

TECHNICAL DATA SHEET

TDS N°01 / 2016.12

ACROBOND® DC 91**GENERAL CHARACTERISTICS / MAIN USE :****Water-borne contact adhesive, multi-purpose.**

ACROBOND® DC 91 is a VOC-free, water-based contact adhesive to be used at room temperature or better after a light heat activation temperature (45-60°C) just before joining. This adhesive has mainly to be applied on both materials by brush, roll-coater or spraying system and has been developed for bonding of many, various materials such as textile, leather, foam, wooden materials, cardboard, fibre, non-woven, insulating & damping materials as well as many plastics and coated or painted metals (mainly aluminium & steel). After drying, adhesive has a high initial tack and an open time up to 20 minutes at 20°C; later heat activation is necessary to get a close contact of both sides under pressure. Adhesive is mainly to be used with addition of 5% catalyst D8 which is improving adhesion, cohesion as well as ageing and heat resistance up to +100°C. Given the big quantity of various materials available on the market, adhesion must be tested for compatibility by carrying out preliminary trials. Main use is in automotive, leather industry, building and marine but also in many various industrial assembly processes where high performance is required.




TECHNICAL PROPERTIES OF PRODUCT :

Chemical base	Water-borne synthetic resins / polymers.
Colour	White / colourless after drying (hardener / catalyst D8 is blue coloured to check presence and mixture)
Consistency	Thixotropic liquid, can easily be applied by brush or roll-coater or with spraying systems.
Density	~ 1,05 g/cm ³
Solid content	~ 53 %
Viscosity	~ 2500 mPa.s (Brookfield RVT)
Pot-life of mixture	≤ 10 hours for adhesive with 5% by weight of Catalyst D8 (blue coloured for optical control).
Drying time	~ 30 to 60 minutes depending on adhesive layer and materials; best is drying under Infra-Red lamps.
Open time	≤ 20 minutes after film dried up at room temperature (≥ +20°C), ≤ 1 hour for heat activation at ≥ +45°C.
Film properties	Cured adhesive film remains soft but tough with good ageing, humidity, thermal resistance (≤ +100°C).
Cleaning	Use only water for fresh adhesive before any drying.

PREPARATION AND PROCESSING :

Materials and Surfaces	Surfaces to be bonded must be clean, dry and free of any dust, oil and grease. Store the materials and do not process below +20°C. Some materials must possibly be sanded, others must normally be prepared by cleaning or by using special primers from our Acrobond® PR range. For special requirements or on not common materials, we do recommend doing preliminary and adapted testing to ensure expected results will be achieved. Technical department is available for any additional technical advice you might need or for shared preliminary and specific laboratory testing.
Preparation of adhesive Catalyst / Hardener	Adhesive should best be stirred a few minutes but is basically ready for use. In most cases this adhesive has to be used with addition of 5% catalyst D8. Add required quantity of catalyst in the adhesive and stir well until mixture is completely homogenous. Catalyst D8 is mainly blue coloured for an optical control of presence and mixture quality. However it can be delivered colourless if required. Do not prepare more adhesive / catalyst mixture able to be used within one shift or working day.
Bonding / Joining	Apply adhesive regularly (80 to 120 g/m ² wet) by brush, roll-coater or spraying on both surfaces to be bonded; this average quantity can be different in some special cases but is anyway strongly depending on the absorption power of each material. For very porous materials a pre-coating may be necessary. Wait for complete evaporating of water (time depends on temperature, layer thickness of adhesive film as well as absorbency of both materials). One side coating is only possible if at least one material is absorbent and following wet joining; in this case apply adhesive on most dense material and join together very quickly (usually ≤ 10 minutes) and keep under light pressure during drying. In case of overtaking open time, heat activation by an Infra-Red lamp of both coated materials can be done around +45 to +60°C for few seconds just before joining and immediate pressing.
Pressing	Press both materials strongly together (approximately 1 to 2 kg/cm ²) or roll up the stuck complexes immediately after required drying time / heat activation. Initial strength is very high but terminal strength is only reached after approximately 24 hours curing.

RECOMMENDATIONS / STORAGE / SAFETY :

Storage	≤ 12 months in a cool place (≥ +10°C and ≤ +25°C) and in the original tightly closed packaging. Protect strictly against freezing.
Packaging Transport void	PE-pails containing 10 kg, drums and one way containers only on special demand. ADR and IMDG and IATA Classification: void / not restricted
Handling precaution 	Before first using, read carefully Material Safety Data Sheet (available on request). Pictograms indicating recommendation/obligation of wearing personal protective equipment:  
Labelling CLP regulation Hazard Pictograms / Signal word void	Hazard statements: Void. Take the regular precautions for handling and processing chemical products. Avoid direct skin contact. Wear protective gloves & glasses. For professional / industrial use only.
General Information	The foregoing information represents values obtained in our laboratory and has been supplied in good faith, it shall not be construed to be legally binding, in particular, it shall not exempt the purchaser from taking responsibility for testing the product supplied so as to determine its suitability for the intended application. Given the high number of materials appearing on the market and the different methods of use, which are beyond our influence and control, we cannot accept any responsibility for the results of your work. Warranty is made exclusively for the constantly high quality of our products. Please note our terms of sales, delivery & payment.