COSMOFEN DUO
2-component-polyurethane-adhesive

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.

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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(315mil) 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 thixotrope, 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 (+338°F))

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

COLOR 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(+68°F)
according to DIN 53505 Shore-D 85 Shore-D

MIXING RATIO parts by volume A:B = 1:1

VISCOSITY at +20°C (+68°F)
 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 Sheet**

**COSMOFEN DUO**  
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### TECHNICAL DATA

**DENSITY**  
according to EN 542 at +20°C (+68°F)  
mixture **COSMOFEN DUO-beige** approx. 1.52 g/cm³  
(12.69 lb/gal)  
mixture **COSMOFEN DUO-white** approx. 1.52 g/cm³  
(12.69 lb/gal)

**POT TIME**  
of a 100g (3.5oz) preparation at +20°C (+68°F) approx. 60 min

**PROCESSING TIME**  
of the twin cartridge with static mixing tube  
at +20°C (+68°F) with tandem pneumatic applicator approx. 45 min  
(The application times are reduced to approx. half of the time at +30°C (+86°F), at +10°C (+50°F) they are prolonged to approx. twice as much time.)

**FUNCTIONAL HARDNESS**  
e.g. corner angle bondings  
at +20°C (+68°F) approx. 6 h

**FINAL SETTING TIME**  
at +20°C (+68°F), 50% r.h. up to ~75% approx. 24 h  
until functional hardness is achieved approx. 7 d

**MINIMUM TEMPERATURE FOR APPLICATION**  
from +7°C (+45°F)

**STRESS SHEARING STRENGTH**  
DIN/EN 1465 (0.2mm (7.9mil) gap)  
Alu / Alu at +20°C (+68°F) approx. 18.0 N/mm²  
(2611 psi)  
Alu / Alu at +80°C (+176°F) approx. 9.0 N/mm²  
(1305 psi)

### 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 color shade by adding the **COSMOFEN-color 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 color if it is exposed to the sun, but its bonding strength does not change!

The allowance of **COSMOPUR 830-accelerator** and/or **COSMOFEN-color 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“

Weiss USA LLC  
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Quality Certificate Registration No.: 320540 QM
WORKING INSTRUCTIONS

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.

* For security reasons, the first 20g (0.71oz) 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 (0.71oz) 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 color 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 (0.71 oz)/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 (+59°F) and +25°C (+77°F), without direct solar radiation.

Can be stored in unopened original casks for 12 months.
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CASK SIZE
550g (19.4 oz) twin cartridge, dispatch unit of 6pcs/box
900g (31.8 oz) 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
The classification of the product is described in the material safety data sheet.

IRRITANT TO SKIN, EYES AND RESPIRATORY PASSAGES.
INHALATION MAY CAUSE RESPIRATORY SENSITIZATION.
REPEATED CONTACT MAY CAUSE SKIN SENSITIZATION.

Consult MSDS for additional information.
Use only with adequate ventilation.
Avoid breathing vapor.
Avoid contact with eyes, skin or clothing.
Wash thoroughly after handling.
Do not ingest.

For professional use only! Keep out of reach of children!
Keep HOBBOCK, DRUM, CONTAINER, e.g. tightly closed!
Use only for applications mentioned in the technical data sheet!

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This document replaces former issues