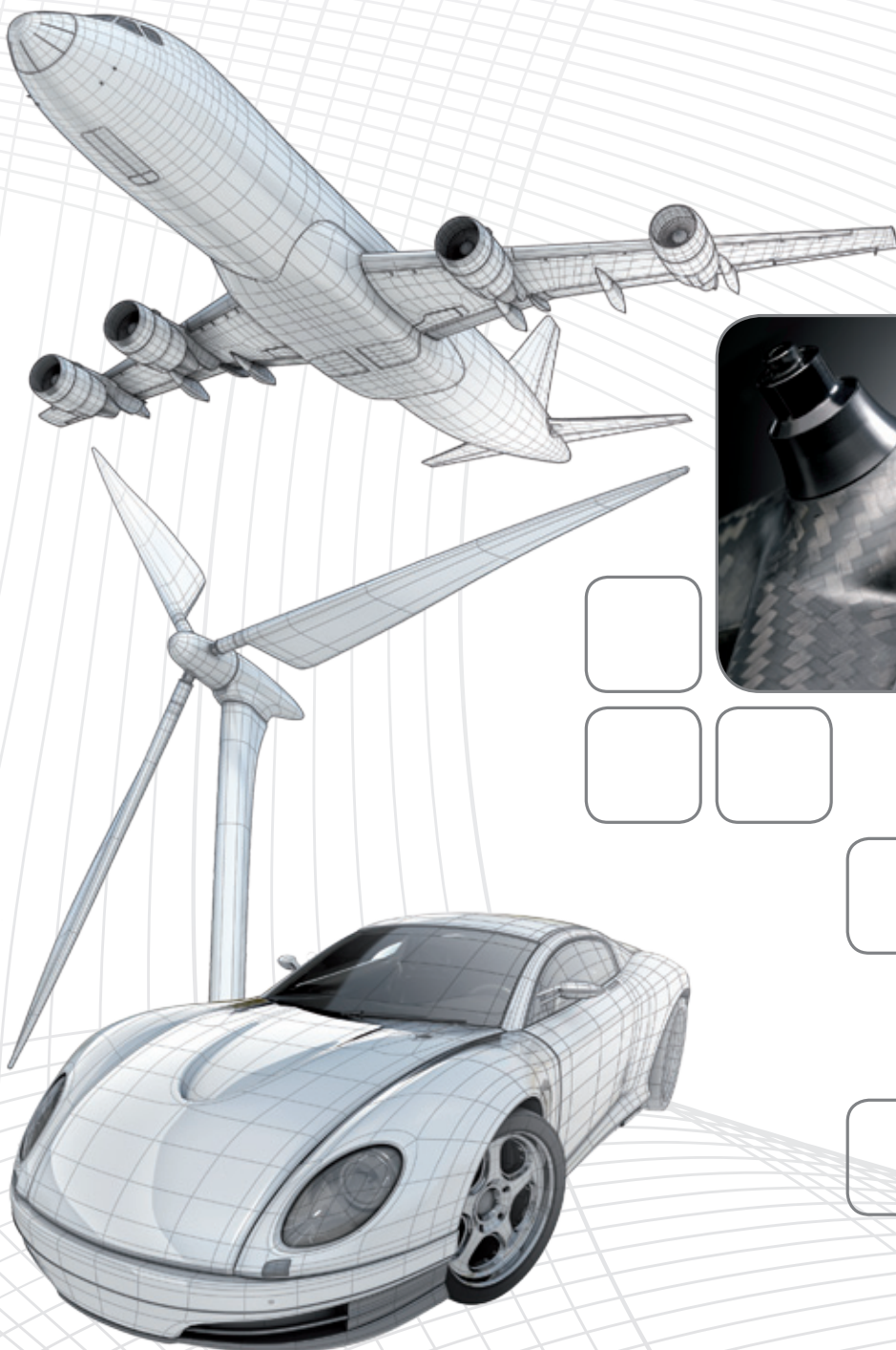


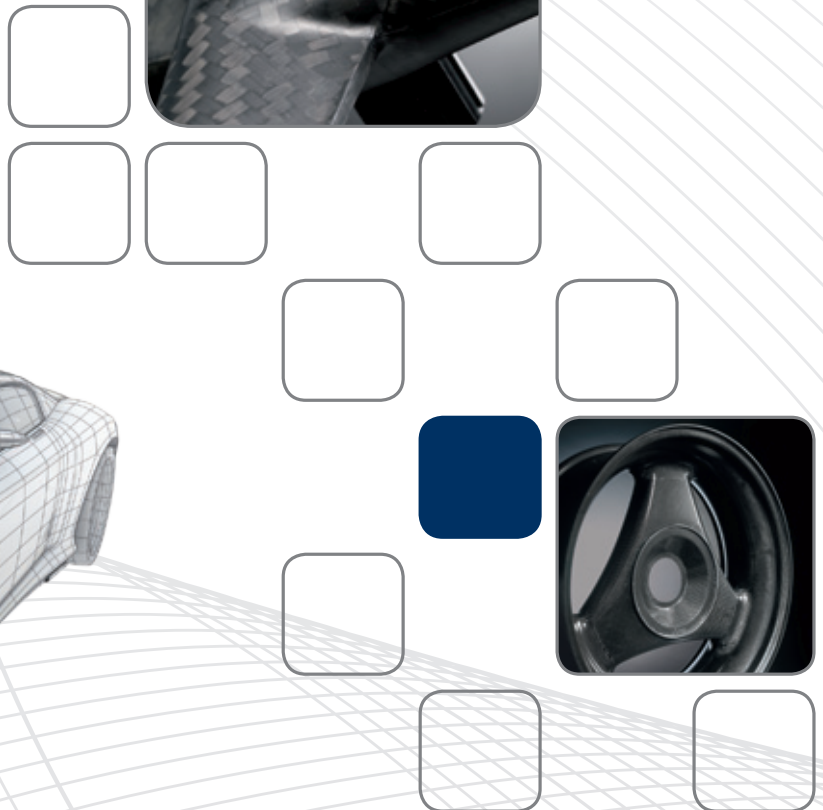


# Advanced Materials

## Composite resin systems



Selector  
guide for all  
manufacturing  
processes





Rely on  
us with  
confidence



### A global partner

As a global partner and innovator working in close collaboration with all major industries using fiber reinforcement : we offer our customers a unique range of innovative high value thermosetting formulated systems combined with a strong technical support. This comprehensive range is used throughout the world's manufacturing industries but particularly in the automotive, aerospace, marine, wind energy, sport and leisure and consumer electronics.

### We deliver more than just products

Our process know-how and over 60 years expertise help us to develop standard products as well as custom-made solutions formulated to answer project requirements.

Huntsman Advanced Materials has a worldwide team of experts

- > To identify with you the best system meeting your needs
- > To develop when needed new material solutions
- > To reduce manufacturing and production costs through process time reduction based on shorter cure cycles
- > To help you to improve the quality, the durability and the performance of your products such as lightness but also mechanical, temperature, fire, chemical or corrosion resistance and more
- > To quickly bring your product to market through material and process optimization.

# Araldite®

The original brand  
serving worldwide composite  
industry for more than  
half a century.





### **Proven solutions for all major industries**

Huntsman leverages its core strengths in synthesis and formulation to produce high performance materials that deliver improved mechanical and thermal performance in the area of composites.

Our application engineers can support you with advice and practical recommendations on how to optimize the use of Huntsman's products in your chosen manufacturing process.

- > Wet lay-up
- > RTM
- > High pressure RTM
- > Infusion
- > Filament winding
- > Pultrusion
- > Compression molding
- > Prepreg



### Germanischer Lloyd statement of approval

“Rules for Classification and Construction, II-Material and Welding technology – Part 2 Non-Metallic materials”

Huntsman’s GL approved resin systems received approval for the construction of FRP laminate components in wind and marine applications on condition that the selected fibre reinforcement both complies with Germanischer Lloyd’s requirements and is compatible with the resin. Huntsman Advanced Materials (Switzerland) GmbH Material Testing is accredited by DN International standard ISO/IEC 17025:2005.









### Lloyd's Register certificate of approval

“Rules and Regulation for Classification of Special Service Craft”

Huntsman’s resin systems with this logo are certified for the construction of composite components on special service crafts including yachts, pleasure crafts, etc.



