Araldite® 2000

General Bonding Adhesives

HUNTSMAN

Araldite® 2000

Properties and Performance

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

		Ferrous Metals and Aluminium	Copper	Zinc and Galvanised Metal	GRP/SMC/GRE/ Thermoset Composites	ABS/PVC	Acrylics/ Polycarbonate
2010	A toughened, fast cure epoxy ideal for metal bonding	●	●	◐	◐		
2011	A multi-purpose epoxy with long working life	●	●	●	◐		◐
2012	A fast cure, multi-purpose epoxy	●	●	●			
2013	A metal coloured epoxy paste, suitable for use on vertical applications	●	●	●	◐		
2014	A grey epoxy paste offering high chemical and temperature resistance	●	●	◐	◐		
2015	A toughened epoxy paste ideal for GRP, SMC and dissimilar substrates	●	●	◐	●		
2017	A flexible epoxy with rapid cure	◐	◐	◐	◐	●	
2018	A flexible polyurethane ideal for bonding thermoplastics	◐			●	●	●
2020	A transparent epoxy ideal for glass or ceramics bonding	●	◐		◐		
2021	A rapid curing, toughened multi-purpose methacrylate	●	◐		◐	●	●
2022	A toughened, resilient methacrylate for bonding thermoplastics	◐	◐		●	●	●
2024	A rapid curing, toughened methacrylate for bonding thermoplastics and composites	◐	◐		●	●	◐
2026	A transparent flexible polyurethane for bonding plastics and glass	◐	◐		◐	●	●
2027	A polyurethane paste ideal for SMC and GRP	◐			●		◐

● Excellent ◐ Good ○ Moderate

	Polyamides/Polystyrene Foams/ Polyurethane Foams	Rubbers	Glass/Quartz/ Precious Stones	Ceramics	Wood	Usable life of adhesives 23°C		Time required at 23°C to reach		Time required at 60°C to reach	Strength at 23°C at full cure	
						In mixer nozzle	100gms of mix	Light handling strength (1 N/mm²)	50% of final shear strength	50% of final shear strength	Force per unit area (N/mm²) (Lap shear strength on aluminium at 23°C)	Force per unit width (N/mm) (Peel strength on aluminium at 23°C)
2010		◐	◐	●	◐	10 mins	-	30 mins	3 hrs	25 mins	23	8
2011	●	◐	◐	●	●	1 3/4 hrs	1 1/2 hrs	7 hrs	10 hrs	45 mins	19	5
2012		◐	◐	◐	●	4 mins	5 mins	20 mins	1 3/4 hrs	25 mins	19	5 1/2
2013	◐	◐			◐	1 1/4 hrs	1 hr	4 hrs	10 hrs	40 mins	18	4
2014				◐	◐	40 mins	40 mins	3 1/2 hrs	5 hrs	25 mins	18	3
2015		◐		◐		40 mins	40 mins	4 hrs	10 hrs	40 mins	17	5
2017		◐			◐	5 mins	-	18 mins	4 hrs	30 mins	14	10
2018	●	●				40 mins	-	4 hrs	16 hrs	30 mins	7	4
2020			●	●		-	45 mins	16 hrs	24 hrs	2 1/4 hrs	17	<1
2021	●	◐	◐	◐		3 mins	-	8 mins	20 mins	-	22	11
2022	◐	◐	◐	◐		10 mins	-	18 mins	30 mins	-	25	4
2024	◐	◐				3 mins	-	10 mins	15 mins	-	16	5
2026	◐	◐	●			5 mins	-	1 hr	4 hrs	30 mins	21	5
2027	◐	◐				8 mins	-	1 1/2 hrs	10 hrs	40 mins	14	8

