


HUNTSMAN

Enriching lives through innovation

Advanced Materials

Araldite[®] 

Strength in bonding **2000+** 

Adhesives selector guide



adhereTM

better bonding from intertronics

www.intertronics.co.uk/adhere

Properties and performance

	Chemical type	Key features	Metals						
			Mild steel	Stainless steel	Aluminium	Copper	Brass	Galvanized steel	
Conditions									
Unit									
Araldite® 2011	EP	> Multi purpose > Long working life > Low shrinkage	●●●	●●●	●●●	●●●	●●●	●●●	●●●
Araldite® 2012	EP	> Fast curing > General purpose > Low shrinkage	●●●	●●●	●●●	●●	●●●	●	
Araldite® 2013	EP	> Metal coloured paste > Suitable for vertical applications > Low shrinkage	●●●	●●●	●●●	●●	●●	●●●	
Araldite® 2014-1	EP	> Grey paste > High temperature and chemical resistance > Low shrinkage	●●●	●●●	●●●	●●	●●	●	
Araldite® 2015	EP	> Toughened paste > Ideal for GRP, SMC and dissimilar substrates > Low shrinkage	●●●	●●●	●●●	●●●	●●●	●	
Araldite® 2031	EP	> Thixotropic – non slumping > Toughened adhesive, resilient bond > Suitable for metal and composite bonding, good adhesion onto polyamides	●●	●●●	●●	●●●	●●●	●●	
Araldite® 2018	PUR	> Good UV stability > Ideal for bonding thermoplastics > Long working life	●●	●	●	●	●	●●	
Araldite® 2028	PUR	> Transparent > Fast curing > UV stable	●●	●●	●●	●	●	●●●	
Araldite® 2029	PUR	> Medium open time > Designed to bond composites and metals > Adhesion to copper and brass	●●●	●●●	●●●	●●●	●●	●●●	
Araldite® 2045	PUR	> Ideal for bonding thermoplastics and thermosets > Good flexibility > Gap filling properties	●●	●●	●●	●●	●●	●●	
Araldite® 2021	MMA	> Rapid curing > High peel strength > Multi purpose	●●●	●●●	●●●	●●	●	●●	
Araldite® 2022	MMA	> Good sanding properties > Ideal for bonding thermoplastics	●●●	●●●	●●●	●●	●●	●●●	
Araldite® 2047	MMA	> Gap filling > Requires minimal surface treatment	●●	●●●	●●	●●●	●●●	●●●	
Araldite® 2048	MMA	> Tolerant to "less than ideal" pretreatment > Gap filling up to 8 mm > Tough flexible bonds for use in dynamic environment	●●	●●●	●●●	●●●	●●●	●●	
Araldite® 2052	MMA	> Very high temperature and chemical resistance > Tolerant to "less than ideal" pretreatment > Thixotropic, non-sagging	●●	●●●	●●●	●●●	●●●	●	
Araldite® 2060	MS	> Elastic brilliant white adhesive for indoor and outdoor applications > Primerless adhesion on most substrates > Non-hazardous, does not contain isocyanate	●●●	●●●	●●●	●●●	●●●	●●●	
Araldite® 2061	MS	> Elastic black adhesive for indoor and outdoor applications > Primerless adhesion on most substrates > Non-hazardous, does not contain isocyanate	●●●	●●●	●●●	●●●	●●●	●●●	

EP: Epoxy adhesives
 PUR: Polyurethane adhesives
 MMA: Methacrylate adhesives
 MS: Silane modified polymers