# Formulated systems for direct liquid processes

Product designation	Wet lay-up	Compression molding	RTM	Infusion	Filament winding	Pultrusion	Pot life	Gel time	Mix viscosity
Conditions							RT, 100ml	80°C	25°C
Norm									
Unit							min	min	mPa.s
Araldite® LY 1564 / Hardener XB 3403	•••			•••	••		870 - 1050	40 - 50	150 - 230
Araldite® LY 1564 / Aradur® 3405		•••	•••				47 - 57	6 - 9	420 - 520
Araldite® LY 3508 / Hardener XB 3403	•••		••				600 - 720	30 - 36	650 - 800
 Araldite® LY 1568 / Aradur® 3489	••		••	•••	••	••	850 - 950	43 - 46	200 - 300
 Araldite® LY 1568 / Aradur® 3492	••	••	••	•••			300 - 350	23 - 25	250 - 350
 Araldite® LY 3505 / Hardener XB 3404-1	•••						80 - 100	11 - 18	550 - 800
 Araldite® LY 3505 / Hardener XB 3403	•••						600 - 720	36 - 48	300 - 400
 Araldite® LY 3505 / Aradur® 3405	•••						26 - 36	5 - 11	1 000 - 1 200
 Araldite® LY 1564 / Aradur® 3486	••		••	•••	••	••	560 - 620	33 - 43	200 - 300
Araldite® LY 3598 / Aradur® 3498		•••	•••	•••			40 - 70	7 - 10	400 - 900
Araldite® LY 3297 / Aradur® 3298	•••	•••	•••	••			120 - 135	18 - 26	850 - 950
Araldite® LY 3508 / Aradur® 3486	•••		•••	••	••	••	380 - 480	9 - 14 at 100°C	720 - 860
Araldite® LY 3585 / Aradur® 3475 <sup>2</sup>	••	•••	••• HP <sup>3</sup>			•••	25 - 35	1 - 2 at 115°C	900 - 1 100
Araldite® LY 3031 / Aradur® 3032 <sup>2</sup>	••	•••					-	<15 sec at 140°C	1 700 - 1 900
Araldite® LY 1564 / Aradur® 5003-1	••	•••	•••				42 - 52	6 - 8 at 40°C	200 - 260
Araldite® LY 1564 / Aradur® 3474	••	•••	•••	••	•••	••	260 - 280	25 - 35	350 - 450
Araldite® LY 5052 / Aradur® 5052	•••	••	••	••			110 - 160	14 - 17	500 - 700
Araldite® LY 3585 / Aradur® 5003-1	•••	••	••				40 - 48	6 - 8 at 40°C	440 - 500
RenLam® LY 113 / Ren® HY 98	•••	•••	•••	•••			90 - 100	18 - 20	300 - 320

Continued on next page

<sup>1</sup> Adjustable reactivity with DY 070 and Accelerator 960-1 ratio

••• Highly recommended

<sup>2</sup> Measured with internal release agent (1-2 phr)

