# Key questions

1. Do you require a multi-purpose adhesive with a rapid cure?  
   - Araldite® 2012  
   - Araldite® 2021

2. Do you require a multi-purpose adhesive with a long working life?  
   - Araldite® 2017

3. Do you require a fast cure adhesive?  
   - Araldite® 2048

4. Do you require chemical resistance or performance at high temperatures?  
   - Araldite® 2029
   - Araldite® 2028-1

5. Do you require high toughness and the ability to bond different substrates?  
   - Araldite® 2015
   - Araldite® 2014-1

6. Do you require large areas for bonding and/or require a long setting and working time?  
   - Araldite® 2013
   - Araldite® 2022

7. Do you require an adhesive for gap filling or vertical applications?  
   - Araldite® 2031
   - Araldite® 2047-1

8. Do you require a flexible adhesive?  
   - Araldite® 2029

9. Do you require a transparent adhesive?  
   - Araldite® 2011 – Araldite® 2029
   - Araldite® 2015
   - Araldite® 2013

### 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 2,300 associates, serve over 3,000 global customers with innovative, tailored solutions and more than 1,500 products which address global engineering challenges.

### Global presence – 13 manufacturing sites

### Distributed by

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**Legal information**

Huntsman is a global provider of products and solutions to the chemical, polyurethanes, advanced materials and composites, and surface protection markets. Huntsman transparent coatings, adhesives and sealants are based on polysiloxane, acrylic, epoxy, polyurethane and other industrial polymer chemistry. Huntsman Advanced Materials 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 2,300 associates, serve over 3,000 global customers with innovative, tailored solutions and more than 1,500 products which address global engineering challenges.

