used with straw or application gun
- Fire resistance up to 180 minutes according to EN 1366-4 / EN 13501-2

- CE marked based on ETA
- Safety-valve for extended shelf life

# **APPROVALS / CERTIFICATES**

- EN 1366-4
- EN 13501-2
- ETA 19/0796
- M1 classification
- AS 1530.4 Assessment
- AS 1530.4 RIR
- AS 1530.4 CoA
- Reaction to fire class E (EN 13501-1)

# STANDARDS

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Dod

















# Sika Boom®-461 Top

# Isocyanate free expanding foam

Sika Boom®-461 Top is a next generation expanding foam, free of isocyanates and also chlorinated paraffins and plasticizers. Therefore, it is very user-friendly. The combi canister packaging allows the application by either gun or nozzle.

# APPLICATION TYPE

Nozzle & application gun

#### USES

- Sealing joints around door & window frames
- Thermal & acoustic insula-
- Filling any kinds of gaps

Wherever a very user-friendly foam is required.

# **ADVANTAGES**

- Free isocyanates, chlorinated paraffins, plasticizers and halogens
- Combi canister packaging allows gun and nozzle application
- Low curing pressure
- Soft & flexible
- Safety-valve for extended shelf life
- Excellent thermal and acoustic insulation

# **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup>
  (very low emissions)
- M1 emission class for building materials

# **STANDARDS**

■ Tested according to EN 17333

- 500 ml canister, 12 pcs/box
- White



















# Sika Boom®-550 Fix & Fill

# Professional general purpose PU foam

Sika Boom®-550 Fix & Fill is a gun applied self-expanding polyurethane foam, designed for multipurpose use.



# **APPLICATION TYPE**Application gun

# **USES**

- Filling cavities & voids
- Fixing door & window frames
- Insulating thermal & acoustic
- Sealing gaps & joints Wherever a versatile foam is needed.

# **ADVANTAGES**

- Supplied ready to use
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials
- Cured foam can be cut, trimmed, sanded and painted

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow













# Sika Boom®-551 Multiposition

# Multi-positioning professional PU foam

Sika Boom®-551 Multiposition is a self-expanding polyurethane foam. Its special formulation allows the application in any position of the canister.



# **APPLICATION TYPE**Application gun

# **USES**

- Filling cavities & voids
- Sealing gaps & joints
  Places that are difficult to
  access, where the canister
  cannot be hold upside down for
  application.

# **ADVANTAGES**

- Multi-positioning (applicable at any angle)
- Does not contain chlorinated paraffins or halogens
- Professional application with application gun
- Good adhesion to many construction materials
- Good thermal and acoustic insulation
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow















# Sika Boom®-552 Foam Fix

# Professional PU foam for bonding insulation boards

Sika Boom®-552 Foam Fix is a gun applied polyurethane foam adhesive, for bonding insulation boards.



# **APPLICATION TYPE**Application gun

# **USES**

Interior and exterior bonding of insulation boards made of:

- Plaster & Gypsum
- XPS (Extruded polystyrene)
- EPS (Expanded polystyrene)
- Wood fibre
- Fibrocement

#### **ADVANTAGES**

- Good adhesion to many construction materials
- Moisture resistant when
- Good thermal insulation
- Professional application with application gun
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow













# Sika Boom®-553 Low Expansion

Low post expansion foam with high yield

Sika Boom®-553 Low Expansion is a gun applied self-expanding polyurethane foam. It is ideal for filling joints around window and door frames.



# **APPLICATION TYPE**Application gun

# **USES**

- Sealing joints around door and window frames
- Thermal and acoustic insulation
- Filling gaps and voids

Wherever a door frame can only be exposed to low curing pressure.

# **ADVANTAGES**

- Low post-expansion
- Low curing pressure
- Very high yield
- Supplied ready to use
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials
- Professional application with application gun

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow















# Sika Boom®-555 Stone Fix

# Professional PU foam for bonding bricks and stones

Sika Boom®-555 Stone Fix is a gun applied polyurethane foam adhesive, for bonding of porous substrates such as grinded bricks, natural stones and aerated concrete blocks, etc., to form non-load-bearing walls.



