PRODUCT DATASHEET

PLIXXOPOL® SF 640100

Introduction & Application

PLIXXOPOL® SF 640100 is a two component closed cell spray polyurethane rigid foam system utilizing a blowing agent (HFO) that does not affect the ozone layer (ODP=0) and has a very low effect on the greenhouse effect (Global Warming Potential <2). The material is processed using an airless spray technique and is mainly designed as a thermal insulation material for residential and common commercial constructions.
PLIXXOPOL® SF 640100 is compatible with most common construction materials and should be processed with the MDI component PLIXXONAT® N102.
The PLIXXOPOL® SF 640100 is covered by the European standard EN14315-1 if it is used as a SPF system.

Typical Characteristics

Polyol component PLIXXOPOL® SF 640100		
Property	**Method**	**Value**
Appearance	R-49	Brown
Density (20°C)	-	1,16 g/cm³
Viscosity (25°C)	R-20c	225 mPa.s

* These values provide general information and are not part of the product specification.

MDI component PLIXXONAT® N102	
Property	**Value**
Appearance	Brown
Density (20°C)	1,23 g/cm³
Viscosity (25°C)	200 mPa.s
NCO-content	31,5 %

* These values provide general information and are not part of the product specification.

General Processing Instructions

Mixing ratio	Parts by volume
PLIXXOPOL® SF 640100	100
PLIXXONAT® N102	100

Recommended temperature ranges for processing	
PLIXXOPOL® SF 640100	38 – 45 °C
PLIXXONAT® N102	38 – 45 °C
Hose temperature	38 – 45 °C
Substrate temperature	> 5 °C

Pressure set proportioner	
PLIXXOPOL® SF 640100	80 – 110 bar
PLIXXONAT® N102	80 – 110 bar

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PLIXXOPOL® SF 640100

Reaction profile determined according to our internal method R17- 5°C	
Cream time	5 s
Gel time	11 s
Tack free time	14 s
Fee rise density	34 kg/m³

PLIXXOPOL® SF 640100 is a Spray Polyurethane Foam (SPF) intended for the insulation of residential and common commercial constructions by qualified contractors, trained in the processing and application of SPF systems, as well as the two-component polyurethane dispensing machines required for this purpose. Contractors and applicators must comply with all applicable and appropriate guidelines for processing, handling, storage and safety guidelines.
PLIXXENT technical representative should be consulted in all cases where application conditions are questionable.

PLIXXOPOL® SF 640100 should be mixed with the MDI component, PLIXXONAT® N102, using an appropriate machine and gun in a volumetric mixing ratio of 100 : 100.
The density of the obtained foam depends on the actual conditions during the application process as well as on the spraying technique. With increasing layer thickness, the density will decrease.
The maximum thickness of one single layer is 4 cm. The next layer is to be applied after the previous layer has cooled down to approximately 30ºC to prevent buildup of heat.

PLIXXOPOL® SF 640100 is not designed for use as an exterior roofing or building shell insulation system.
PLIXXOPOL® SF 640100 can only be used as an indoor insulation system. It also can be applied on the outside of the inner wall, provided that the foam afterwards will be permanently protected by the outer wall. For more information please contact your sales or technical representative.

PLIXXOPOL® SF 640100 is designed for installation to most standard construction materials such as wood, wood-based products, plastics, metal and concrete.
Porous surfaces shall not have a moisture content > 20 %. Non-porous substrates shall be checked to ensure that there is no surface condensation. If there are doubts about the adhesion of the SPF to the substrate, for example metallic or plastic surfaces. Please contact PLIXXENT technical representative for more information.

All to be sprayed substrates must be free from dirt, grease, oil and moisture prior to the application. Moisture in any form, like rain, fog, ice or a high air humidity (> 70% RH), will react chemically and will adversely affect system performance and corresponding physical properties. Application should not take place at an ambient temperature below 3 ºC of the dew point.
In any case and before proceeding to start to spray, it is necessary to carry out a small adhesion test on the substrate to check that good adhesion will be obtained.

In case of the existence of expansion joints that could cause breaks in the foam due to the movement of the support, these joints shall be covered with a non-adhesive plastic tape.

Wind speeds from approximately 4 Beaufort (≥ 18 km/h) result in excessive loss of exotherm and interfere with the mixing efficiency, affecting foam surface, cure, physical properties and will cause overspray. Precautions must be taken to prevent damage to adjacent areas from overspray.

