Agomet® F 300 AB, Agomet® F 305 AB

Fast curing methacrylate adhesives for separate surface application (eg Loudspeaker Production lines)

Properties

Agomet F 300 AB and F 305 AB are reaction adhesives for bonding of metals and plastics. Thanks to their very high curing rates, the adhesives are ideally suited for bonding operations where, e.g. in series production, a short potlife is required. Especially for the production of loudspeakers in different sizes, Agomet F 300 AB / F 305 AB have proven very successful.

The adhesives have a potlife of 1 - 2 minutes. As soon as 2 - 4 min. after bonding and curing at room temperature, the parts can be handled. The final strength is reached after appr. 2 hours.

Bonds produced with Agomet F 300 AB / F 305 AB are shock- and peel resistant and have a good moisture resistance.

Both Agomet F 300 AB / F 305 AB come as a two part system and can be applied 1:1 with standard dosing/dispensing equipment. In many cases, a particular surface preparation of the parts to be bonded is not necessary or can be reduced to a minimum.

Bondable materials

Metals such as steel, aluminium, copper and their alloys, ferrites.
Plastics such as ABS, polystyrene, rigid PVC, polycarbonate, polyphenylene oxide, moulded polyester parts, hard paper, and others.
Materials on a cellulose and wood basis such as loudspeaker membranes and chip boards.

Viscosity (23 °C)	**Agomet F 300 AB**	**Agomet F 305 AB**
	F 300 A: appr. 15 Pa.s	F 305 A: appr. 2,5 Pa.s
	F 300 B: appr. 20 Pa.s	F 305 B: appr. 4 Pa.s
Specific Gravity	appr. 1.2	appr. 1.0

Processing

Surface preparation

Even without a particular surface preparation, Agomet F 300 AB / F 305 AB develop high strength values, e.g. when bonding loudspeaker parts. As with all bonds, however, the bonding strength can be optimised by additional surface pretreatment: the parts must be free of loose impurities such as dust, oxides, grease, mould release agents, or plasticizers. A simple surface wipe with a solvent such as ethyl acetate (for plastics: alcohol) is adequate. Normal residues of rolling or drawing oil are relatively compatible with F 300 AB / F 305 AB and can remain on the surfaces to be joined.

Application weight

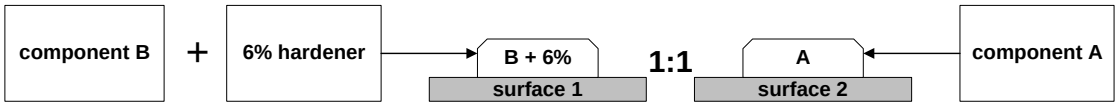
The most favourable amount of adhesive to be applied is 150 - 250 g/m².

Mixing ratio

Add 4 to 10 % - preferably 6 % - hardener powder to component B and mix homogeneously. Then apply 1:1 together with the ready-to-use component A.

Bonding

Apply component A to one surface and place an equally thick layer of component B (hardener already mixed in) on the other surface. Then the two surfaces are mated and kept under contact pressure. Curing starts only after both surfaces to be bonded have been joined. This separate processing allows bonding operations practically independent of the adhesive's potlife.



Caution: Never mix hardener into Component A !

Bonding *continued*

You may also apply the adhesive with dosing/dispensing equipment, even by placing components A and B (incl. hardener) on top of each other on one of the surfaces to be joined. In this case, however, the parts must be mated immediately.

Bonding performance

			F 300 AB	F 305 AB
Tensile Shear Strength	- Aluminium/Bondur F 44 (AlCuMg2pl)	N/mm²:	**appr. 27**	**appr. 25**
	- Brass	N/mm²:	**appr. 23**	**appr. 25**
	- Steel	N/mm²:	**appr. 23**	**appr. 23**
	- Rigid PVC	N/mm²:	**appr. 10 (mb)**	**appr. 10 (mb)**

according to DIN 53 283, (mb = material rupture)
test specimen: 100 x 25 x 1.6 mm; pretreatment: degreased, roughened; bonded area: 3 cm²

Peel Strength	Aluminium/AlF 13.3	N/mm:	**appr. 2**	**appr. 2**

measured in the T-Peel Test according to DIN 53 282,
test specimen: 130 x 30 x 0.5 mm; pretreatment: roughened

Resistance to Chemicals

Agomet F 300 AB / F 305 AB have good resistance against diluted mineral acids and alkalis, gasoline and diesel fuels. Joints produced with F 300 AB / F 305 AB also show good stability under the effects of moisture and heat (tropical climate), as well as under the influence of aqueous solutions.

Advice

Shelf life

Please see labels: a minimum of 6 months in the original unopened container.

Note:

Once the hardener has been mixed in, component B can only be stored for about one week.

Handling Precautions

Caution

Our 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 into contact with foodstuffs or food utensils, and measures should 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 - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. These precautions are described in greater detail in the Material Safety Data sheets for the individual products and should be referred to for fuller information.

Huntsman Advanced Materials
Duxford, Cambridge
England
CB2 4QA
Tel: +44(0)1223 832121
Fax: +44(0)1223 493322
www.araldite.com