

A total solution to high performance adhesive bonding

One stop shop technology for structural bonding of metals

• Fully comprehensive range of structural adhesives

Araldite® 2000 PLUS adhesives are available in a wide range of cartridge systems and small packs for convenient handling. These options allow the user to accurately deliver a measured quantity of adhesive with minimum wastage.

• Broad range of easy to use packing sizes

Araldite® 2000 PLUS adhesives are available in a wide range of cartridge systems and small packs for convenient handling. These options allow the user to accurately deliver a measured quantity of adhesive with minimum wastage.

• Local availability

No matter where you are in the world, Huntsman's strong global network means Araldite® 2000 PLUS adhesives can be supplied locally. Our operations span 30 countries and are supported by an established worldwide distribution framework.

Setting the industry standard for technical support

• Comprehensive telephone technical support

Huntsman sets the standard for technical support. Its industry experts can provide advice at a local level and can rapidly respond to customer challenges.

• On site technical assistance

Our network of technical support staff can give on site demonstrations and provide expert advice to find the best solution for a range of technical challenges.

• Access to significant case history database

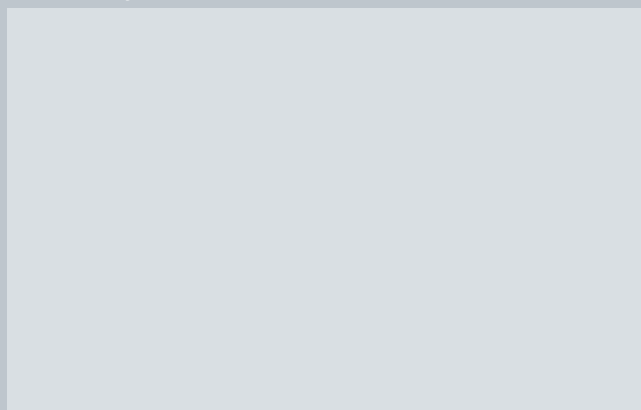
The Araldite® 2000 PLUS range can be used across a vast range of structural engineering applications. Sample case studies from our extensive library available on our website www.araldite2000plus.com.

• Additional reference guides available

Araldite® has been a leading adhesive brand for 60 years and our experience is reflected in our comprehensive technical support packages which can be accessed through our website and provide a complete solution to your adhesive processing and performance needs.



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HUNTSMAN

Enriching lives through innovation

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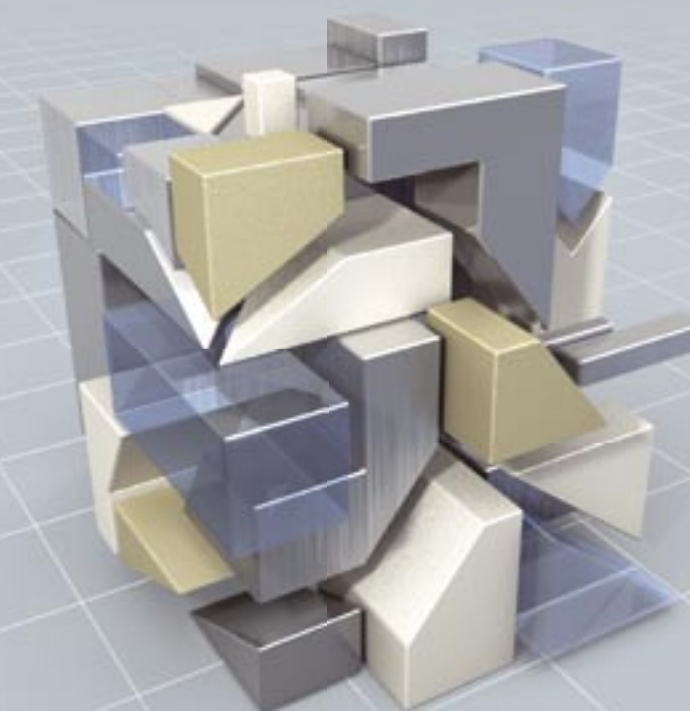
Ref.Nr. CCA Araldite2000plus Metals 04.07_EN