	Service temperature	Resistance properties				Pack sizes available		
	Typical Tg* value/max. Temperature giving LSS of 5 N/mm²	Chemical	Heat	Water	Impact	Cartridges	Working packs	Information sheet no.
2010	40/80	◐	◐	◐	●	200ml		A279
2011	45/80	○	○	○	●	50/200ml 300g tube	2kg	A230
2012	40/80	◐	◐	○	○	50/200ml 300g tube	2kg	A231
2013	45/70	●	◐	◐	○	50/200/ 400ml	2kg	A232
2014	85/140	●	●	●	○	50/200ml	2kg	A233
2015	65/100	◐	◐	◐	◐	50/200/ 400ml	2kg	A234
2017	flexible	○	○	○	●	200ml		A253
2018	flexible /40	○	○	○	●	200ml		A280
2020	40/80	◐	◐	◐	○		500g	A282
2021	65/110	◐	●	◐	●	50/400ml		A297
2022	45/100	●	◐	◐	●	50/400ml		A298
2024	40/100	◐	◐	◐	●	37.5/ 380ml		A437
2026	flexible	◐	○	◐	◐	50/200ml		A441
2027	25/60	○	○	◐	◐	200/ 400ml		A442

200ml Pneumatic Gun

50ml Manual Gun

Typical working pack

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

Selecting an Araldite® 2000 Adhesive

The 9 key questions below highlight potential bonding solutions for some of the principal manufacturing fastening requirements. For further advice please contact your local technical sales engineer.

Key Questions	Epoxy Load-bearing adhesives good for metals and composites	Methacrylate Fast setting and resilient for composites, thermoplastics and metals	Polyurethane Flexible adhesive for composites and certain thermoplastics
1 Do you require a **multi-purpose** adhesive with a **rapid** cure?	2012	2021 / 2024	-
2 Do you require a **multi-purpose** adhesive with a **long** working life?	2011	-	-
3 Do you require a **fast cure** adhesive?	2010 / 2012 / 2017	2021 / 2022 / 2024	2026 / 2027
4 Do you have **large areas** for bonding and/or require a long working time?	2011 / 2020	-	2018
5 Do you require **high toughness** and the ability to bond different substrates?	2010 / 2015	2021 / 2022 / 2024	-
6 Do you require **chemical resistance** or performance at high temperatures?	2013 / 2014	2021 / 2022	-
7 Do you require an adhesive for **gap filling** or **vertical applications**?	2013 / 2014 / 2015	2021 / 2022 / 2024	2027
8 Do you require a **flexible** adhesive?	2017	-	2018 / 2026
9 Do you require a **transparent** adhesive?	2020	-	2026

- The Araldite 2000 range has bonding solutions for 95% of all structural bonding applications.
- The range includes load-bearing adhesives for bonding metals and composites, resilient and flexible adhesives for bonding thermoplastics and combinations of materials, slow cure adhesives for large area application, adhesives designed to give results in minutes, adhesives that are resistant to high temperatures or chemicals, paste adhesives for gap filling or vertical applications, transparent adhesives for bonding glass and other transparent substrates and rapid cure multi-purpose adhesives.

Araldite® : Bonding virtually anything to anything

- The Araldite 2000 structural adhesives range is continually updated to meet the new demands of innovative design.
- The Araldite 2000 range of 14 adhesives, offers high performance from epoxy, polyurethane and methacrylate technologies.
- The Araldite 2000 range is capable of bonding more than 95% of all plastics, composites, metals and glass.

The Araldite 2000 cartridge range

The Araldite 2000 cartridge system stores, mixes and dispenses the adhesive and hardener as a one-component product. Lightweight, available in a variety of sizes and operable with both pneumatic and manual guns, it allows the user to deliver a measured quantity of adhesive with ease, accuracy and minimum wastage.

Araldite 2000 *cartridge range*

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. These 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 therefore. The Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information, please consult the corresponding product safety data sheets.

Distributed by:

Huntsman Advanced Materials
Duxford
Cambridge CB2 4QA
UK
Tel: +44 (0)1223 493 000
Fax: +44 (0)1223 493 002

www.araldite.com

HUNTSMAN

Publication no. A201p-GB / 1000/08/03