Technical data sheet

Pigmolux DC ST51 3431

Water-based, **radiation-curing pigmented paint with textured effect** for industrial coating in **furniture and interior finishing**

PRODUCT DESCRIPTION

General

Water-based pigmented paint with textured effect for wooden surfaces in the furniture sector. The coating material is hardened using two different crosslinking mechanisms (through radiation curing and 2C polyurethane crosslinking). The use of this special hardening system (Dualcure) means that even areas of the workpiece that are insufficiently lit by the lamps – shaded areas – will be completely crosslinked. Hardener crosslinking means that even three-dimensional parts can be coated with ADLER Pigmolux DC ST51 3431 and hardened without the use of UV lamps. Stand-out features of this product include good mechanical and chemical resistance, excellent resistance to the effects of light, good filling performance and very good stackability.

Special properties and standards

- **ÖNORM A 1605-12 (furniture surfaces)**
  Resistance to chemical reactions: 1-B1 (except for pure white and pastel shades)
  Response to abrasion: 2-D (≥50 U)
  Response to scratches: 4-D (≥ 1.0 N)
  Flame treatment: 5-B (hardly inflammable furniture surface)
- **DIN 68861 (furniture surfaces)**
  Part 1: Response to chemical stress: 1-B (except for pure white and pastel shades)
  Part 2: Response to abrasion: 2 D (> 50 to ≤ 150 U)
  Part 4: Response to scratches: 4 E (> 0.5 to ≤ 1.0 N)
- **EN 13501-1 (fire behaviour)**
  In combination with a hardly inflammable surface, e.g. materials of fire class A1 or A2: classification as B-s2,d0. The complete coating system (carrier board / glue / veneer or foil) is always used to classify the reaction to fire.
- **DIN 53160-1 and DIN 53160-2**
  Perspiration and saliva-proof properties
- **ÖNORM EN 71-3**
  Safety of toys; migration of certain elements (free of heavy metals)
- **French ordinance DEVL1104875A**
  Marking of construction coating products for their emission of volatile pollutants: A+

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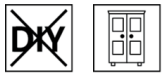
Application area



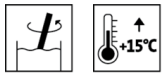
For coating heavily used surfaces in furniture and interior fittings, including kitchen and sanitary areas. Application areas II - IV according to ÖNORM A 1610-12.

The application area depends on the colour shade. Pure white and pastel shades meet the requirements except for a few colouring test materials.

For hardly inflammable or flame-retardant coating systems.

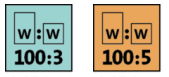
PROCESSING

Processing instructions



- Please stir the product before use.
- The temperature of the product and object, and the room temperature must be at least + 15 °C.
- To achieve the highest chemical resistance and "ring test"-resistant surfaces, we recommend coating with Bluefin Multilux Top (3853) in the desired gloss level.
- When coating interior doors, it must be ensured that only sealing profiles compatible with acrylic paints are used.
- When using plastic edgebands, an adhesion test must always be carried out with the planned structure. Adhesion can be improved on ABS edgebands by using ABS Kantenaktivator (8315000210).
- Any change in the processing sequence, environmental conditions, non-observance of instructions or the use of products not listed may have an unfavourable effect on the result.
- Please follow our **ARL 150 - Working guidelines for water-based furniture coatings.**

Blending ratio



8450 3% **8451** 5%

100 Part(s) by weight Pigmolux DC ST51 (3431)
3 Part(s) by weight Aqua-Hardener 8450 (8450000210)

If Pigmolux DC ST51 (3431) is processed without UV curing (e.g. for three-dimensional parts), the following paint-hardener mixture must be used:

100 weight part(s) Pigmolux DC ST51 (3431)
5 weight part(s) Aqua-Hardener 8451 (8451000210)

Aqua-Hardener 8450 (8450000210) or Aqua-Hardener 8451 (8451000210) must be carefully worked into the coating components by stirring before processing. We recommend waiting approx. 10 minutes before starting work.

Pot life

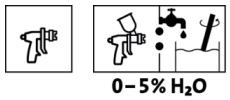
With Aqua-Hardener 8450 (8450000210): 4 hour(s)

Mixed material can be processed for a further 4 hour(s), but must be mixed 1:1 with freshly hardened material. A further extension of the pot life is not possible. Increased temperatures reduce the pot life.

With Aqua-Hardener 8451 (8451000210): 4 hour(s)

Mixed material can be processed for a further 4 hour(s), but must be mixed 1:1 with freshly hardened material. A further extension of the pot life is not possible. Increased temperatures reduce the pot life.