Design: www.zygmund.fr

Araldite® 2000+

Strength in bonding

bonding **metals**
to metals and dissimilar substrates



The appropriate solution for

Bonding metals to any substrates

Huntsman's recognised expertise in research and development allows us to offer a uniquely wide range of innovative solutions - all of which is backed by strong technical support and excellent levels of customer service. Araldite® 2000 PLUS is a comprehensive range of adhesives designed to satisfy all your metal bonding requirements.



Processing, performance and packaging data

Araldite® 2000 PLUS is a trusted brand – with more than 60 years experience in developing engineering adhesives.



	2011	2055	2010-1	2012	2013	2014-1*	2052**	2015	2021	2022	2047**
	Multi purpose	Rigid	Rapid cure		Chemical / temperature resistance			Toughened			
Chemical type	EP	PUR	EP	EP	EP	EP	MMA	EP	MMA	MMA	MMA
Fast curing			■	■			■		■	■	■
Gap filling		■			■	■	■	■	■	■	■

BONDING METALS TO METALS

	2011	2055	2010-1	2012	2013	2014-1*	2052**	2015	2021	2022	2047**
Ferrous metals	●	○	○	●	●	●	●	●	●	●	○
Stainless steel	●	●	●	●	●	●	●	●	●	●	○
Aluminium	●	●	●	●	●	●	●	●	●	●	○
Copper	●	●	●	●	●	●	●	●	●	○	●
Brass	●	○	●	●	●	●	●	●	●	●	●
Zinc / Galvanised metal	●	●	●	○	●	●	○	○	○	●	●

BONDING METALS TO PLASTICS

	2011	2055	2010-1	2012	2013	2014-1*	2052**	2015	2021	2022	2047**
GRP	●	●	○	●	●	●	○	●	●	●	○
CFRP	●	○	●	●	●	●	○	●	●	●	○
SMC	●	●	○	○	●	●	○	●	○	○	○
ABS	●	●	○	○	○	○	●	○	○	●	○
PVC	○	●	○	○	○	○	●	○	●	●	○
PMMA	○	○	○	○	○	○	●	●	●	●	●
Polycarbonate	○	○	○	○	○	○	●	○	●	●	●
Polyamides	●	○	○	○	○	○	○	○	○	○	○

BONDING METALS TO NON-METALS

	2011	2055	2010-1	2012	2013	2014-1*	2052**	2015	2021	2022	2047**
Rubbers	○	○	○	○	○	○	○	○	○	○	○
Glass	○	○	○	○	○	○	○	○	○	○	○
Ceramics	●	○	○	●	●	○	●	○	●	●	○
Wood	●	●	●	●	●	●	○	●	○	○	○

EP Epoxy / MMA Methyl Methacrylate / PUR Polyurethane • ● Excellent / ○ Good / ○ Moderate

Bonding metals

Chemical type	2011	2055	2010-1	2012
EP	●	○	○	○
PUR	○	●	○	○
MMA	○	○	○	○

Product description

PROCESSING DATA

Property	2011	2055	2010-1	2012
Viscosity (at 23°C)	30-45 Pa.s	Thixotropic	Appr. 80 Pa.s	25-35 Pa.s
Useable life of adhesive (at 23°C)				
<i>In mixer nozzle</i>	1.8 hr	45 min	10 min	8 min
<i>100 g of mix</i>	1.5 hr	1 hr	6 min	5 min
Time required to reach (at 23°C)				
<i>Light handling strength (1 MPa)</i>	7 hr	6 hr	30 min	20 min
<i>50% of final shear strength</i>	10 hr	20 hr	3 hr	1 hr
Time required to reach (at 60°C)				
<i>50% of final shear strength</i>	45 min	60 min	20 min	10 min

