



## 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/cm <sup>3</sup>
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/cm <sup>3</sup>
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

## 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 30°C 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 °C 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 ( $\geq 18$  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.

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## 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 <sub>a</sub> ) m².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 <sup>3</sup> A3 > 44 kg/m <sup>3</sup> 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.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by PLIXXENT. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

This product is not designated as „Medical Grade” and therefore shall not be considered a candidate for the manufacture of a medical device or of intermediate products for medical devices, which are intended under normal use to be brought into direct contact with the patient's body (for example skin, body fluids or tissues, including indirect contact to blood). This product is also not designated for food contact, including drinking water, or cosmetic applications (as defined in Commission Regulation EU 1935/2004). If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, for food contact products or cosmetic applications PLIXXENT must be contacted in advance to provide its agreement to sell such product for such purpose. Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for food contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by PLIXXENT.

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