

# Key questions

Adhesives	Epoxy	Methacrylate	Polyurethane
	Load-bearing adhesives good for metals and composites	Fast setting and resilient for composites, thermoplastics and metals	Flexible adhesive for composites and certain thermoplastics
1. Do you require a multi-purpose adhesive with a rapid cure?	Araldite® 2012	Araldite® 2047-1	-
2. Do you require a multi-purpose adhesive with a long working life?	Araldite® 2011	-	Araldite® 2029
3. Do you require a fast cure adhesive?	Araldite® 2012	Araldite® 2021 Araldite® 2047-1	Araldite® 2028-1
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® 2047-1	Araldite® 2029
6. Do you require chemical resistance or performance at high temperatures?	Araldite® 2014-1	Araldite® 2052-1	-
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® 2047-1 Araldite® 2048	Araldite® 2029
8. Do you require a flexible adhesive?	-	-	Araldite® 2018 Araldite® 2028-1
9. Do you require a transparent adhesive?	-	-	Araldite® 2028-1

## Huntsman Advanced Materials

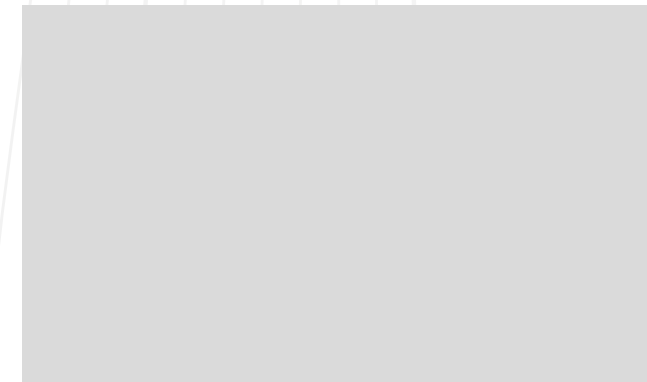
Our Advanced Materials division is a leading global chemical solutions provider with a long heritage of pioneering technologically advanced epoxy, acrylic and polyurethane-based polymer products.

Our capabilities in high-performance adhesives and composites, delivered by more than 2300 associates, serve over 3000 global customers with innovative, tailor-made solutions and more than 1500 products which address global engineering challenges.

## Global presence – 13 manufacturing sites



## Distributed by



# HUNTSMAN

Enriching lives through innovation

**For more information**  
www.huntsman.com/advanced\_materials  
advanced\_materials@huntsman.com

**Europe**  
Huntsman Advanced Materials (Switzerland) GmbH  
Kybeckstrasse 200  
P.O. Box  
4002 Basel  
Switzerland  
Tel. +41 61 299 20 41  
Fax +41 61 299 20 40

**India, Middle East, Africa & Turkey**  
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  
Fax + 91 22 4095 1300 / 1500

**Asia / Pacific**  
Huntsman Advanced Materials (Guangdong) Co., Ltd.  
Shanghai Suites 4604 – 4606, 46F 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

### Legal information

All trademarks mentioned are either property of or licensed to Huntsman Corporation or an affiliate thereof in one or more, but not all, countries. Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of either Huntsman Advanced Materials LLC, or its appropriate affiliate including without limitation Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas Inc., or Huntsman Advanced Materials (Hong Kong) Ltd. or Huntsman Advanced Materials (Guangdong) Ltd. ("Huntsman"). The following supercedes Buyer's documents. While the information and recommendations included in this publication are, to the best of Huntsman's knowledge, accurate as of the date of publication, NOTHING CONTAINED HEREIN IS TO BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES. No statements or recommendations made herein are to be construed as a representation about the suitability of any Product for the particular application of Buyer or user or as an inducement to infringe any patent or other intellectual property right. Data and results are based on controlled conditions and/or lab work. Buyer is responsible to determine the applicability of such information and recommendations and the suitability of any Product for its own particular purpose, and to ensure that its intended use of the Product does not infringe any intellectual property rights. The Product may be or become hazardous. Buyer should (i) obtain Material Safety Data Sheets and Technical Data Sheets from Huntsman containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product, (ii) take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product and (iii) comply with and ensure that its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product comply with all safety information contained in the applicable Material Safety Data Sheets, Technical Data Sheets or other instructions provided by Huntsman and all applicable laws, regulations and standards relating to the handling, use, storage, distribution and disposal of and exposure to the Product. Please note that products may differ from country to country. If you have any queries, kindly contact your local Huntsman representative.