PERFORMANCE DATA

Property	2011	2055	2010-1	2012
Lap shear strength on Al substrate	19 MPa	9 MPa	23 MPa	19 MPa
Peel strength on Al substrate	5 N/mm	1 N/mm	6 N/mm	5.5 N/mm
Typical Tg / Max temp giving LSS of 5 MPa	45°C / 90°C	60°C / 90°C	40°C / 80°C	40°C / 80°C
Resistance properties				
<i>Chemical</i>	○	○	○	○
<i>Heat</i>	○	○	○	○
<i>Water</i>	○	○	○	○
<i>Impact</i>	●	○	○	○

PACKAGING

Cartridges	2011	2055	2010-1	2012
50 ml	■	■	■	■
200 ml	■	■	■	■
400 ml	■	■	■	■
500 ml	■	■	■	■
Working packs (2 kg kits)	■	■	■	■

* Araldite® 2014-1 is only registered for use in Europe. Araldite 2014* is directly equivalent in performance to 2014-1 and is available for regions outside of Europe.
** Araldite® 2047 and Araldite® 2052 are currently only registered for use in Europe.

Chemical / temperature resistance			Toughened			
2013	2014-1*	2052**	2015	2021	2022	2047**
EP	EP	MMA	EP	MMA	MMA	MMA
<ul style="list-style-type: none"> Metal coloured paste Suitable for vertical applications Low shrinkage 	<ul style="list-style-type: none"> Grey paste High temperature and chemical resistance Low shrinkage 	<ul style="list-style-type: none"> Fast curing Very high temperature resistance 	<ul style="list-style-type: none"> Toughened paste Ideal for GRP, SMC and dissimilar substrates Low shrinkage 	<ul style="list-style-type: none"> Rapid curing High peel strength Multi purpose 	<ul style="list-style-type: none"> Good sanding properties Ideal for bonding thermoplastics 	<ul style="list-style-type: none"> Gap filling Requires minimal surface treatment

Property	2013	2014-1*	2052**	2015	2021	2022	2047**
Thixotropic	Thixotropic	Thixotropic	Thixotropic	Thixotropic	Appr. 45 Pa.s	Appr. 60 Pa.s	Appr. 70 Pa.s
Time to reach (at 23°C)							
<i>Light handling strength (1 MPa)</i>	1.3 hr	1 hr	5 min	40 min	3 min	10 min	5 min
<i>50% of final shear strength</i>	1 hr	1 hr	-	40 min	-	-	-
Time to reach (at 60°C)							
<i>50% of final shear strength</i>	4 hr	3 hr	8 min	4 hr	8 min	18 min	5 min
<i>50% of final shear strength</i>	10 hr	5 hr	35 min	6 hr	20 min	30 min	20 min
Time to reach (at 60°C)							
<i>50% of final shear strength</i>	40 min	20 min	-	40 min	-	-	-

Property	2013	2014-1*	2052**	2015	2021	2022	2047**
Lap shear strength on Al substrate	18 MPa	18 MPa	25 MPa	17 MPa	22 MPa	25 MPa	12 MPa
Peel strength on Al substrate	4 N/mm	3 N/mm	3 N/mm	4 N/mm	11 N/mm	4 N/mm	3 N/mm
Typical Tg / Max temp giving LSS of 5 MPa	45°C / 70°C	85°C / 140°C	120°C / 140°C	65°C / 110°C	65°C / 110°C	45°C / 100°C	80°C / 90°C
Resistance properties							
<i>Chemical</i>	●	●	●	○	○	●	●
<i>Heat</i>	○	○	○	○	○	○	○
<i>Water</i>	○	○	○	○	○	○	○
<i>Impact</i>	○	○	○	○	○	○	○

Cartridges	2013	2014-1*	2052**	2015	2021	2022	2047**
50 ml	■	■	■	■	■	■	■
200 ml	■	■	■	■	■	■	■
400 ml	■	■	■	■	■	■	■
500 ml	■	■	■	■	■	■	■
Working packs (2 kg kits)	■	■	■	■	■	■	■