Thermosets / composites				Thermoplastics					Miscellaneous substrates				Viscosity	Work time
GRP (UP)	GRP (EP)	CFRP	SMC	PVC	PA	ABS, ASA, SAN	PC	PMMA	Ceramic	Glass	Rubber	Wood		
														Pot life (100 g at 23 °C)
													Pa·s	min
●●●	●●●	●●●	●●●	●	●●	●●●	●●	●	●●●	●●●	●●●	●●●	40	100
●●●	●●●	●●	●●	●●	●	●●	●●	●	●●●	●●●	●	●●●	30	6
●●●	●●	●●	●●●	●●●	●	●	●	●●	●●●	●●●	●	●●●	thixotropic	65
●●●	●●●	●●	●●●	●●	●	●●	●	●	●●	●●●	●●	●●●	thixotropic	60
●●●	●●●	●●●	●●●	●●	●	●●	●●	●●	●●●	●●●	●●	●●●	thixotropic	35
●●●	●●●	●●	●●●	●●	●●●	●●	●●	●	●●●	●●●	●●	●●●	thixotropic	60
●●●	●●●	●●●	●●●	●●	●●	●●●	●●●	●●	●●	●●	●●●	●●	8	40
●●●	●●●	●●●	●●●	●●●	●●	●●●	●●●	●●	●●	●●	●●	●●	5	6
●●●	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●	●●	●●	●●	●●	thixotropic	40
●●●	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●	●●	●●	●●	●●	thixotropic	10
●●●	●●	●●	●●	●●●	●●	●●	●●●	●●●	●●●	●●●	●●	●	thixotropic	3
●●●	●●	●●	●●	●●●	●	●●●	●●●	●●●	●●●	●●	●●	●	thixotropic	10
●●	●	●	●●	●●●	●	●●●	●●●	●●●	●●	●●	●●	●	thixotropic	5
●●	●●●	●●●	●●●	●●●	●	●●●	●●●	●●●	●●	●●	●●	●	thixotropic	10
●	●	●	●	●●	●	●●●	●●	●●●	●●●	●●●	●	●	thixotropic	15
●●●	●●●	●●●	●●●	●●	●●	●●●	●●●	●●	●●●	●●●	●●	●●●	thixotropic	15*
●●●	●●●	●●●	●●●	●●	●●	●●●	●●●	●●	●●●	●●●	●●	●●●	thixotropic	15*

* Skin formation time
 ** Tack free time
 *** LSS = Lap Shear Strength

The data below indicates the detailed properties and performance of each product. This data was obtained following recommended pre-treatment of substrates.

Cure speed	Mechanical properties		Bond strength	Durability in			Colour (mixed)	Packaging						
	Cure time at 23 °C to LSS***= 1 N/mm ²	E-modulus at 23 °C		Elongation at break at 23 °C	LSS*** aluminium at 23 °C	Water / humidity		Chemicals	Heat	50 ml	200 ml	400 ml	500 ml	290 ml
min	N/mm ²	%	N/mm ²											
420	1900	9	26	●	●●	●●	yellow	○	○	○				○
20	2520	4	18	●●	●●●	●●	yellow	○	○					○
240	2530	1	18	●●	●●	●●	grey	○	○	○				○
180	4000	1	19	●●●	●●●	●●●	grey	○	○	○				○
240	2000	4	16	●●●	●●●	●●●	beige	○	○	○				○
360	1000	5	19	●●●	●●●	●●●	black	○		○				
240	60	45	7	●●	●	●●	colourless		○					
15	10	34	14	●	●	●●	transparent	○	○					
240	580	47	25	●●	●●	●●●	grey	○		○				
100	36	78	10	●	●	●●	beige	○		○				
8	2300	10	23	●●	●●	●●●	yellow	○		○				
18	2050	3	25	●●	●	●●●	yellow	○		○				
5	850	32	12	●●	●●	●●	brown	○			○			
15	360	91	24	●●	●	●●●	red	○			○			
20	1550	5	25	●●	●●●	●●●	red				○			
40**	1	300	1	●●●	●●	●●	white						○	
40**	1	250	1	●●●	●●	●●	black						○	

