

Short-term heat resistance of cured sealants



Merbenit PC200

Tensile strength by dumbbell shape according to DIN 53504

Aim

- Control of the technical properties after heat stress
- Heat stress of the cured specimens / sealant in a muffle furnace - «Linn High Therm 400»
- Testing of the mechanical properties according to DIN 53504 after heat stress

Reference

No relevant influence

on technical values, surface, weight loss
destruction, adhesiveness / decomposition, yellowing
Overall rating > OK

Slight influence

on technical values, surface, weight loss
destruction, adhesiveness / decomposition, yellowing
Overall rating > OK

Strong influence

on technical values, surface texture, weight loss
destruction, adhesiveness / decomposition, yellowing
Overall rating > Partially to strong negative impact

Starting destruction of sealant

decomposition of sealant

Advanced destruction of sealant

decomposition of sealant

Conventional adhesive

Temp. [°C]	Time [min]	Tensile strength [N/mm ²]	Elongati- on at break [%]	Modulus 100% [N/mm ²]	Modulus 200% [N/mm ²]	Weight loss [%]
23	0	3.2	441	1.35	2.11	0
200	10	3.3	597	0.82	1.42	12.7
200	20	2.9	604	0.66	1.18	19.2
200	30	1.2	271	0.35	0.63	26.8

Merbenit PC200 - Batch no. 50766826

Temp. [°C]	Time [min]	Tensile strength [N/mm ²]	Elongati- on at break [%]	Modulus 100% [N/mm ²]	Modulus 200% [N/mm ²]	Weight loss [%]
23	0	3.2	261	1.97	2.74	0
200	120	3.2	248	1.88	2.85	0.9
210	60	3.1	235	1.96	2.90	0.7
220	45	3.0	237	1.83	2.75	0.6
230	30	3.0	249	1.86	2.77	0.6
240	20	2.9	246	1.82	2.70	0.6

Maximum recommended process conditions

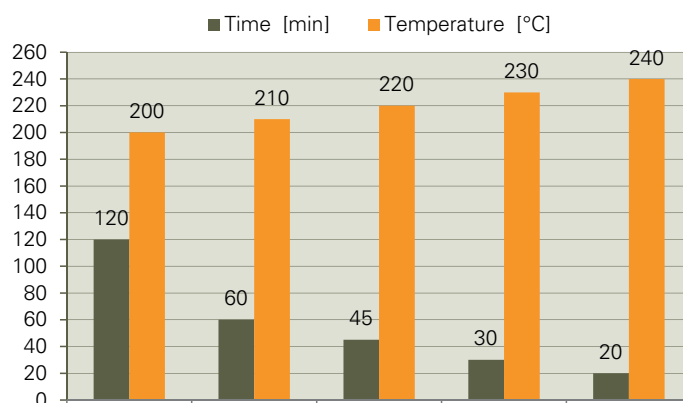
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Merbenit PC200

Lap shear strength on the basis DIN EN 1465

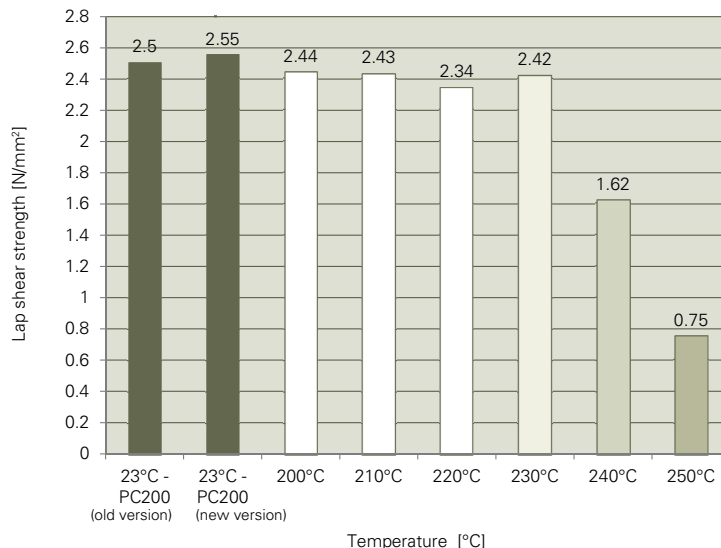
Maximum recommended process conditions based on lap shear strength

Product	Merbenit PC200, Batch no. 50766826
Specimen	Aluminium anodised
Primer	Adhesion promoter V2
Coat thickness	1 mm
Prestocking	9 days at 23 °C and 50 % r.h.
Time of heat stress	Variable
Test temperature	Variable
Oven	Heating cabine «Linn High Term 400» (muffle furnace)
Paint / Varnish	None



Lap shear strength after 30 min of heat stress

Product	Merbenit PC200, Laboratory batches 1+2
Specimen	Aluminium anodised
Primer	Adhesion promoter V2
Coat thickness	1 mm
Prestocking	9 days at 23 °C and 50 % r.h.
Time of heat stress	30 min.
Test temperature	Variable
Oven	Heating cabine «Linn High Term 400» (muffle furnace)
Paint / Varnish	None



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