•• Recommended

<sup>3</sup> High Pressure RTM

Applied cure schedule	Tg	Flexural strength	Ultimate flexural elongation	Fracture properties K <sub>1c</sub> G <sub>1c</sub>	Key features
	DSC, 10 K/min				
	ISO 11357-2	ISO 178		ISO 13586	
	°C	MPa	%	MPa/m J/m <sup>2</sup>	
8h at 80°C	68 - 72	104 - 115	10.5 - 11.5	1.0 - 1.1 360 - 380	Hardener XB 3403 and Aradur® 3405 can be mixed to adjust reactivity at constant resin/hardener mix ratio. High toughness.
8h at 80°C	68 - 72	116 - 130	9.0 - 10.0	1.1 - 1.3 460 - 480	
4h at 60°C + 6h at 80°C	70 - 75	100 - 125	9.0 - 11.0	2.1 - 2.3 1 250 - 1 400	Latent, very high toughness.
8h at 80°C	78 - 80	120 - 130	9.0 - 10.0	0.7 - 0.8 170 - 210	Aradur® 3489 and Aradur® 3492 can be mixed to adjust reactivity at constant resin/hardener mix ratio. Aradur® 3489 based system provides low exothermic behavior.
8h at 80°C	80 - 85	125 - 135	7.0 - 7.5	0.7 - 0.8 210 - 230	
4h at 60°C + 6h at 80°C	76 - 81	125 - 145	6.5 - 9.5	0.8 - 1.0 160 - 200	Hardener XB 3404-1, XB 3403 and Aradur® 3405 can be mixed to adjust reactivity at constant resin/hardener mix ratio.
4h at 60°C + 6h at 80°C	78 - 83	110 - 130	10.5 - 13.0	0.9 - 1.1 250 - 280	
4h at 60°C + 6h at 80°C	87 - 92	135 - 155	7.0 - 9.0	0.8 - 0.9 150 - 190	
8h at 80°C	80 - 84	118 - 130	10.5 - 12.5	0.9 - 1.1 260 - 310	Latent, low viscosity.
30 min at 100°C	87 - 93	100 - 110	7.0 - 8.5	1.7 - 1.9 900 - 1 100	Laminating system containing nano-technology, offering outstanding toughness.
8h at 80°C	92 - 98	125 - 130	7.0 - 8.0	0.8 - 1.0 215 - 245	Good mechanical properties after 23°C curing.
5h at 100°C	95 - 102	110 - 125	10.0 - 12.5	2.2 - 2.4 1 500 - 1 700	Very high toughness.
2 min at 115°C	105 - 115 CFRP DMA Tg	75 - 80 in tensile	8.0 - 10.0 in tensile	0.8 - 0.9 220 - 300	Latent, fast cure system for composite mass production.
30 sec at 140°C	95 - 105 CFRP DMA Tg	70 - 80 in tensile	5.0 - 7.0 in tensile	0.9 - 1.1 320 - 380	Very fast cure system for compression molding mass production.
30 min at 80°C + 2h at 120°C	108 - 115	108 - 118	7.0 - 9.0	0.9 - 1.0 230 - 290	Very fast.
1h at 80°C + 4h at 120°C	115 - 120	120 - 130	8.0 - 9.0	0.7 - 0.9 200 - 240	Excellent flexibility and high reactivity.
8h at 80°C	114 - 122 (max 120 - 134)	116 - 122	8.5 - 13.5	0.7 - 0.9 192 - 212	Very good mechanical properties after 23°C curing. Aerospace qualified.
30 min at 80°C + 2h at 120°C	120 - 130	115 - 125	6.0 - 9.0	0.8 - 0.9 180 - 230	Medium Tg, very fast.
24h at 23°C + 4h at 120°C	120 - 125	127 - 130	7.0 - 8.0	0.8 - 0.9 220 - 250	Suitable for tooling application: free stand post-cure after 23°C pre-cure conditions.

Continued

Product designation	Wet lay-up	Compression molding	RTM	Infusion	Filament winding	Pultrusion	Pot life	Gel time	Mix viscosity
Conditions							RT, 100ml	80°C	25°C
Norm									
Unit							min	min	mPa.s
Araldite® LY 1564 / Aradur® 917-1 / Accelerator 960-1 <sup>1</sup>				••	•••	•••	80 - 90h	30 - 40	450 - 700
Resin XB 6469 / Aradur® 2954	••	•••	•••	•••	••	••	740 - 810	38 - 42	220 - 240
Resin XB 3518 / Aradur® 22962	••	•••	•••	••			210 - 290	15 - 20	400 - 500
Araldite® LY 1564 / Aradur® 22962	••	•••	•••	•••			110 - 150	20 - 30	400 - 600
Araldite® LY 1135-1 / Aradur® 917-1 / Accelerator 960-1 <sup>1</sup>				••	•••	•••	56 - 62	15 - 21 at 100°C	600 - 1 000
Araldite® LY 1135-1A / Aradur® 1135-1B		••• EES <sup>3</sup>					-	1 - 2 at 110°C	3 200
Araldite® LY 556 / Ren® HY 5212		••	••		••	•••	260 - 280	110 - 120	11 500 - 12 500
Araldite® LY 1564 / Aradur® 2954	••		•••	••	••	••	480 - 600	35 - 45	500 - 700
Araldite® LY 3508 / Aradur® 22962	••		•••				90 - 150	24 - 40	1 800 - 2 100
Araldite® LY 1564 / Ren® HY 5211	•••	••	••	•••	••	••	27 - 31h	200 - 220	1 350 - 1 550
Araldite® LY 556 / Aradur® 917-1 / Accelerator DY 070 <sup>1</sup>				••	•••	•••	95 - 105h	140 - 160	600 - 900
Araldite® LY 556 / Aradur® 22962	•••	••	••				120 - 180	18 - 22	1 800 - 2 000
RenLam® LY 120 / Ren® HY 99	•••		•••	•••			210 - 230	20 - 25	300 - 350
Araldite® LY 3508 / Aradur® 2954	••		•••	••			320 - 380	9 - 14 at 100°C	2 600 - 3 300
Araldite® LY 1564 / Hardener XB 3473	•••	••	••	•••	•••	••	84 - 88h	410 - 430	1 000 - 1 200
Araldite® LY 556 / Aradur® HY 906 / Accelerator DY 070 <sup>1</sup>				••	•••	•••	50 - 55h	200 - 280	1 900 - 2 100
Araldite® LY 556 / Hardener XB 3473			••	••	••	••	32 - 37h	> 600	5 200 - 6 000
Resin XB 3292 / Hardener XB 3473	••	••	•••		••		78 - 86h	360 - 420	1 600 - 2 000
Araldite® CY 179 / Aradur® 917-1 / Accelerator DY 070 <sup>1</sup>				••	••	••	> 48h	60 - 80	100 - 200
Araldite® LY 8615 / Hardener XB 5173		••	•••	•••			300 - 400	24 - 28	270 - 370

