



# Araldite®

Industrial Range

**HUNTSMAN**

	Features	Product	Araldite 2000 designation
Fast cure Usable life < 20 minutes at 23°C	Liquid – general purpose	AW 2104/HW 2934	Araldite 2012
		XD 4463/XD 4369	
	Liquid – high peel strength	XD 4443/XD 4444	Araldite 2010
	Thixotropic – gap filling	AW 2101/HW 2951	
		XD 4662 A/B	Araldite 2022
		XD 4664 A/B	
	Thixotropic – gap filling – very fast setting	XD 4661 A/B	Araldite 2021
	Highly thixotropic – gap filling	XD 4490/XD 4491	
XD 4497/XB 5304			
Putty	AV/HV 1580		
Medium reactivity Usable life 30-90 minutes at 23°C	Liquid – easily spread	XB 5090-1/XB 5304	
	Liquid	AY 105-1/HY 991	
		XB 5047/XB 5067	
	Liquid – viscous	AW 136H/XB 5067	
		XD 4445/XD 4446	Araldite 2018
		AW 136H/HY 991	
	Lightly thixotropic	AV 144-2/HY 4076	
	Easily spread paste	AV 121N/HY 991	
	Medium thixotropic	AW 136H/HV 997	
	Thixotropic	AV 138M/HV 998	
		AW 139/XB 5323	Araldite 2014
	Thixotropic – resilient	AV 144-2/HV 997	Araldite 2013
	Thixotropic – toughened	AV 4076-1/HY 4076	
	Highly thixotropic	XD 4510/XD 4511	
Highly thixotropic toughened	AV 5308/HV 5309-1	Araldite 2015	
Long usable life ≥ 90 minutes at 23°C	Liquid easily spread – low viscosity	AY 103/HY 991	
		XD 4467/XB 5304	
	Liquid – general purpose	AW 106/HV 953U	Araldite 2011
	Liquid easily spread – medium viscosity	XD 4495/XB 5304	
	Highly thixotropic	XB 5032 A/ XB 5319	
		XD 4525/XD 4526	
XD 4436-1/XB 5304			
One component heat curing	Powder	AT 1-1	
	Liquid – toughened	AV 118	
	Thixotropic – toughened	AV 119	
	Thixotropic – very high impact resistance	AV 4600	

Heat resistance (Tg)

≥60°C
  ≥80°C
  ≥110°C

Mix ratio by weight (volume)	Product viscosity Pas (gap filling capacity)	Typical usable life 100gms at 23°C (minutes)	Typical curing time at 23°C to handing strength* *1 N/mm2 (minutes)	Typical curing time at 23°C for near to full cure (hours)	Typical lap shear strength at 23°C (sandblasted aluminium) (N/mm <sup>2</sup> )
100:100 (100:100)	ca. 30 (0-0,5mm)	4	20	48	19
100:76 (100:100)	ca. 65 (0-0,5mm)	20	35	48	26
100:100 (100:100)	ca. 80 (0-2mm)	8	30	48	23
100:100 (100:100)	Thixotropic (0-4mm)	6	25	48	20
100:94 (100:100)	ca. 60 (0-4mm)	10	20	12	23
100:12,5 (100:10)	ca. 150 (0-4mm)	5	15	12	12
100:90 (100:100)	ca. 45 (0-4mm)	3	8	12	22
100:104 (100:100)	Thixotropic (0-10mm)	9	100	48	13
100:40 (100:45)	Thixotropic (0-15mm)	8	80	24	20
100:100 (100:100)	Putty (1-20mm)	15	60	48	-
100:20 (100:25)	ca. 7 (0-0,4mm)	90	300	72	23
100:50 (100:60)	ca. 15 (0-0,4mm)	60	500	72	12
100:30 (100:45)	ca. 12 (0-0,4mm)	70	500	1h at 60°C	22
100:29 (100:38)	ca. 15 (0-1mm)	90	300	48 (1h at 80°C)	17
100:95 (100:100)	ca. 8 (0-2mm)	40	240	72	8
100:35 (100:45)	ca. 25 (0-0,5mm)	65	300	72	15
100:28 (100:40)	Thixotropic (0-2mm)	80	360	72	22
100:25 (100:40)	Thixotropic (0-2mm)	60	300	72	14
100:60 (100:80)	Thixotropic (0-3mm)	60	300	72	18
100:40 (100:40)	Thixotropic (0-3mm)	35	240	48	14
100:50 (100:50)	Thixotropic (0-4mm)	40	230	48	19
100:60 (100:100)	Thixotropic (0-4mm)	65	240	48	18
100:44 (100:50)	Thixotropic (0-4mm)	60	300	72	28
100:50 (100:50)	Thixotropic (0-6mm)	90	15 at 60°C	2 at 100°C	17
100:100 (100:100)	Thixotropic (0-10mm)	40	240	48	18
100:40 (100:50)	ca. 3 (0-0,3mm)	90	900	150	14
100:20 (100:26)	ca. 2 (0-0,4mm)	120	240	72	8
100:80 (100:100)	ca. 35 (0-1mm)	120	420	100	27
100:25 (100:30)	ca. 10 (0-1mm)	90	265	72	20
100:55 (100:70)	Thixotropic (0-6mm)	120	300	72	22
100:45 (100:50)	Thixotropic (0-10mm)	120	300	72	16
100:20 (100:27)	Thixotropic (0-25mm)	90	300	72	14
-	Solid (0-0.5mm)	2 years (shelf life)	Minimum 120°C	1 at 180°C	33
-	ca. 100 (0-0.5mm)	6 months (shelf life)	Minimum 110°C	1/2 at 150°C	30
-	Thixotropic (0-4mm)	6 months (shelf life)	Minimum 110°C	1/2 at 150°C	30
-	Thixotropic (0-3mm)	6 months (shelf life)	Minimum 160°C	1/2 at 175°C	25