© 2012 Huntsman Corporation. All rights reserved.  
Ref. No. AdMat Araldite® 2000plus selector guide 06.12\_EN\_EU

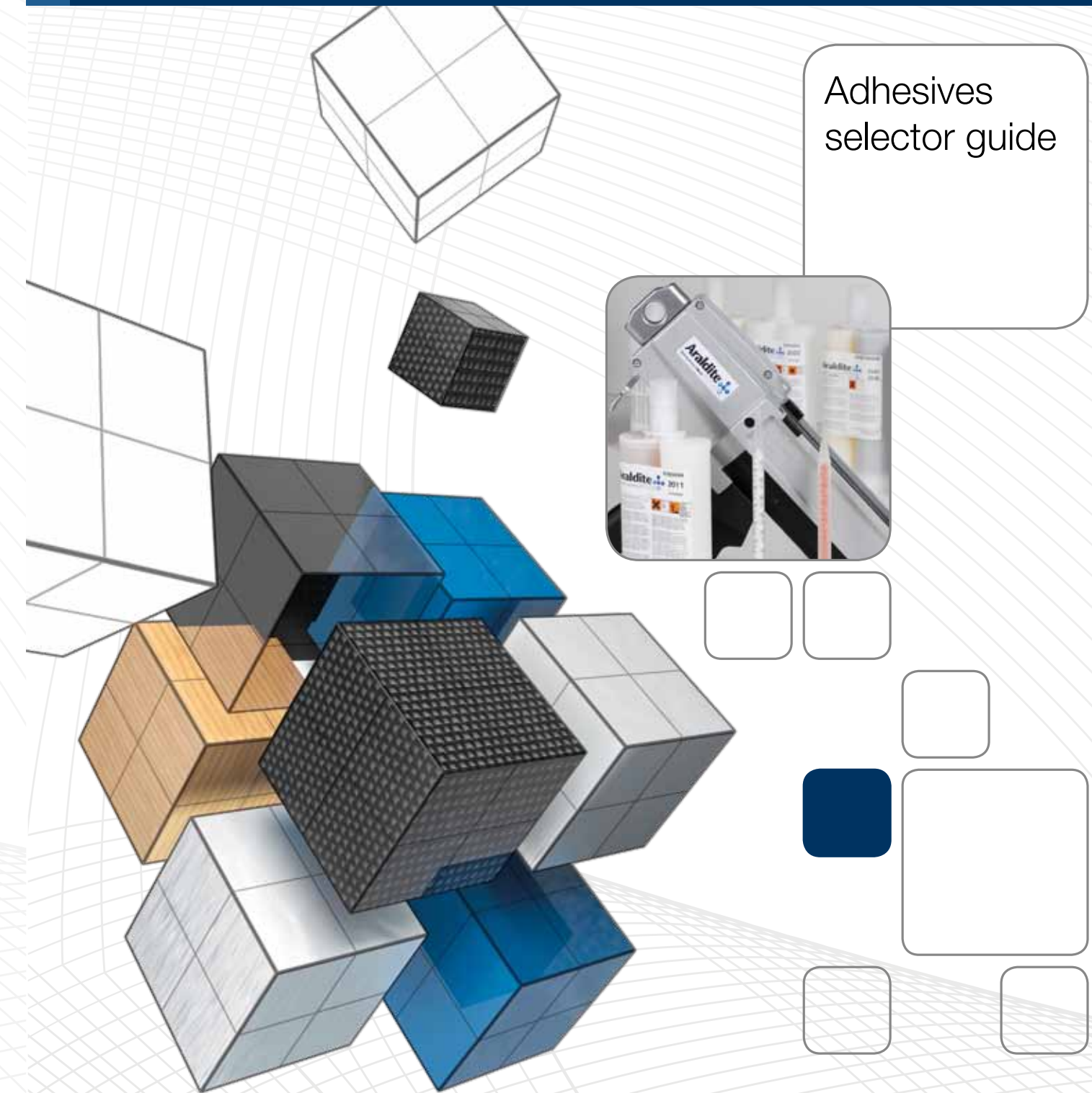
# HUNTSMAN

Enriching lives through innovation

## Advanced Materials

**Araldite®** adhesives  
Strength in bonding 2000+

## Adhesives selector guide



## Properties and performance

	Chemical type	Key features	Metals							Thermosets / composites				Thermoplastics					Miscellaneous substrates				Viscosity	Work time		Cure speed	Mechanical properties		Bond strength	Durability in			Colour (mixed)	Packaging				
			Mild steel	Stainless steel	Aluminium	Copper	Brass	Galvanized steel		GRP (UP)	GRP (EP)	CFRP	SMC	PVC	PA	ABS, ASA, SAN	PC	PMMA	Ceramic	Glass	Rubber	Wood					E-modulus at 23 °C	Elongation at break at 23 °C		LSS* aluminium at 23 °C	Water/ humidity	Chemicals		Heat	50ml	200ml	380ml	480ml
Conditions																							Pot life (100g at 23 °C)		Cure time at 23 °C to LSS* = 1 N/mm²	E-modulus at 23 °C	Elongation at break at 23 °C	LSS* aluminium at 23 °C	Water/ humidity	Chemicals	Heat		50ml	200ml	380ml	480ml	WP (2kg)	
Unit																						Pa·s	min		min	N/mm²	%	N/mm²										
<b>Araldite® 2011</b>	EP	> Multi purpose > Long working life > Good resistance to dynamic loading	●●●	●●●	●●●	●●●	●●●	●●●		●●●	●●●	●●●	●●●	●	●●	●●●	●●	●	●●●	●●●	●●●	●●●	40	100		420	1900	9	26	●	●●	●●	yellow	○	○	○	○	○
<b>Araldite® 2012</b>	EP	> Fast curing > General purpose > Good long term durability	●●●	●●●	●●●	●●	●●●	●		●●●	●●●	●●	●●	●●	●	●●	●●	●	●●●	●●●	●	●●●	30	6		20	2520	4	18	●●	●●●	●●	yellow	○	○			○
<b>Araldite® 2013</b>	EP	> Metal coloured paste > Suitable for vertical applications > Good environmental, chemical and temperature durability	●●●	●●●	●●●	●●	●●	●●●		●●●	●●	●●	●●●	●●●	●	●	●	●●	●●●	●●●	●	●●●	thixotropic	65		240	1300	1	18	●●	●●	●●	grey	○	○	○		○
<b>Araldite® 2014-1</b>	EP	> Grey paste > High temperature and chemical resistance > Excellent durability on metals and many chemicals	●●●	●●●	●●●	●●	●●	●		●●●	●●●	●●	●●●	●●	●	●●	●	●	●●	●●●	●●	●●●	thixotropic	60		180	4000	1	19	●●●	●●●	●●●	grey	○	○	○		○
<b>Araldite® 2015</b>	EP	> Toughened paste > Ideal for GRP, SMC and dissimilar substrates > Excellent resistance to dynamic loading	●●●	●●●	●●●	●●●	●●●	●		●●●	●●●	●●●	●●●	●●	●	●●	●●	●●	●●●	●●●	●●	●●●	thixotropic	35		240	2000	4	16	●●●	●●●	●●●	beige	○	○	○		○