Continued on next page

<sup>1</sup> Adjustable reactivity with DY 070 and Accelerator 960-1 ratio

••• Highly recommended

<sup>2</sup> Measured with internal release agent (1-2 phr)

•• Recommended

<sup>3</sup> Expandable Epoxy System



	Applied cure schedule	Tg	Flexural strength	Ultimate flexural elongation	Fracture properties K <sub>1c</sub> G <sub>1c</sub>	Key features
		DSC, 10 K/min				
		ISO 11357-2	ISO 178		ISO 13586	
		°C	MPa	%	MPa√m J/m <sup>2</sup>	
	4h at 80°C + 4h at 120°C	122 - 130	140 - 150	6.0 - 7.0	0.6 - 0.7 100 - 125	Low temperature cure anhydride curing system.
	90 min at 80°C + 1h at 150°C	125 - 135	100 - 110	6.5 - 7.5	0.95 - 1.0 350 - 390	Low viscosity, long pot life. Alternative to anhydride for filament winding and pultrusion when hot/wet performance is key.
	1h at 100°C + 2h at 140°C	128 - 138	120 - 135	8.5 - 10.0	0.6 - 0.8 160 - 180	Medium Tg, high elongation at break.
	15 min at 120°C + 2h at 150°C	130 - 140	124 - 132	9.0 - 11.0	0.8 - 1.0 200 - 260	Medium Tg, high elongation at break.
	4h at 80° + 4-8h at 140°C	132 - 138	150 - 162	6.5 - 8.0	0.57 - 0.65 90 - 115	Medium Tg, very latent anhydride curing system.
	2 - 3 min at 150°C - 160°C	135 - 145	-	-	-	Expandable EP system. High Tg, low density.
	2h at 80°C + 2h at 120°C + 4h at 150°C	140 - 150	130 - 140	6.0 - 7.0	0.6 - 0.65 140 - 150	Good chemical resistance. Ren® HY 5212: faster version of Ren® HY 5211.
	1h at 80°C + 8h at 140°C	143 - 148	120 - 124	6.5 - 7.5	0.7 - 0.8 150 - 180	Medium Tg, alternative to anhydride for filament winding and pultrusion when hot/wet performance is key.
	1h at 80°C + 2h at 150°C	144 - 154	120 - 135	8.0 - 10.0	0.9 - 1.2 340 - 380	Medium Tg, toughened.
	30 min at 130°C + 12h at 160°C	145 - 155	120 - 130	7.0 - 8.0	0.6 - 0.7 120 - 130	Good chemical resistance. Ren® HY 5211: faster version of XB 3473.
	4h at 80°C + 8h at 140°C	148 - 153	125 - 135	6.0 - 8.5	0.5 - 0.6 85 - 95	Medium Tg, very latent anhydride curing system.
	15 min at 120°C + 2h at 150°C	148 - 158	130 - 136	7.5 - 10.0	0.7 - 0.8 140 - 175	Good balance between Tg and elongation at break.
	8h at 40°C + 8h at 150°C	150 - 155	120 - 126	6.5 - 7.5	0.6 - 0.7 170 - 185	Suitable for tooling application: free stand post-cure after 40°C pre-cure conditions.
	1h at 80°C + 8h at 160°C	150 - 158	125 - 135	7.0 - 8.0	0.8 - 1.0 250 - 290	High Tg, toughened.
	30 min at 130°C + 12h at 160°C	165 - 175	100 - 110	5.5 - 6.5	0.7 - 0.8 170 - 190	Good chemical resistance.
	2h at 120°C + 8h at 160°C	165 - 175	100 - 140	4.0 - 7.0	0.6 - 0.8 100 - 125	High Tg, very latent anhydride curing system.
	2h at 120°C + 4h at 180°C	185 - 194	110 - 120	5.5 - 6.5	0.7 - 0.9 190 - 220	High chemical resistance.
	2h at 100°C + 1h at 140°C + 1h at 180°C + 2h at 200°C	195 - 203	98 - 108	4.0 - 4.5	0.5 - 0.6 70 - 75	Very high Tg, high chemical resistance.
	1h at 100°C + 6h at 180°C	200 - 205	75 - 95	2.0 - 3.5	0.4 - 0.5 65 - 75	Very high Tg, very latent anhydride curing system.
	90 min at 80°C + 1h at 150°C + 1h at 180°C	200 - 207	113 - 117	4.0 - 5.0	0.5 - 0.7 130 - 165	Suitable for tooling application: free stand post-cure after 40°C pre-cure conditions.