PLIXXOPOL® SF 640100

Mechanical Properties

PU foam based on the PLIXXOPOL® SF 640100

Property	Value	Unit	Method
Applied density	42	kg/m³	
Fire classification	E	--	DIN EN 13501-1:2007+A1:2009
Compressive strength	> 200 (CS (10/Y)200)	kPa	EN 826:2013

Thermal resistance according EN 14315-1:2013

Type of facing: none or diffusion open

Thickness mm	Declared aged thermal conductivity W/m.K	Thermal resistance level (R_d) m^2.K/W
30	0,023	1,30
35	0,023	1,50
40	0,023	1,75
45	0,023	1,95
50	0,023	2,15
55	0,023	2,40
60	0,023	2,60
65	0,023	2,85
70	0,023	3,05
75	0,023	3,25
80	0,023	3,50
85	0,023	3,70
90	0,023	3,90
95	0,023	4,15
100	0,023	4,35
105	0,023	4,55
110	0,023	4,80
115	0,023	5,00
120	0,023	5,20
125	0,023	5,45
130	0,023	5,65
135	0,023	5,85
140	0,023	6,10
145	0,023	6,30
150	0,023	6,50
155	0,023	6,75
160	0,023	6,95
165	0,023	7,15
170	0,023	7,40
175	0,023	7,60
180	0,023	7,85
185	0,023	8,05
190	0,023	8,25
195	0,023	8,50
200	0,023	8,70

PLIXXOPOL® SF 640100

Storage, Handling & Preparation

The recommend storage temperature should be selected within 15 – 25 °C. When stored in unopened original containers or drums in dry areas, PLIXXOPOL® SF 640100 has a expiry date of 4 months after production date.
Do not expose storage containers or drums to direct sunlight. Reclose opened containers tightly after each use.

Safety Instructions

The reaction product of PLIXXOPOL® SF 640100 with PLIXXONAT® N102 is an organic combustible product. There is a risk of fire in some applications when the material is exposed to fire and/or heat. Do not use welding or cutting equipment, fire and/or any source of ignition on or adjacent to the exposed foam.
When working with liquid polyols, isocyanates and/or with additives, wear suitable safety equipment in accordance with the potential health hazards involved. In addition, avoid direct skin contact with freshly manufactured polyurethane products, eg when handling or processing directly after demoulding.
When bag shots are made to flush the machine, these bag shots should not have a diameter larger than 30 cm, to prevent heat buildup.
Large masses of SPF should be removed to an outside safe area, cut into smaller pieces and allowed to cool down before discarding into an appropriate trash receptacle.

For more detailed information, we refer to the Safety Data Sheets of the components processed and the Product Stewardship program of PU-Europe

Fire Performance Test

The methods described in this publication for testing the fire performance of polyurethane and the results quoted do not permit direct conclusions to be drawn regarding every possible risk there may be under service conditions.
Furthermore, this does not release the producer of the finished parts from his obligation to carry out suitable tests on his end product with respect to the fire performance and/or fire risk in order to guarantee conformity with the required fire safety standard.

Labelling & REACH Applications

This Technical Data Sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information - in accordance with statutory requirements - will only be reflected in the Safety Data Sheet which will be revised and distributed. Information relating to the current classification and labelling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet processed.

PLIXXOPOL® SF 640100

Additional Information

Certificates	
SKGIKOB	SKGIKOB.012343.01.NL
Insula (BRL2131 attest)	2031-A02
ISSO databank	20210229GK
EPB databank	Qualified 23-03-2021

External analysis

Institute	Analysis	Performance	Reference
Eurofins	VOC classification	A+	392-2018-00443902_A_EN
CSTB	Creep	< 42 kg/m^3 A3 > 44 kg/m^3 A2	DEIS/HTO-2019-068 FaL/LB

- PLIXXOPOL® SF 640100 in combination with the black intumescent coating PLIXXOPOL® SC 610036 has a **B s1 d0** classification. Reference report: 2021-Efectis-R000661.
- PLIXXOPOL® SF 640100 in combination with the white intumescent coating PLIXXOPOL® SC 610131 has a **B s2 d0** classification. Reference report: 2021-Efectis-R001405.

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