Key questions

Adhesives	Epoxy	Methacrylate	Polyurethane	Silane modified polymers
	Load-bearing adhesives good for metals and composites	Fast setting and resilient for composites, thermoplastics and metals	Flexible adhesive for composites and certain thermoplastics	Elastic adhesive for indoor and outdoor applications
1. Do you require a multi-purpose adhesive with a rapid cure?	Araldite® 2012	Araldite® 2047	–	–
2. Do you require a multi-purpose adhesive with a long working life?	Araldite® 2011	–	Araldite® 2029	Araldite® 2060 Araldite® 2061
3. Do you require a fast cure adhesive?	Araldite® 2012	Araldite® 2021 Araldite® 2047	Araldite® 2028	–
4. Do you have large areas for bonding and/or require a long working time?	Araldite® 2013 Araldite® 2014-1 Araldite® 2031	–	Araldite® 2029 Araldite® 2018	–
5. Do you require high toughness and the ability to bond different substrates?	Araldite® 2015 Araldite® 2031	Araldite® 2022 Araldite® 2048 Araldite® 2047	Araldite® 2029	–
6. Do you require chemical resistance or performance at high temperatures?	Araldite® 2014-1	Araldite® 2052	–	–
7. Do you require an adhesive for gap filling or vertical applications?	Araldite® 2013 Araldite® 2014-1 Araldite® 2015 Araldite® 2031	Araldite® 2021 Araldite® 2022 Araldite® 2047 Araldite® 2048	Araldite® 2029	Araldite® 2060 Araldite® 2061
8. Do you require a flexible adhesive?	–	–	Araldite® 2018 Araldite® 2028 Araldite® 2045	Araldite® 2060 Araldite® 2061
9. Do you require a transparent adhesive?	–	–	Araldite® 2028	–

Huntsman Advanced Materials

We are a leading global supplier of synthetic and formulated polymer systems for customers requiring high-performance materials which outperform the properties, functionality and durability of traditional materials. Over 2300 associates at 13 locations worldwide work to fulfill this promise day by day.

More than 9 000 companies around the world use Huntsman Advanced Materials technologies in key markets such as adhesives and inks, aerospace, automotive, coatings, construction, electronics, medical, marine, power transmission and distribution, sports equipment and wind power generation.

Markets

Structural bonding techniques play a pivotal role in today's engineering industries. As designers strive to bring lightweight and durable products to market in the quickest time possible, they are increasingly turning to industrial adhesives to solve complex design issues. Building on our 60 years heritage as pioneers in epoxy adhesive technology, Huntsman has developed a full range of adhesives to address many of the design issues engineers face on a daily basis.

Based on the four chemistries – epoxy, polyurethane, methacrylate and silane modified polymers, this complete range provides superior fastening and bonding solutions for plastic, metal and composite materials under the established Araldite® brand.

Global presence – 13 manufacturing sites



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DANLUBE A/S

"Så ved du det holder"

Tune Parkvej 5
4030 Tune
Tlf.: +45 70 25 12 80
info@danlube.dk
www.danlube.dk

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More detailed information about these products can be found on our website:
www.araldite2000plus.com
For any other information, please send an e-mail to:
araldite2000plus@huntsman.com

Europe/Africa:
Huntsman Advanced Materials (Switzerland) GmbH
Klybeckstrasse 200
P.O. Box
4002 Basel
Switzerland
Tel. +41 61 299 11 11
Fax +41 61 299 11 12

India/Middle East:
Huntsman Advanced Materials (India) Pvt. Ltd.
5th Floor, Bldg. No. 10
Solitaire Corporate Park, 167
Guru Hargovindji Marg, Chakal, Andheri (East)
Mumbai – 400 093
India
Tel. +91 22 4095 1556-60
Fax +91 22 4095 1300/1400/1500

Asia/Pacific:
Huntsman Advanced Materials (Guangdong) Co., Ltd.
Rooms 4903 – 4906, Maxdo Center
8 Xing Yi Road
Shanghai, 200336
P.R. China
Tel. +86 21 2208 7588
Fax +86 21 2208 7511

Americas:
Huntsman Advanced Materials Americas Inc.
10003 Woodloch Forest Drive
The Woodlands
Texas 77380
USA
Tel. +1 888 564 9318
Fax +1 281 719 4047

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