<b>Araldite® 2031</b>	EP	> Toughened adhesive, resilient bond > Suitable for metal and composite bonding, good adhesion onto polyamides	●●	●●●	●●	●●●	●●●	●●		●●●	●●●	●●	●●●	●●	●●●	●●	●●	●	●●●	●●●	●●	●●●	thixotropic	60		360	1000	5	19	●●●	●●●	●●●	black	○		○		
<b>Araldite® 2018</b>	PUR	> Good UV stability > Ideal for bonding thermoplastics > Long working life	●●	●	●	●	●	●●		●●●	●●●	●●●	●●●	●●	●●	●●●	●●●	●●	●●	●●	●●●	●●	8	40		240	16	45	7	●●	●	●●	colourless		○			
<b>Araldite® 2028-1</b>	PUR	> Transparent > Fast curing > UV stable	●●	●●	●●	●	●	●●●		●●●	●●●	●●●	●●●	●●●	●●	●●●	●●●	●●	●●	●●	●●	●●	5	6		15	16	60	15	●	●	●●	transparent	○				
<b>Araldite® 2029</b>	PUR	> Medium open time > Designed to bond composites and metals > Well balanced strength and durability	●●●	●●●	●●●	●●●	●●	●●●		●●●	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●	●●	●●	●●	●●	thixotropic	40		240	580	47	25	●●	●●	●●●	grey	○				
<b>Araldite® 2021</b>	MMA	> Rapid curing > High peel and shear strength > Multi purpose	●●●	●●●	●●●	●●	●	●●		●●●	●●	●●	●●	●●●	●●	●●	●●●	●●●	●●●	●●●	●●	●	thixotropic	3		8	2300	5	23	●●	●●	●●●	yellow	○		○		
<b>Araldite® 2022</b>	MMA	> Ideal for bonding thermoplastics > Multi purpose > Good sanding properties	●●●	●●●	●●●	●●	●●	●●●		●●●	●●	●●	●●	●●●	●	●●●	●●●	●●●	●●●	●●	●●	●	thixotropic	10		18	2050	3	25	●●	●	●●●	yellow	○		○		
<b>Araldite® 2047-1</b>	MMA	> Outstanding adhesion to copper, brass, galvanized and stainless steel > Requires minimal surface treatment > Gap filling	●●	●●●	●●	●●●	●●●	●●●		●●	●	●	●●	●●●	●	●●●	●●●	●●●	●●	●●	●●	●	thixotropic	5		15	850	15	12	●●	●●	●●	brown	○			○	
<b>Araldite® 2048</b>	MMA	> Tolerant to "less than ideal" pretreatment > Gap filling up to 8 mm > Tough flexible bonds for use in dynamic environment	●●	●●●	●●●	●●●	●●●	●●		●●	●●●	●●●	●●●	●●●	●	●●●	●●●	●●●	●●	●●	●●	●	thixotropic	10		15	360	91	24	●●	●	●●●	red	○			○	
<b>Araldite® 2052-1</b>	MMA	> Very high temperature and chemical resistance > Tolerant to "less than ideal" pretreatment > Excellent on metals	●●	●●●	●●●	●●●	●●●	●		●	●	●	●	●●	●	●●●	●●	●●●	●●●	●●●	●	●	thixotropic	15		20	1750	7	24	●●	●●●	●●●	red				○	