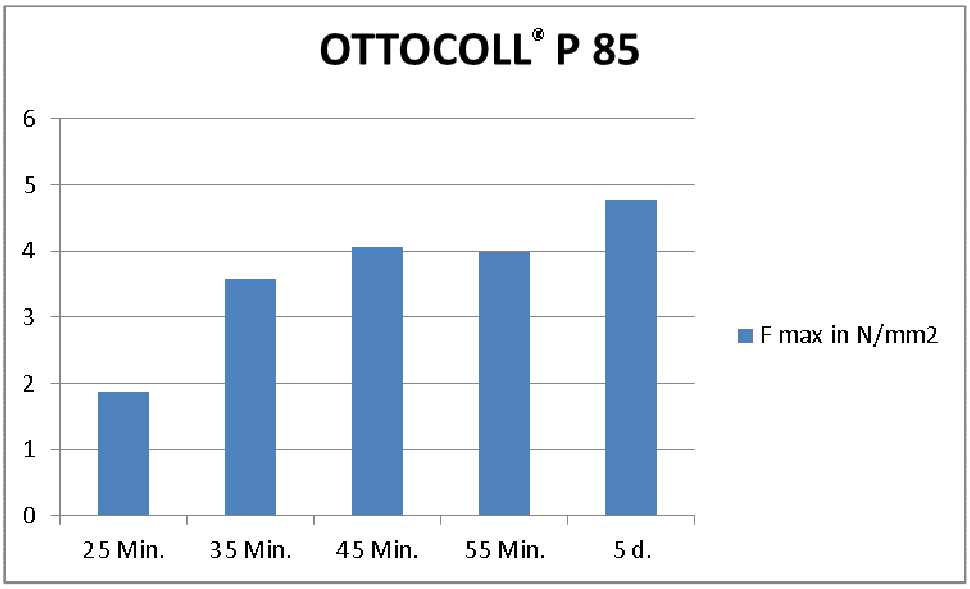
Sealants • Adhesives

Development of adhesive strength from OTTOCOLL® Products

1. 1-component polyurethanes

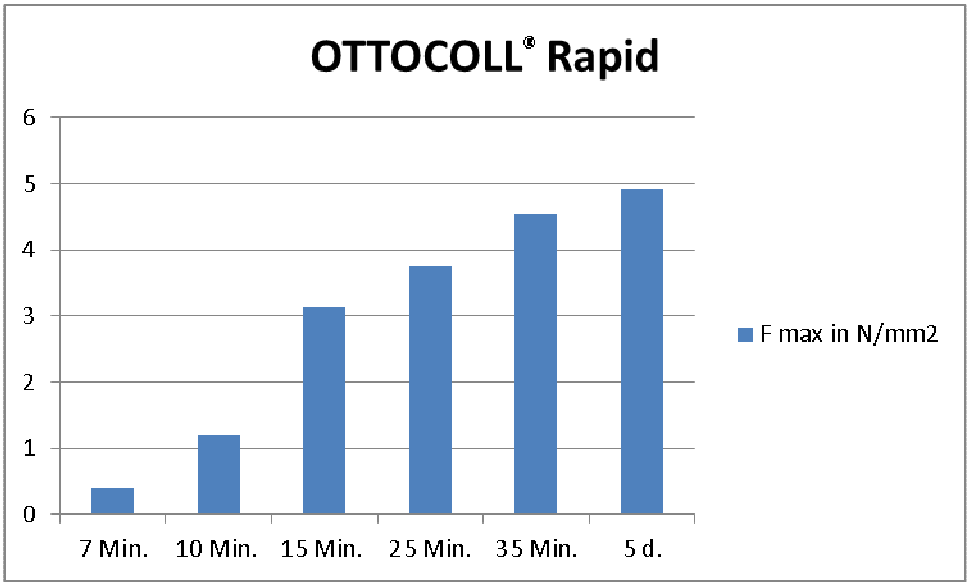
P 85	pine-pine +H_2O
Time at RT	strength [N/mm²]
25 min.	1,88
35 min.	3,57
45 min.	4,06
55 min.	3,98
5 days	4,77

RT= room temperatrure (approx. 23°C)



Rapid	pine-pine +H_2O
Time at RT	strength [N/mm²]
7 min.	0,4
10 min.	1,19
15 min.	3,13
25 min.	3,75
35 min.	4,54
5 days	4,91