Continued

Product designation	Wet lay-up	Compression molding	RTM	Infusion	Filament winding	Pultrusion	Pot life	Gel time	Mix viscosity	
Conditions							RT, 100ml	80°C	25°C	
Norm										
Unit							min	min	mPa.s	
Araldite® LY 8615 / Aradur® 8615	••	••	••	•••	••	••	14 - 16h	34 - 38	480 - 580	
Araldite® LY 8615 / Ren® HY 5212			••		••	•••	460 - 480	58 - 62	2 000 - 2 100	
Resin XB 9721 / Aradur® 917-1 / Accelerator DY 070 <sup>1</sup>					••	•••	110 - 130h	6 - 9 at 120°C	550 - 750	
Resin XB 9721 / Hardener XB 3473		••	••		••	••	80 - 95h	80 - 100 at 120°C	14 000 - 17 000	
Araldite® FST 40002 / FST 40003		••	•••	•••		•••	> 24 h	see data sheet	600 - 800	
Araldite® FST 40004 / FST 40005		••	•••	•••		•••	> 24 h	see data sheet	400 - 500	

<sup>1</sup> Adjustable reactivity with DY 070 and Accelerator 960-1 ratio

••• Highly recommended

<sup>2</sup> Measured with internal release agent (1-2 phr)

•• Recommended

## Formulated systems for pre-impregnation (Prepregs)

Product designation	Mix viscosity	B-Staging	Shelf-life	Gel time <sup>1</sup>	Applied cure schedule	
Conditions	25°C	23°C	23°C	120°C		
Norm						
Unit	mPa.s	h		min		

### Chemical B-stage process

 Araldite® LY 1556 / Aradur® 1571 / Accelerator 1573 / Hardener XB 3403	4 000 - 6 000	24 - 48	> 6 weeks	6 - 11	2h at 120°C	
Araldite® LY 3508 / Aradur® 1571 / Accelerator 1573 / Hardener XB 3403	6 650 - 7 450	24 - 48	> 4 weeks	4 - 12	4h at 120°C	

### Hot-melt process

Araldite® LY 3514 / Aradur® 1571 / Accelerator 1573	14 000 - 15 000 at 70°C	n.a.	> 5 weeks	17 - 21	30 min at 90°C + 2h at 120°C	
Resin XB 3515 / Aradur® 1571 / Accelerator 1573	24 000 - 28 000 at 55°C	n.a.	> 5 weeks	10 - 13	1h at 120°C + 2h at 140°C	