For more information or to download our mobile app and easily find the adhesive to fulfill your needs, please visit our website at www.huntsman.com/advanced_materials.
<table>
<thead>
<tr>
<th>Product Order</th>
<th>chem code</th>
<th>Key features</th>
<th>Adhesives</th>
<th>Viscosity</th>
<th>Work time</th>
<th>Cure speed</th>
<th>Mechanical properties</th>
<th>Bond strength</th>
<th>Durability</th>
<th>Colour (mixed)</th>
<th>Packaging</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Araldite® 2011</td>
<td>EP</td>
<td>&gt; Multi purpose</td>
<td>&gt; Long working life</td>
<td>&gt; Good resistance to dynamic loading</td>
<td>40</td>
<td>6</td>
<td>100</td>
<td>420</td>
<td>1000</td>
<td>5</td>
<td>20</td>
<td>yellow</td>
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<tr>
<td>Araldite® 2012</td>
<td>EP</td>
<td>&gt; Fast curing</td>
<td>&gt; General purpose</td>
<td>&gt; Good long term durability</td>
<td>30</td>
<td>6</td>
<td>20</td>
<td>200</td>
<td>200</td>
<td>1</td>
<td>20</td>
<td>grey</td>
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<tr>
<td>Araldite® 2013</td>
<td>EP</td>
<td>&gt; Metal coloured paste</td>
<td>&gt; Suitable for vertical applications</td>
<td>&gt; Good environmental, chemical and temperature durability</td>
<td>40</td>
<td>100</td>
<td>420</td>
<td>1</td>
<td>300</td>
<td>1</td>
<td>18</td>
<td>grey</td>
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<tr>
<td>Araldite® 2014-1</td>
<td>EP</td>
<td>&gt; Thixotropic</td>
<td>&gt; Grey paste</td>
<td>&gt; High temperature and chemical resistance</td>
<td>&gt; Excellent durability on metals and against many chemicals</td>
<td>35</td>
<td>240</td>
<td>1000</td>
<td>4</td>
<td>19</td>
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<td>a</td>
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<tr>
<td>Araldite® 2015</td>
<td>EP</td>
<td>&gt; Toughened paste</td>
<td>&gt; Ideal for GRP, SMC and dissimilar substrates</td>
<td>&gt; Excellent resistance to dynamic loading</td>
<td>&gt; Lap Shear Strength</td>
<td>35</td>
<td>240</td>
<td>2000</td>
<td>4</td>
<td>16</td>
<td>beige</td>
<td>a</td>
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<tr>
<td>Araldite® 2031</td>
<td>PUR</td>
<td>&gt; Thixotropic</td>
<td>&gt; Toughened adhesive, resilient bond</td>
<td>&gt; Suitable for metal and composite bonding, good resistance to environmental degradation</td>
<td>60</td>
<td>360</td>
<td>1000</td>
<td>5</td>
<td>19</td>
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<td>a</td>
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<tr>
<td>Araldite® 2028-1</td>
<td>PUR</td>
<td>&gt; Transparent</td>
<td>&gt; Fast curing</td>
<td>&gt; UV stable</td>
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<td>6</td>
<td>15</td>
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<td>15</td>
<td>15</td>
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<tr>
<td>Araldite® 2029</td>
<td>PUR</td>
<td>&gt; Medium open time</td>
<td>&gt; Designed to bond composites and metals</td>
<td>&gt; Well balanced strength and durability</td>
<td>&gt; Lap Shear Strength</td>
<td>40</td>
<td>240</td>
<td>580</td>
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<td>Araldite® 2021</td>
<td>MMA</td>
<td>&gt; Rapid curing</td>
<td>&gt; High peel and shear strength</td>
<td>&gt; Multi purpose</td>
<td>&gt; Lap Shear Strength</td>
<td>3</td>
<td>8</td>
<td>230</td>
<td>5</td>
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<tr>
<td>Araldite® 2022</td>
<td>MMA</td>
<td>&gt; Ideal for bonding thermoplastics</td>
<td>&gt; Ideal for bonding thermoplastics</td>
<td>&gt; Multi purpose</td>
<td>&gt; Good sanding properties</td>
<td>10</td>
<td>18</td>
<td>2050</td>
<td>3</td>
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<td>a</td>
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<tr>
<td>Araldite® 2047-1</td>
<td>MMA</td>
<td>&gt; Excellent adhesive characteristics</td>
<td>&gt; Outstanding adhesion to copper, brass, galvanized and stainless steel</td>
<td>&gt; Requires minimal surface treatment</td>
<td>&gt; Lap Shear Strength</td>
<td>5</td>
<td>15</td>
<td>850</td>
<td>15</td>
<td>12</td>
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<td>a</td>
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<tr>
<td>Araldite® 2048</td>
<td>MMA</td>
<td>&gt; Very high temperature and chemical resistance</td>
<td>&gt; Tolerant to “less than ideal” pretreatment</td>
<td>&gt; Excellent on metals</td>
<td>&gt; Lap Shear Strength</td>
<td>10</td>
<td>15</td>
<td>360</td>
<td>91</td>
<td>24</td>
<td>red</td>
<td>a</td>
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<tr>
<td>Araldite® 2052-1</td>
<td>MMA</td>
<td>&gt; Tolerant to “less than ideal” pretreatment</td>
<td>&gt; Gap filling up to 8 mm</td>
<td>&gt; Tough flexible bonds for use in dynamic environment</td>
<td>&gt; Lap Shear Strength</td>
<td>10</td>
<td>15</td>
<td>360</td>
<td>91</td>
<td>24</td>
<td>red</td>
<td>a</td>
</tr>
</tbody>
</table>

Note: Suitable substrates: 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.

Conditions:
- Pot life (100 g 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
- 50 ml
- 200 ml
- 380 ml
- 480 ml
- WP (2 kg)

Unit:
- Pa·s
- min
- N/mm²
- %
- N/mm²

Araldite® 2011:
- EP: Epoxy adhesives
- PUR: Polyurethane adhesives
- MMA: Methacrylate adhesives

Suitability:
- Excellent
- Good
- Suitable

LSS* = Lap Shear Strength