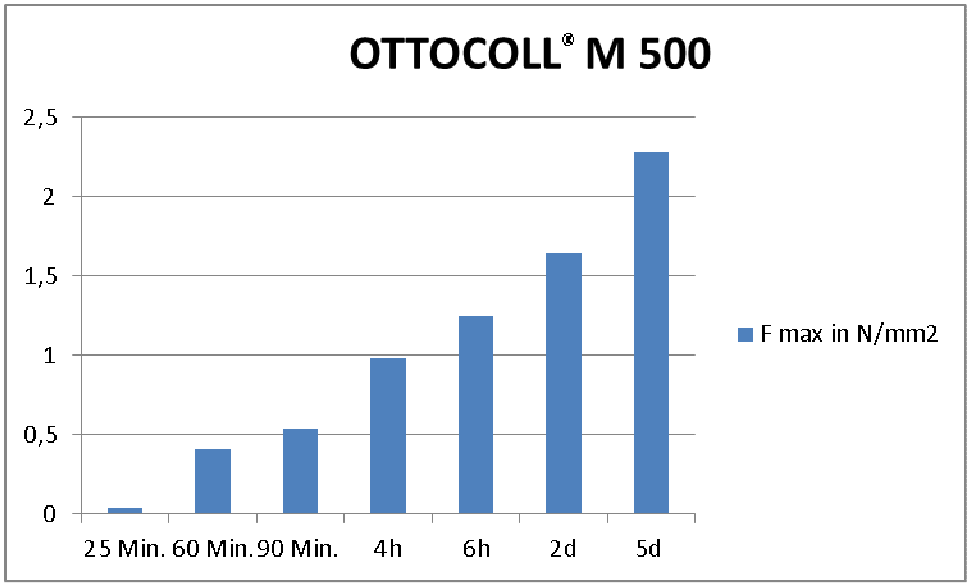
RT= room temperatrure (approx. 23°C)



2. 1-component silane-terminated polymers

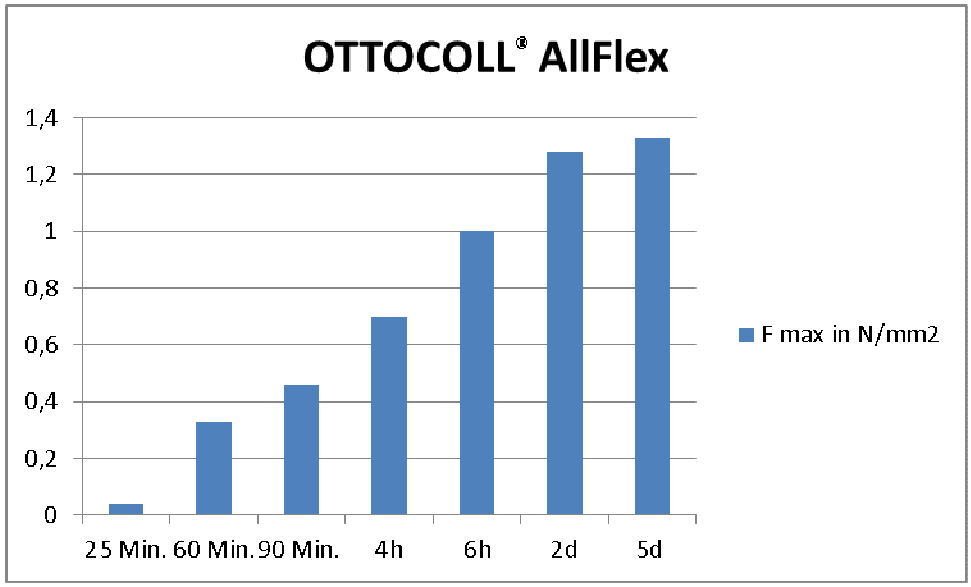
M 500	pine-pine +H_2O
Time at RT	strength [N/mm^2]
25 min.	0,04
60 min.	0,41
90 min.	0,54
4 hours	0,98
6 hours	1,25
2 days	1,64
5 days	2,28

RT= room temperatrure (approx. 23°C)