Typical peel strength at 23°C (chromated aluminium) (N/mm)	Typical Tg value/max. temperature giving LSS of 5N/mm²	Flexibility/toughness	Chemical resistance	Water/humidity resistance	Apperance of resin/hardener (mixed)	Data sheet ref No.
5.5	40/80	Rigid	Good	Good	Translucent/yellow (yellow)	A231
2	45/60	Rigid	Good	Good	Beige/brown (beige)	A411
7.8	40/80	Impact resistant	Good	Good	Translucent/yellow (yellow)	A279
4.5	45/80	Rigid	Good	Good	White/grey (grey)	A312
4	45/100	Impact resistant	Limited	Limited	Translucent/yellow (yellow)	A298
6	20/80	Impact resistant	Limited	Good	Yellow/white (yellow)	A300
11	65/110	Impact resistant	Good	Good	Translucent/yellow (yellow)	A297
2.4	55/80	Rigid	Excellent	Excellent	White/black (grey)	A412
3.3	50/80	Rigid	Good	Good	Beige/brown (beige)	A413
-	65/90	Rigid	Good	Good	Yellow/blue (green)	A54
3.4	30/70	Flexible	Limited	Limited	Beige/brown (beige)	A286
2	100/130	Rigid	Excellent	Excellent	Translucent/brown (brown)	A123
4	100/120	Rigid	Excellent	Excellent	White/brown (blanc)	A291
4	80/120	Rigid	Excellent	Excellent	Grey/brown (grey)	A414
4	0 (flexible)/40	Flexible	Limited	Limited	Opaque/opaque (opaque)	A280
4	80/100	Rigid	Excellent	Excellent	Grey/brown (grey)	A186
4	45/100	Impact resistant	Good	Good	Grey/brown (grey)	A294
3	55/90	Rigid	Good	Good	Black/brown (black)	A49
5	60/80	Rigid	Good	Excellent	Grey/beige (grey)	A315
2	95/140	Rigid	Excellent	Excellent	Beige/grey (grey)	A63
3	85/140	Rigid	Excellent	Excellent	Beige/grey (grey)	A233
4	45/70	Rigid	Good	Good	Grey/beige (grey)	A232
7.5	55/70	Impact resistant	Limited	Good	Opaque/opaque (opaque)	A72
1.5	130/180	Rigid	Excellent	Excellent	White/black (grey)	A393
4.5	65/100	Impact resistant	Good	Good	Beige/beige (beige)	A234
<1	55/80	Rigid	Good	Excellent	Brown/transparent (brown)	A281
3	10 (flexible)/50	Flexible	Limited	Good	Beige/ brown (brown)	A305
5	45/80	Rigid	Good	Good	Yellow/translucent (yellow)	A230
6	40/60	Rigid	Good	Good	Beige/brown (brown)	A404
2.2	58/85	Rigid	Good	Good	Yellow/red (brown)	A415
2	80/125	Rigid	Excellent	Excellent	White/grey (grey)	A416
4	20/50	Impact resistant	Limited	Good	Beige/brown (brown)	A273
5	100/130	Rigid	Excellent	Good	White	A405
8	100/130	Impact resistant	Good	Good	Beige	A313
8	100/130	Impact resistant	Good	Good	Beige	A314
8	110/130	Impact resistant	Excellent	Excellent	Orange	A417

\*Tg is the maximum temperature at which full strength and E-modulus will be maintained

Metals	Composites (SMC, GRE, GRP)	Engineering thermoplastics (glass reinforced PPS, PEI)	Metal to composite/ Engineering thermoplastics	Polyamide, ABS, PVC, PC	Metal to flexible plastics	Metal to thermoset laminates	Ceramics, glass
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## Handling precautions

### Caution

Huntsman Advanced Materials products are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils, and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper towels – not cloth towels – should be used to dry the skin. The work area should be well ventilated. The precautions are described in greater detail in Manual No. 24264/e Hygienic Precautions for Handling Plastic Products of Huntsman Advanced Materials and in the Material Safety Data Sheets for the individual products. These publications are available on request and should be referred to for fuller information.

*All recommendations for use of our products, whether given by us in writing, verbally, or to be implied from the results of tests carried out by us, are based on the current state of our knowledge. Notwithstanding any such recommendations the Buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for his intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility therefor. The Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights.*

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