COSMOFEN DUO
2-component-polyurethane-adhesive

APPLYING FIELD

COSMOFEN DUO is suitable for the constructional bonding of aluminium corner angles into anodised and powder-coated cover- and wing-frame profiles, only suitable for professional use by instructed personnel in the aluminium-window-, door- and façade manufacturing.

COSMOFEN DUO beige has been tested by the ift-Rosenheim (institute for window technique), test report no. 50924109/1 of 25th June 2001 “Examination of the resistance to tensile strength of bonded frame corners of aluminium-compound profiles at different temperatures and after diverse conditions of storage “. The hollow chamber profiles bonded with COSMOFEN DUO can be powder-coated subsequently.

COSMOFEN DUO is suitable for the constructive and non-positive compound of GFK sandwich constructions in specialized companies for the vehicle manufacturing.

COSMOFEN DUO is also suitable for the bonding of further materials, e.g. PVC-hard, ALU, HPL. - Only for professional use by instructed personnel.

COSMOFEN DUO is used for the joint bonding of fibre reinforced plasterboards as well as for filling assembly joints up to 8mm width and additional openings or for renovating damaged joints.

COSMOFEN DUO ensures an easy handling of the twin cartridge with static-mixing-tube during constructional bondings.

COSMOFEN DUO is thixotropic, does not drip, does not contain any solvent and can be overpainted after the hardening up.

COSMOFEN DUO possesses a good weather resistance.

TECHNICAL DATA

Basis
2-component polyurethane reaction adhesive, solvent-free
(free from easy volatile organic compounds, boiling point <+170 °C)

Colour
of hardened up film COSMOFEN DUO-beige ivory
binder beige-white
hardener beige

of hardened up film COSMOFEN DUO-white pearl-white
binder white
hardener beige

Film Property
of hardened up film semi-hard

Shore - Hardness
of the film, hardened up at +20°C according to DIN 53505 85 Shore-D

Mixing Ratio
parts by volume A:B = 1,0:1,0 ml

Viscosity
at +20°C mixture COSMOFEN DUO-beige low viscosity - paste-like
binder low viscosity - paste-like
hardener low viscosity - paste-like

mixture COSMOFEN DUO-white low viscosity - paste-like
binder low viscosity - paste-like
hardener low viscosity - paste-like
TECHNICAL DATA

DENSITY
according to EN 542 at +20°C
mixture COSMOFEN DUO-beige approx. 1.52 g/cm³
mixture COSMOFEN DUO-white approx. 1.52 g/cm³

POT TIME
of a 100g preparation at +20°C approx. 60 min

PROCESSING TIME
of the twin cartridge with static mixing tube
at +20°C with tandem pneumatic applicator approx. 45 min
(The application times are reduced to approx. half of the time at +30°C, at +10°C they are prolonged to approx. twice as much time.)

FUNCTIONAL HARDNESS
e.g. corner angle bondings at +20°C approx. 6 h

FINAL SETTING TIME
at +20°C, 50%rel. air humidity up to ~75%
until functional hardness is achieved approx. 24 h
approx. 7 d

MINIMUM TEMPERATURE
FOR APPLICATION
DIN/EN 1465 Alu/Alu (0.2mm gap)
approx. 18.0 N/mm²
approx. 9.0 N/mm²

WORKING INSTRUCTIONS

The functional hardness, and consequently, the application of the system COSMOFEN DUO, can be reduced by adding the COSMOPUR 830-accelerator as required.

COSMOFEN DUO can be dyed to the required colour shade by adding the COSMOFEN-colour pastes (white/black/blue/red/yellow).

* Bonding of aluminium: only on chemically pretreated or lacquered surfaces; durable and non-aging bondings of aluminium blank cannot be achieved without the corresponding pretreatment of the surfaces to be bonded.

* Bondings of materials with different linear expansion must be evaluated regarding their long-time performance particularly when loading in application areas with changing temperatures.

* The adhesive changes its colour if it is exposed to the sun, but its bonding strength does not change!

The allowance of COSMOPUR 830-accelerator and/or COSMOFEN-colour pastes can be effected directly after the dosage of the two components from the twin cartridge, they can therefore be mixed together in one mixing procedure.

Please consider the Technical Information: “Metal Bonding“, „Fermacell Joint Bonding“, „Powder coating of bonded aluminium profiles“

Mixing procedure I :
The static-mixing-tube is screwed onto the opened adhesive cartridge. By operating the pressure gun DLP 550 or DLP 900, depending on the cartridge unit, the homogeneously mixed glue in the static-mixing-tube is directly applied onto the dry, dust- and grease-free profile. Then, the parts are joined and afterwards, fixed/pressed together, until the functional hardness has been achieved.
**WORKING INSTRUCTIONS**

**Mixing procedure I :**

* For security reasons, the first 20g mixed adhesive are not used for the bonding, because of the filling technique of the cartridge! The application time amounts approx. 45min/at room temperature. If the operation is shortly interrupted within the application time, fresh adhesive is brought into the static-mixing-tube when dosage is repeated, so that one static-mixing-tube can be used during a whole working day.

* At the end of work, the used static-mixing-tube remains on the cartridge unit, when starting again to work, change the static-mixing-tube; now press out the first 20g glue and do not use the for the bonding, for security reasons!

**Mixing procedure II :**

The opened adhesive cartridge is inserted into the pressure gun DLP 550 or DLP 900, depending on the cartridge unit. By operating the pressure gun, both components are dosed in the right mixing ratio into the mixing tray. As described above, the accelerator and/or colour paste may be added now. The components are homogeneously mixed. The adhesive is applied with a spatula within the pot time onto the dry, dust- and grease-free surface to be bonded. Then, the parts are joined and fixed/pressed together, until the functional hardness has been achieved.

With the COSMOPUR 820 primer, the adhesion to PVC- and metal surfaces can be improved. For the bonding of PS-hard surfaces, to primer with COSMOPUR 820 is absolutely necessary.

**APPLICATION QUANTITY**

average approx. 20 g/corner angle

**POT TIME, as well as the individual PRESS TIMES, can only be exactly found out through own tests, as they are strongly affected by material, temperature, application quantity, humidity, and other criteria. The user should provide adequate security additions to the given approximate values.**

**CLEANING**

The cleaning of not hardened up COSMOFEN DUO is effected with COSMOFEN 60.

The cleaning of hardened up COSMOFEN DUO is usually only mechanically possible.

**STORAGE**

Store original casks tightly closed, in a dry place, at a temperature between +15°C and +25°C, without direct solar radiation. Can be stored in unopened original casks for 12 months.

**CASK SIZE**

550g twin cartridge, dispatch unit of 6pcs/box
900g twin cartridge, dispatch unit of 6pcs/box

**Accessories:**

static-mixing-tube DUO
static-mixing-tube W
pressure gun DLP 550
pressure gun DLP 900
COSMOPLAST HS (liquid skin protection)
CLASSIFICATION

COSMOFEN DUO-binder is not subject to classification, according to the Ordinance on Hazardous Materials (GefStoffV).

COSMOFEN DUO-hardener is subject to classification, according to the Ordinance on Hazardous Materials (GefStoffV).

Further information for the process can be taken from the safety data sheet.