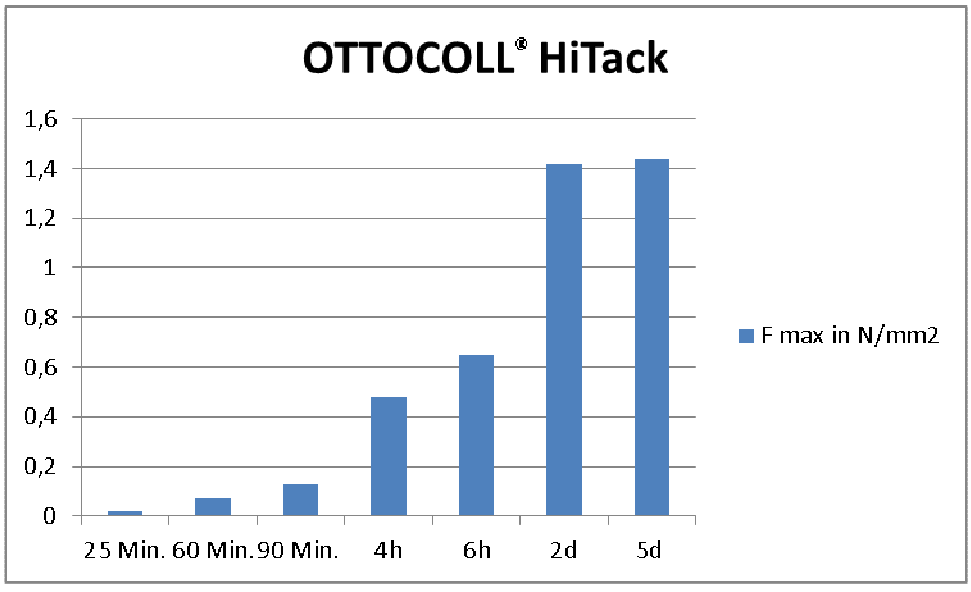
Allflex	pine-pine +H_2O
Time at RT	strength [N/mm^2]
25 min.	0,04
60 min.	0,33
90 min.	0,46
4 hours	0,7
6 hours	1
2 days	1,28
5 days	1,33

RT= room temperatrure (approx. 23°C)



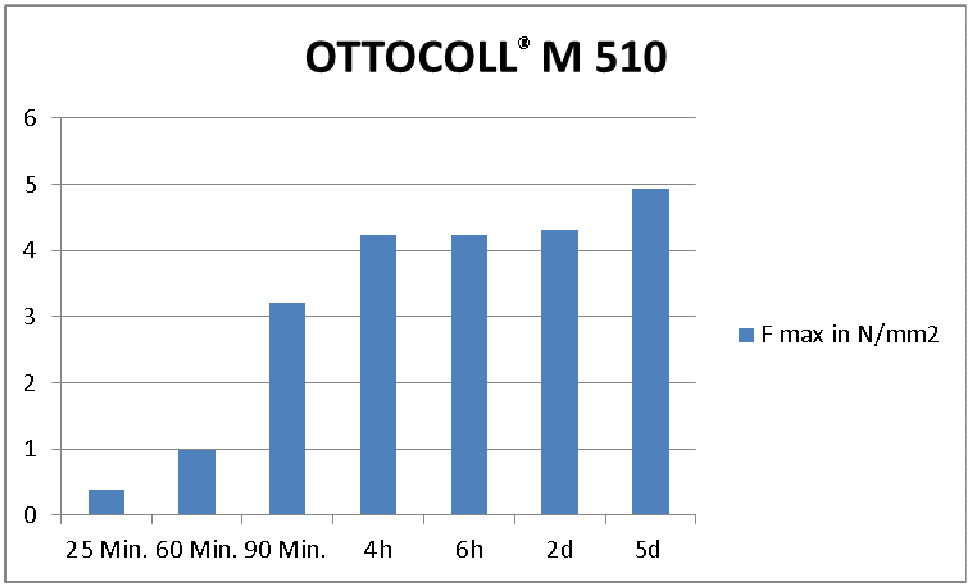
HiTack	pine-pine +H_2O
Time at RT	strength [N/mm^2]
25 min.	0,02
60 min.	0,07
90 min.	0,13
4 hours	0,48
6 hours	0,65
2 days	1,42
5 days	1,44

RT= room temperatrure (approx. 23°C)



M 510	pine-pine +H_2O
Time at RT	strength [N/mm²]
25 min.	0,39
60 min.	0,98
90 min.	3,2
4 hours	4,24
6 hours	4,24
2 days	4,31
5 days	4,93