Application technique



	Airless	Airless air-supported (Airmix®, Aircoat, etc.)	Cup gun
Spraying nozzle Ø (mm)	0,28 - 0,33	0,28 -0,33	1,8
Spraying pressure (bar)	100 - 120		2 - 3
Vaporizer Air (bar)	-	1 - 2	-
Diluent	Water		

Diluent amount added (%)	-	0 - 5
Viscosity 6-mm-cup (s)	50	30
Applied quantity per application (g/m²)	100 - 150*	
Total quantity applied (g/m²)	max. 450	

* closed-pored surfaces: approx. 120 g/m²
* open-pored surfaces: approx. 150 - 200 g/m²

The shape and surface condition of the workpiece as well as the type of application influence the actual consumption. Accurate values for consumption must be obtained by applying trial coats in advance.

Drying conditions

Flashing off the water:

35 - 45 Minuten	belt-type pallet drier (Rising temperature up to max. + 50 °C, air speed approx. 2 m/s)
or	
15 - 20 Minuten	Flat channel dryer (Rising temperature up to max. + 50 °C, air speed approx. 2 m/s)

The mentioned system parameters are reference values, which must be coordinated with the respective plant. Drying depends on the substrate, layer thickness, temperature, air exchange, relative humidity, stacking pressure and stacking conditions.

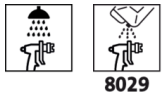
Lower temperatures and/or high level of atmospheric humidity can increase the drying time.

UV curing

Feed rate 2 - 3 m/min when using 1 Ga-radiator and 1 Hg-radiator (power: 80 W/cm²)

Attention must be paid to adequate curing at the edges!

Cleaning the working equipment



With water immediately after use.

To remove dried paint residues we recommend using Aqua-Cleaner (8029) (diluted 1:1 with water).

SUBSTRATE

Type of substrate

Solid wood, chipboard or wood fibre materials suitable for opaque varnishing, veneered or coated with priming film.

Substrate property

The substrate must be dry, clean, capable of holding the paint, free from separating substances such as grease, wax, silicone, resin etc. and free from wood dust, as well as tested for suitability for coating.

Substrate preparation

Wood sanding:

Grit size 150 – 180

Carrier plates coated with priming film:

Grit size 180 – 220

COATING SYSTEM

Primer coat

For closed-pore coating surfaces

Carrier plates coated with priming film: Film sanding Grit size 240

(optional) 1 x Aqualux Spritzfüller (3319) (two-component)

Intermediate sanding Grit size 320 – 360

Solid wood or chipboard panels veneered with blind veneer (e. g. beech):

2 x Aqualux Spritzfüller (3319) (two-component)

Intermediate sanding Grit size 280 – 320

MDF panels:

2 - 3 x Aqualux Spritzfüller (3319) (two-component)

Intermediate sanding Grit size 280 – 320

For open-pore coating surfaces

Pre-insulated with 150 - 200 g/m² Aqualux Spritzfüller (3319) (two component) in case of wood species with water-soluble colouring wood components (e. g. ash) coating systems in RAL 9010 "Reinweiß" (pure white) and in pastel shades.

Regarding coating systems for full-tone-colours it is sufficient to apply one primer coat using 150 – 200 g/m² Pigmolux DC ST51 3431).

Drying overnight at room temperature.

Intermediate sanding

Grit size 280 – 360

Avoid sanding straight through!

Remove sanding dust.

Topcoat

1 x Pigmolux DC ST51 (3431) in the desired colour

CLEANING AND MAINTENANCE

Cleaning and Maintenance

Cleaning with Clean-Möbelreiniger (7202) an care with Clean-Möbelpflege Plus (7222).

ORDERING INFORMATION

Size of trading unit

25 kg

Colour shades / Glosslevels

Standard colour(s):
RAL9016 Verkehrsweiß (3431009016)

RAL-shades, NCS-shades, etc. are available as special productions.

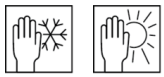
Supplementary products

ABS Kantenaktivator (8315)
Aqua-Cleaner 8029 (8029)
Aqua-Hardener 8450 (8450)
Aqua-Hardener 8451 (8451)
Aqualux Spritzfüller (3319)
Bluefin Multilux Top (3853)
Clean-Möbelpflege Plus (7222)
Clean-Möbelreiniger (7202)

Please refer to the corresponding technical data sheets of the products.

FURTHER DETAILS

Durability / storage



Min. 1 year(s) in the original sealed containers.

Make sure the product is protected against moisture, direct sunlight, frost and high temperatures (above 30 °C).

Close opened containers well and use up the content as soon as possible.

Technical specifications

Delivery viscosity: 45 – 50 seconds according to DIN 53211
(6 mm measuring cup, 20 °C)

Safety information

The product is only suitable for industrial use.

The inhalation of paint aerosols during spray application must generally be avoided. This is ensured by the proper use of a respirator (combination filter A2/P2).

Further information on the subject of safety during transport, storage and handling as well as disposal can be found in the relevant safety data sheet. The current version can be accessed on the Internet at **www.adler-lacke.com.**