



Araldite®

Sandwich Panel Adhesives

HUNTSMAN

Araldite® Sandwich Panel Bonding Adhesives

Huntsman Advanced Materials is a world leader in all aspects of sandwich panel construction. Our two-component Araldite epoxy and polyurethane adhesives are proven the world over for their flexibility and performance. They have been specially formulated for the lamination of large surfaces and are suitable for use with a wide variety of different materials.

In addition to adhesive supply, Huntsman Advanced Materials also offers advice on application methods (spraying, extrusion, roller coating and spatula methods), equipment, surface pre-treatment and adhesive handling.

Epoxy or Polyurethane?

These two different types of adhesives can be differentiated by some characteristic properties, making one or the other particularly suitable depending on the application.

Epoxy

- Longer open times
- Insensitive to humidity
- High performance at higher temperatures (> 80°C)
- Lower density materials

Polyurethane

- Shorter open times, faster cures
- Flexibility at low temperatures

Panel Construction

Rigid layers

- Steel sheet
- Aluminium sheet
- Composite sheet
- Wood
- Concrete/plaster/marble

Core materials

- Polystyrene foam
- PUR foam
- PVC foam
- Carbon/glass
- Rockwool
- Glasswool
- Honeycomb
- aluminium/paper



RIGID LAYER

CORE MATERIAL

RIGID LAYER

Sandwich panels are generally composed of two to five components, all of which may be different materials. Araldite adhesives are consequently formulated to bond any combination of core materials and rigid layers.

The quality of the final panel depends on the choice of adhesive, efficient application and surface pre-treatment. Production cycle time and output is also dependent on the type of adhesive used and its thin film reactivity. Huntsman Advanced Materials offers comprehensive help and advice for maximising the efficiency and quality of the manufacturing process.

Applications



Panel adhesives where, why, how?

Whatever your particular application, our technicians and engineers have the experience and expertise to offer you the best advice to help you to select the product that best meets your needs. For any sandwich panel manufacturing situation, large or small, you can rely on Huntsman Advanced Materials.

Panels made with Araldite adhesives are used for many applications throughout the world in the construction of:

- Refrigerated trailers and semi-trailers
 - Building panels incorporating insulating foam or rockwool, cold stores, offices, portacabins and refrigerated sea containers.
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The wide range of adhesives ensures that there is one to suit every application and the correct choice will be defined by a number of parameters:

- Application method
 - Open time (time between lay-up and pressure application)
 - Time to handling strength
 - Continuous or section production
 - Panel **lamination** and **assembly**.
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Some of the more common considerations are as follows:

- Multi-panel production may need the longer open time of an **epoxy** adhesive
- Short handling times may benefit from the faster curing **polyurethane** adhesives
- Continuous line production of building panels requires very short cure, 2 to 4 minute
- High humidity conditions may require an **epoxy** adhesive
- Rockwool or glasswool bonding is made easier when using the foaming capability of **polyurethane** adhesives.

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

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