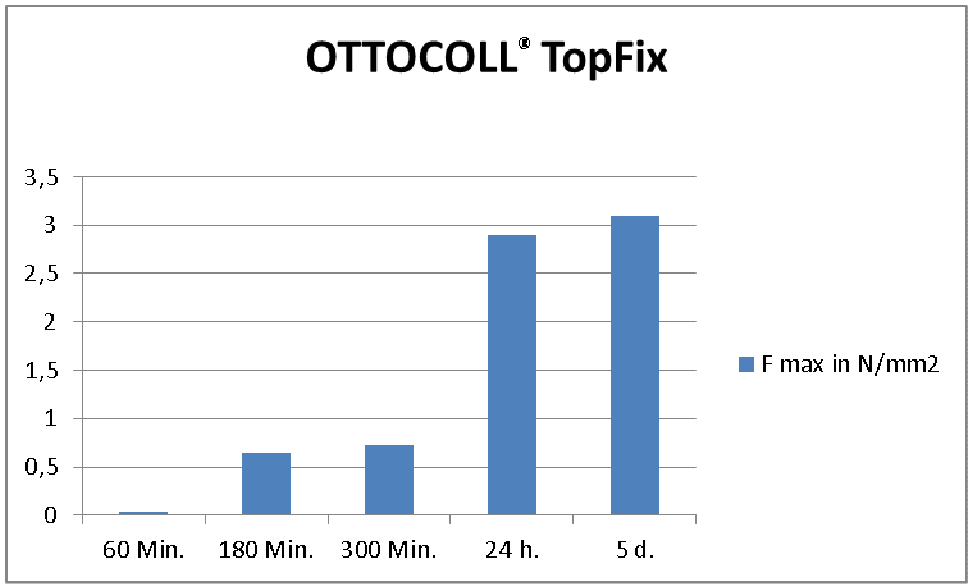
RT= room temperatrure (approx. 23°C)



3. 1-component acrylic adhesive

TopFix	pine-ano. alu.
Time at RT	strength [N/mm²]
60 min.	0,04
180 min.	0,65
300 min.	0,72
24 hours	2,9
5 days	3,1

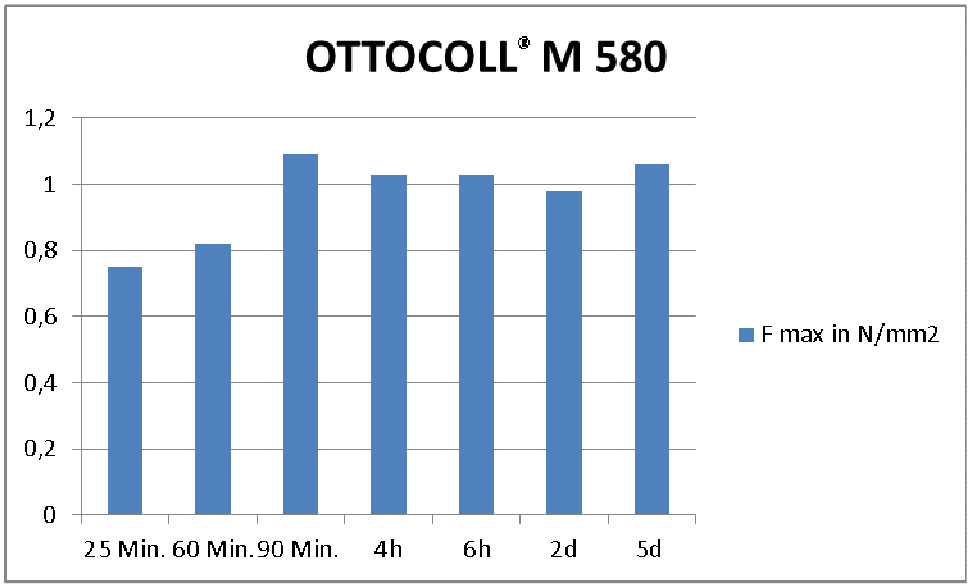
RT= room temperatrure (approx. 23°C)



4. 2-component silane-terminated polymer

M 580	pine-pine
Time at RT	strength [N/mm²]
25 min.	0,75
60 min.	0,82
90 min.	1,09
4 hours	1,03
6 hours	1,03
2 days	0,98
5 days	1,06

RT= room temperatrure (approx. 23°C)



5. Testing parameters

Type measuring device: Universal testing machines Zwick/Roell

OTTOCOLL®	Rapid	P 85	M500	M510	M540	M550	M580	TopFix
layer thickness [mm]	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
overlapping length [mm]	20	20	60	20	60	60	60	10
width test samples [mm]	50	50	50	50	50	50	50	25
pre-load [N]	30	30	30	30	30	30	30	1
pre-load speed [mm/min.]	5	5	5	5	5	5	5	10
test-speed [mm/min.]	10	10	10	10	10	10	10	6
specimen material	pine-pine	pine-pine	pine-pine	pine-pine	pine-pine	pine-pine	pine-pine	pine-anodized aluminum
additional info	+ H_2O	+ H_2O	+ H_2O	+ H_2O	+ H_2O	+ H_2O	-	-