

## Norwegian Institute of Wood Technology

### Approved adhesives for JAS glulam

Adhesive family	Producer	Product name	Resin	Hardener	Mixing ratio face gluing <sup>2)</sup>	Face gluing & Fingerjointing	Dimension		Exposure condition		
							Small/Medium	Large <sup>1)</sup>	A	B	C
<b>PRF</b> (Phenol- resorcinol- formaldehyde)	Akzo Nobel Adhesives AB		1711	2520	100:15	•	•	•	•	•	•
			1711	2622	100:15	•	•	•	•	•	•
			1717	2533	100:30	•	•	•	•	•	•
			1719	2619	100:20	•	•	•	•	•	•
	Dynea AS	Prefere	4040	5835	100:20	•	•	•	•	•	•
		Prefere	4040	5839	100:20	•	•	•	•	•	•
		Prefere	4040	5840	100:20	•	•	•	•	•	•
		Prefere	4041	5839	100:20	•	•	•	•	•	•
		Prefere	4041	5840	100:20	•	•	•	•	•	•
		Prefere	4045	5839	100:20	•	•	•	•	•	•
		Prefere	4070	5870	100:20	•	•	•	•	•	•
		Prefere	4071	5870	100:20	•	•	•	•	•	•
		Prefere	4073	5870	100:20	•	•	•	•	•	•
		Prefere	4074	5870	100:20	•	•	•	•	•	•
		Prefere	4075	5870	100:20	•	•	•	•	•	•
		Prefere	4079	5872	100:20	•	•	•	•	•	•
		Prefere	4094	5827	100:20	•	•	•	•	•	•
		Prefere	4099	5827	100:20	•	•	•	•	•	•
		Aerodux	185	HRP 155	100:20	•	•	•	•	•	•
	Hexion Oy	Cascophen/Cascoset	RF-300V	FM-6310L	100:40	•	•	•	•	•	•
		Cascophen/Cascoset	RF-350	FM-6310L	100:40	•	•	•	•	•	•
		Bakelite	PF 2023 HL	PF 2003 H	100:20	•	•	•	•	•	•
		Bakelite	PF 2023 HL	PF 2003 H	100:35	•	•	•	•	•	•
		Bakelite	PF 1993 HL	PF 2003 H	100:35	•	•	•	•	•	•

- Is applicable for
- 1) Only applicable in Exposure condition A and B
- 2) Mixing ratio for fingerjointing according to adhesive manufacturer

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							Small/Medium	Large <sup>1)</sup>	A	B	C
<b>EPI</b> (Emulsion- polymerised Isocyanate)	Akzo Nobel Adhesives AB		1949	1990	100:15	•	•				•
			1950	1999	100:15	•	•				•
			1973	1993	100:10-15	•	•				•
			1937	1943	100:10-15	•	•				•
			1977	1990	100:10-15	•	•				•
			1989	1993	100:15	•	•				•
	Dynea AS	Prefere	6150	6650	100:15	•	•				•
		Prefere	6151	6651	100:15	•	•				•
		Prefere	6181	6681	100:15	•	•				•
		Prefere	6182	6682	100:15	7)	7)			7)	7)
	Kilto OY	Kestokol	WR05	WR	100:15	•	•				•
Kestokol		WR11	WR	100:15	•	•				•	
<b>MF</b> (Melamine- formaldehyde)	Akzo Nobel Adhesives AB		1265	7565	100:100	4)	4)	4)	4)	4)	4)
	Dynea AS	Prefere	4720	5020	3)	3)	3)	3)	3)	3)	3)
<b>MUF</b> <sup>2)</sup> (Melamineurea- formaldehyde)	Dynea AS	Prefere	4546	5021	3)	3)	3)				3)
		Prefere	4546	5093	100:30	6)	6)	6)		6)	6)
	BASF SE	Kauramin	690	1690	100:50	5)	5)	5)		5)	5)

- Is applicable for
- 1) Only applicable in Exposure condition A and B
- 2) Mixing ratio for fingerjointing according to adhesive manufacturer
- 3) Only use for fingerjointing
- 4) Approved by MAFF until 2020-04-02 for face gluing in Exposure condition B and C, generally approved for fingerjointing in Exposure condition A, B and C
- 5) Approved by MAFF until 2020-02-18 for face gluing in Exposure condition B and C, generally approved for fingerjointing in Exposure condition C
- 6) Approved by MAFF until 2020-08-20 for face gluing and fingerjointing in Exposure condition B and C (mixing ratio fingerjointing 100:30)
- 7) Approved by MAFF until 2021-04-02 for face gluing and fingerjointing in Exposure condition B and C (mixing ratio fingerjointing 100:15)

**Approved adhesives for JAS CLT**

Adhesive family	Producer	Product name	Resin	Adhesive approval
<b>PUR</b> (One component polyurethan)	Henkel & Cie. AG	Loctite	HB S509	Approved by MAFF until 2021-09-08 for face gluing in Exposure condition C
		Loctite	HB S159	Approved by MAFF until 2021-09-08 for fingerjointing in Exposure condition C