<sup>1</sup> Adjustable reactivity with Accelerator 1573 ratio

n.a.: not applicable / n.m.: not measured

Applied cure schedule	Tg	Flexural strength	Ultimate flexural elongation	Fracture properties K <sub>1C</sub> G <sub>1C</sub>	Key features
	DSC, 10 K/min				
	ISO 11357-2	ISO 178		ISO 13586	
	°C	MPa	%	MPa√m J/m <sup>2</sup>	
90 min at 80°C + 1h at 150°C + 1h at 180°C	200 - 210	82 - 86	2.5 - 4.0	0.6 - 0.8 130 - 165	Suitable for tooling application: free stand post-cure after 40°C pre-cure conditions.
90 min at 80°C + 1h at 150°C	205 - 215	135 - 140	5.5 - 6.0	0.6 - 0.65 125 - 135	Very high Tg, good chemical resistance. Ren <sup>®</sup> HY 5212: faster version of Ren <sup>®</sup> HY 5211.
2h at 120°C + 2h at 160°C + 2h at 200°C + 4h at 220°C	205 - 215	85 - 100	2.5 - 3.0	0.4 - 0.5 45 - 60	Very high Tg, very latent anhydride curing system.
2h at 120°C + 2h at 160°C + 2h at 200°C + 4h at 220°C	232 - 238	105 - 125	3.0 - 4.5	0.6 - 0.7 95 - 100	High chemical resistance.
1h at 100°C + 1h at 120°C + 2h at 180°C	250 - 260	90 - 110 in tensile	4.0 - 6.0 in tensile	0.85 - 0.95 250 - 300	FST (Fire, Smoke & Toxicity) unfilled inherently flame retardant. High mechanical performance. Meets FST according to FAR 25.853.
1h at 100°C + 1h at 120°C + 2h at 180°C	260 - 270	40 - 50 in tensile	1.0 - 2.0 in tensile	0.55 - 0.65 100 - 150	FST (Fire, Smoke & Toxicity) unfilled inherently flame retardant. Meets HL1 / HL2 according to EN 45545-2 R1/R7.

Tg	Flexural strength	Ultimate flexural elongation	Fracture properties K <sub>1C</sub> G <sub>1C</sub>
DSC, 10 K/min			
ISO 11357-2	ISO 178		ISO 13586
°C	MPa	%	MPa√m J/m <sup>2</sup>

105 - 115	125 - 140	7.0 - 10.0	0.7 - 0.9 130 - 250
115 - 125	110 - 120	5.5 - 8.0	1.4 - 1.7 850 - 1 000

120 - 130	135 - 150	6.0 - 9.0	0.8 - 0.9 280 - 320
140 - 145	120 - 140	4.5 - 6.5	1.2 - 1.3 400 - 440

## Preforming epoxy binders for RTM process

Product designation	Softening point	Tg	Typical preforming cycle
Conditions		DSC, 10 K/min	
Norm	DIN 51920	ISO 11357-2	
Unit	°C	°C	
<b>Araldite® LT 3366</b>	ca. 150	75 - 85	20 ± 10 sec at 180 ± 20°C + cold stamping.

## Structural adhesives (epoxy)

Product designation	Mixing ratio	Pot life	Recommended cure schedule	LSS <sup>1</sup>	Tg	Gap filling	Key features
Conditions		23°C, 100g					
Unit		min		MPa	°C	mm	
<b>Araldite® 2029-1<sup>2</sup></b>	1 : 1	35 - 45	RT or at elevated temperature	24	25 - 35	5	High elongation at break, high strength.
<b>Araldite® 2015</b>	1 : 1	45 - 60	RT or at elevated temperature	17	60	10	Toughened, GL approved, resistant to weathering.
<b>Araldite® 2031</b>	1 : 1	50 - 65	RT or at elevated temperature	18	60	10	Toughened, resistant to weathering.
<b>Araldite® AV 4858 / Hardener HW 4858</b>	2 : 1	150	RT or at elevated temperature	38	60	10	High peel strength, high toughness.
<b>Araldite® 2014-1</b>	2 : 1	50 - 65	RT or at elevated temperature	18	75 - 85	5	Resistant to temperature, KIWA approved (contact with drinking water).
<b>Araldite® AV 4859 / Hardener HW 4859</b>	2 : 1	100	RT or at elevated temperature	33	50 - 120	10	Resistant to high temperature after post cure, high toughness.
<b>Araldite® AW 4510 / Hardener HV 4511</b>	2 : 1	85 - 100	2h at 110°C	16	120 - 125	10	Resistant to high temperature, resistant to chemicals.

