



**2K-PU coating for e. g. pipelines  
heavy-duty  
80 Shore D**

**Polyol**                      Trifunctional polypropylene polyether polyol and polyfunctional amine-based polyether polyol  
**Isocyanate**                Polyisocyanate prepolymer based on MDI

			<b>SILLITIN Z 86 PURISS</b>	<b>SILFIT Z 91</b>	<b>AKTIFIT PF 115</b>
<b>Component A</b>	L00015.2		[3]	[7]	[10]
	Desmophen 1400 BT	(1)	13.14	13.14	13.14
	Desmophen T 460	(1)	13.14	13.14	13.14
	Barite	(2)	8.87	8.87	8.87
	SILLITIN Z 86 PURISS	(3)	13.03	---	---
	SILFIT Z 91	(3)	---	13.03	---
	AKTIFIT PF 115	(3)	---	---	13.03
	Finma-Sorb 430 PR	(4)	5.21	5.21	5.21
	Ethacure 100 Plus	(5)	1.26	1.26	1.26
	Byk-A 530	(6)	0.26	0.26	0.26
	Disperbyk-163	(6)	0.26	0.26	0.26
Dabco 33-LV	(7)	0.24	0.24	0.24	
Total parts by weight component A			55.41	55.41	55.41
<b>Component B</b>	Desmodur E 29	(1)	44.00	44.00	44.00
	Total parts by weight component A+B			99.41	99.41
<b>Mixing ratio</b>					
Component A:B by volume					
Stoichiometric, isocyanate / polyol					
					1:1
					approx. 1.25

- Recommendation**
- [3] SILLITIN Z 86 PURISS
    - cost-effective standard product
    - balanced profile of properties
  - [7] SILFIT Z 91
    - highest brightness and color neutrality
    - higher tensile strain /deformability
  - [10] AKTIFIT PF 115
    - highest brightness and color neutrality
    - very low moisture content without increase under humid climatic conditions
    - higher tensile strain /deformability
    - higher impact strength
    - moderate rheological activity / higher sagging resistance
    - no sedimentation



**Mixing** Component A was prepared with a planetary dissolver under vacuum (“Labotop”, equipped with toothed disk, bar blade and scraper).

**Note** Usually, the formulation is applied with a 2K airless system in a layer thickness of 1-2 mm. The processing time is <120 s at room temperature. To determine the mechanical properties, the formulations were applied at room temperature by hand into corresponding specimen molds using a 2K static mixer. The tests were carried out after a total curing time of 14 to 16 days at standard climatic conditions.

	SILLITIN Z 86 PURISS	SILFIT Z 91	AKTIFIT PF 115
L00015.2	[3]	[7]	[10]

Technical Data			SILLITIN Z 86 PURISS	SILFIT Z 91	AKTIFIT PF 115
Viscosity component A					
@ 0.1 s <sup>-1</sup>		Pa·s	6.4	10.7	35.9
@ 1000 s <sup>-1</sup>		Pa·s	5.1	5.8	5.4
Storage stability component A after 3 months @ 40					
Clear supernatant		%	6	8	9
Hard sediment		%	3	5	0
Hardness	DIN EN ISO 868; 15 s	Shore D	81	80	81
Tensile modulus	DIN EN ISO 527; 0.5 mm/min	MPa	3560	3560	3380
Tensile strength	DIN EN ISO 527; 5 mm/min	MPa	53.2	53.4	52.0
Strain at break	DIN EN ISO 527; 5 mm/min	%	5.4	7.0	7.0
Impact Strength Charpy	DIN EN ISO 179-1; 1eU	kJ/m <sup>2</sup>	20	23	31

- Suppliers**
- (1) Covestro
  - (2) Sachtleben Minerals
  - (3) HOFFMANN MINERAL
  - (4) Finma-Chemie
  - (5) Albemarle
  - (6) Byk Chemie
  - (7) Evonik Industries

**More information on this topic:**  
[Neuburg Siliceous Earth in 2K PU Coatings for Pipelines](#)

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