# **APPLICATION TYPE**Application gun

#### USES

Bonding of porous substrates such as

- Bricks
- Lime stones
- Natural stone blocks
- Aerated concrete blocks Interior and exterior bonding to form
- Walls for privacy protection
- Retaining and protective walls
- Room partition walls

# **ADVANTAGES**

- Very good adhesion to many porous construction materials
- High adhesive strength
- Moisture resistant when
- Fast curing
- Professional application with application gun
- Supplied ready to use
- Professional application with application gun
- Supplied ready to use

# **APPROVALS / CERTIFICATES**

■ Emicode EC1<sup>plus</sup> (very low emissions)

# **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Grev













### Sika Boom®-557 All Seasons

#### Professional PU foam for all seasons

Sika Boom®-557 All Seasons is a polyurethane, self-expanding foam usable in a temperature range from -10°C to +40°C.



# **APPLICATION TYPE**Application gun

#### USES

- Filling cavities & voids
- Fixing door & window frames

Usable in every season of the year.

#### **ADVANTAGES**

- Wide temperature range of application (-10°C to +40°C)
- Does not contain chlorinated paraffins or halogens
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials

#### **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup>
  (very low emissions)
- M1 emission class for building materials

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow















#### Sika Boom®-558 Flex

### Flexible PU foam with low post expansion

Sika Boom®-558 Flex is a flexible PU foam It is designed for sealing joints around window and door frames, as it has a low post expansion as well as a low curing pressure. Due to its flexibility it can withstand large movements in joints.



#### **APPLICATION TYPE** Application gun

#### **USES**

- Joints in the building envelope, such as:
- Sealing gaps around door and window frames
- Filling joints and voids in and around any building components

Wherever high movement of the joint is expected.

#### **ADVANTAGES**

- Flexible
- Low curing pressure
- Low post-expansion
- No chlorinated paraffins
- Excellent thermal and acoustic insulation
- Professional application with application gun
- Good adhesion to many construction materials
- Wide temperature range of application (-10°C to +35°C)

EN 17333

#### **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup> (very low emissions)
- Reaction to fire class E (EN 13501-1)

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow / blue























#### Sika Boom®-562 Foam Fix Plus

### Professional PU foam for bonding insulation boards

Sika Boom®-562 Foam Fix Plus is a gun applied polyurethane foam adhesive, for bonding insulation boards above and below ground.



# **APPLICATION TYPE**Application gun

#### USES

Interior and exterior, above and below ground bonding of insulation boards made of:

- Plaster & Gypsum
- XPS (Extruded polystyrene)
- EPS (Expanded polystyrene)
- Wood fibre
- Fibrocement

#### **ADVANTAGES**

- Good adhesion to many construction materials
- Very high adhesive strength
- Moisture resistant when cured
- Good thermal insulation
- Professional application with application gun
- Supplied ready to use

#### **APPROVALS / CERTIFICATES**

- Emicode EC1<sup>plus</sup>
  (very low emissions)
- Reaction to fire class E (EN 13501-1)
- Reaction to fire class B2 (DIN 4102-1)

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow















#### Sika Boom®-580 Fix & Fill

### Professional general purpose PU foam

Sika Boom®-580 Fix & Fill is a gun applied self-expanding polyurethane foam, designed for multipurpose use.



# **APPLICATION TYPE**Application gun

#### **USES**

- Filling cavities & voids
- Fixing door & window frames
- Insulating thermal & acoustic
- Sealing gaps & joints Wherever a versatile foam is needed.

#### **ADVANTAGES**

- Supplied ready to use
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials
- Cured foam can be cut, trimmed, sanded and painted

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow











### Sika Boom®-582 Foam Fix

### Professional PU foam for bonding insulation boards

Sika Boom®-582 Foam Fix is a gun applied polyurethane foam adhesive, for bonding insulation boards.



# **APPLICATION TYPE**Application gun

#### USES

Interior and exterior bonding of insulation boards made of:

- Plaster & Gypsum
- XPS (Extruded polystyrene)
- EPS (Expanded polystyrene)
- Wood fibre
- Fibrocement

#### **ADVANTAGES**

- Good adhesion to many construction materials
- Moisture resistant when
- Good thermal insulation
- Professional application with application gun
- Supplied ready to use

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Purple













### Sika Boom®-583 Low Expansion

### PU Foam with low post expansion

Sika Boom®-583 Low Expansion is a gun applied self-expanding polyurethane foam. It is ideal for filling joints around window and door frames.