<sup>1</sup> On epoxy composites - LSS = Lap Shear Strength

<sup>2</sup> Polyurethane chemistry

Note: All adhesives are available in different pack sizes including cartridges for easy use in the field

## Shell bonding adhesive, gap filling

Product designation	Pot life	Typical cure schedule	LSS <sup>1</sup>	Tg	Gap filling	Key features
Conditions	23°C, 500g					
Unit	min		MPa	°C	mm	
<b>Araldite® AW 4856 / Hardener HW 4856</b>	240 - 280	5h at 70°C	25 - 30 on 0.5 mm 13 - 16 on 3.0 mm	80 - 85	up to 40	Assembly adhesive for large structures, particularly where thick bond lines may occur.

<sup>1</sup> On acid etched aluminium - LSS = Lap Shear Strength

## Fast assembly and repair

Product designation	Chemistry	Pot life	Fixture time	LSS <sup>1</sup>	Tg	Gap filling	Key features
Conditions		23°C, 100g	23°C				
Unit		min	min	MPa	°C	mm	
<b>Araldite® 2012</b>	EP system	6	20	18	40 - 50	self leveling	Short gel time, multipurpose.
<b>Araldite® AW 2101 / Hardener HW 2951</b>	EP system	6	60	20	40 - 45	5	Rigid, low shrinkage.
<b>Araldite® 2021</b>	MMA system	3 - 5	8	20 - 22	65 - 80	3 - 5	Very fast setting, tough adhesive for rapid fixing and filling of small voids.
<b>Araldite® 2022</b>	MMA system	10	18	25	65 - 80	5	No sagging, toughened.
<b>Araldite® 2048-1</b>	MMA system	10	35	24	65 - 75	8	Flexible, gap filling.

<sup>1</sup> On acid etched aluminium - LSS = Lap Shear Strength

Note: All adhesives are available in different pack sizes including cartridges for easy use in the field

EP: Epoxy

MMA: Methacrylate



## With innovation

Every day, all over the world, our Technical Competence centers engage in intensive research and development focusing on one goal : to deliver innovative solutions by working hand-in hand with our business partners. Together through a continual exchange of ideas, supported by an experienced team of sales and technical specialists, we strive to deliver innovative and regulatory compliant (eg REACH compliant) solutions.

We track both new market expectations and changing regulations. Protection of the environment, as well as health and safety are paramount concerns, playing an integral part in our development projects.

By providing unique, certified or patented technologies, combined with high quality and reliability, our chemists and experts bring enhanced value to our customers, ensuring their success.

## With customer intimacy

We market a unique product portfolio and a broad range of forward-looking solutions for our customers. Customers and partners benefit from an advanced level of service in:

- > Product development and quality
- > Product trials in-house and with customers
- > Customer seminars and training
- > Trouble-shooting and problem-solving

Partnership with our customers is more than simply «putting them first». It requires long-term commitment to forging close relationships that create synergies of knowledge, security and adaptability to create a successful, shared future.

## With care

Sustainability is a fundamental part of our corporate and business strategy. We see a better world in which our innovations help reduce consumption of natural resources and improve the quality of life for people everywhere. We are identifying the long - term trends that affect our markets and looking to see how products and applications can play a part in supporting and providing solutions to the challenges those markets face.





We value  
your  
challenge



## Huntsman Advanced Materials

Our Advanced Materials division is a leading global chemical solutions provider with a long heritage of pioneering technologically advanced epoxy, acrylic and polyurethane-based polymer products.

Our capabilities in high-performance adhesives and composites, delivered by more than 1 600 associates, serve over 2 000 global customers with innovative, tailor-made solutions and more than 1 500 products which address global engineering challenges.

# HUNTSMAN

Enriching lives through innovation

**For more information**  
[www.huntsman.com/advanced\\_materials](http://www.huntsman.com/advanced_materials)  
[advanced\\_materials@huntsman.com](mailto:advanced_materials@huntsman.com)

## Global presence – 13 manufacturing sites



Ihr Lieferant:

**T-E-Klebetchnik**

*Anwendungs-, Verfahrens- und Dosiertechnik*

Großer Kolonnenweg 3  
Tel.: 0511 - 353982 - 0  
internet: [www.t-e-klebetchnik.de](http://www.t-e-klebetchnik.de)

30163 Hannover  
Fax.: 0511 353982 - 40  
mail: [infotek@t-e-klebetchnik.de](mailto:infotek@t-e-klebetchnik.de)



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Download our mobile App and easily find the product to fulfill your need.



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