#### **APPLICATION TYPE** Application gun

#### **USES**

- Sealing joints around door and window frames
- Thermal and acoustic insula-
- Filling gaps and voids Wherever a door frame can only be exposed to low curing pressure.

#### **ADVANTAGES**

- Low post-expansion
- Low curing pressure
- Supplied ready to use
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials
- Professional application with application gun

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow













#### Sika Boom®-585 Stone Fix

### Professional PU foam for bonding bricks and stones

Sika Boom®-585 Stone Fix is a gun applied polyurethane foam adhesive, for bonding of porous substrates such as grinded bricks, natural stones and aerated concrete blocks, etc., to form non-load-bearing walls.



# **APPLICATION TYPE**Application gun

#### USES

Bonding of porous substrates such as

- Bricks
- Lime stones
- Natural stone blocks
- Aerated concrete blocks Interior and exterior bonding to form
- Walls for privacy protection

- Retaining and protective walls
- Room partition walls

#### **ADVANTAGES**

- Very good adhesion to many porous construction materials
- High adhesive strength
- Moisture resistant when cured
- Fast curing
- Professional application with application gun
- Supplied ready to use

#### **STANDARDS**

■ Tested according to EN 17333

- 850 ml canister, 12 pcs/box
- Grey













### Sika Boom®-587 All Seasons

#### Professional PU foam for all seasons

Sika Boom®-587 All Seasons is a polyurethane, self-expanding foam usable in a temperature range from -10°C to +35°C.



# **APPLICATION TYPE**Application gun

#### **USES**

- Filling cavities & voids
- Fixing door & window frames Usable in every season of the year.

#### **ADVANTAGES**

- Wide temperature range of application (-10°C to +35°C)
- Excellent thermal insulation
- Effective sound dampening
- Good adhesion to many construction materials

#### **STANDARDS**

■ Tested according to EN 17333

- 750 ml canister, 12 pcs/box
- Light yellow











### Sika Boom® Cleaner

#### Cleaner for PU foam

Sika Boom® Cleaner dissolves fresh, not yet cured polyurethane foam and thoroughly cleans the inside of the application gun.

#### **APPLICATION TYPE**

The packaging allows two different application types:

- Cleaning of the application gun: Sika Boom®-cleaner can be screwed directly onto the thread of the application gun
- Removing uncured PU-foam from different substrates:
   With the adapter Sika Boom®-Cleaner can be used as an aerosol cleaning spray

#### USES

- Internal and external cleaning of application guns
- Remove uncured foam residues on equipment and surfaces

#### **ADVANTAGES**

- Quick and simple cleaning of uncured PU foam
- Extends the functionality of application guns
- Integral valve for precise application

#### PACKAGING / COLOR

- 500 ml canister, 12 pcs/box
- Transparent







### Sika Boom®-G Dispenser

Foam application gun for professional use



#### USES

This application gun allows the user to easily fill both wide and narrow gaps, even the smallest and most difficult to access gaps can be reached with the extension tube attached. The Teflon® coated body can easily be cleaned which extends the usability of the product.

### CHARACTERISTICS & ADVANTAGES

- Light and balanced for easy handling
- Extrusion dosage is easily controlled
- Constant application
- Teflon® coated body
- Stainless steel rod
- Very easy to clean (with Sika Boom®-Cleaner)

#### PACKAGING / COLOR

- One unit blister pack
- Yellow black

### Sika Boom® Dispenser

Foam application gun for semi-professional use.



#### USES

This application gun allows the user to easily fill both wide and narrow gaps, even the smallest and most difficult to access gaps can be reached with the extension tube attached.

## CHARACTERISTICS & ADVANTAGES

- Easy to handle
- Ultra-light
- Constant application
- Very easy to clean (with Sika Boom®-Cleaner)

#### PACKAGING / COLOR

- One unit blister pack
- Yellow

# GLOBAL BUT LOCAL PARTNERSHIP



# FOR MORE SEALING & BONDING INFORMATION:



#### **WE ARE SIKA**

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.









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