

Processing instructions

anaxBlend Dentine / Enamel / Effect Paste & Flow

These processing instructions cover the dentine compounds, incisal compounds and effect compounds of the anaxBlend Dentine/ Enamel/ Effect Flow & Paste products. The materials called anaxBlend Transpa and anaxBlend Make-In are summarized as effect materials.

1 Intended purpose

Resin facing materials are composites used for covering different framework materials for the design of dental restorations.

2 Brief description of product and users

2.1 Description of product

anaxBlend Dentine/ Enamel/ Effect Flow & Paste are used to veneer various framework materials. This helps to achieve an aesthetically pleasing, tooth-shaped appearance for the restoration.

The different consistencies mean users can use various modelling techniques at the design stage. The large range of colours also allows the form and colour to be imitated perfectly.

2.2 Users

For use by laboratory technicians in a dental laboratory

3 Composition

3.1 anaxBlend Dentine/ Effect Paste

- Glass powder, splitter polymerisate, urethane dimethacrylate, 1,4-butanediol dimethacrylate, BisGMA, silicon dioxide, pigments, initiators
- Filler content: 67 wt.%, inorganic filling materials (0,005-3,0 µm)

3.2 anaxBlend Enamel Paste

- Glass powder, urethane dimethacrylate, silicon dioxide, BisGMA, 1,4-butanediol dimethacrylate, pigments, initiators
- Filler content: 75 wt.%, inorganic filling materials (0,005-3,0 µm)

3.3 anaxBlend Dentine/ Effect/ Enamel Flow

- Glass powder, urethane dimethacrylate, 1,4-butanediol dimethacrylate, silicon dioxide, pigments, initiators
- Fillers: 56 wt.%, inorganic filling materials (0,005-3,0 µm)

4 Indications

4.1 Fixed restoration

4.1.1 Framework-supported

- Facing of crowns, bridges, adhesive/bonded bridges, implants and overdentures as well as long-term temporary solutions

4.1.2 Without framework material

- Fabrication of inlays, onlays, indirect veneers and full veneering of single tooth restorations without framework material

4.2 Removable restorations

4.2.1 Framework-supported

- Veneering of cone-shaped and telescopic crowns as well as external attachment parts
- Customisation of prefabricated teeth made of plastic
- Repairs, cosmetic corrections and characterisation of existing restorations

5 Contraindications

If the patient is allergic or hypersensitive to one of the components, this product must not be used or only under the strict supervision of the treating doctor/dentist.

6 Warnings

Contains di-urethane dimethacrylate, tetramethylene dimethacrylate. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

7 Safety instructions

Avoid breathing vapours/ spray. Wear protective gloves. If skin irritation or rash occurs: get medical advice/ attention.

8 Interactions with other medicinal products

- Phenolic substances such as Eugenol inhibit polymerisation. Therefore, do not use any material containing these substances.
- The dentist should consider known interactions and cross-reactions of the medical device with other materials already in the patient's mouth before using the product.

9 Fabrication of frameworks and preparation

- The frameworks are modelled, cast or CAD/CAM milled and finished as usual in accordance with the applicable guidelines on dental procedures.
- Standard commercial dental metals and alloys, PMMA, PEEK and zirconia may be used as framework materials. All materials must be processed in accordance with the manufacturer's specifications and prepared for further processing.
- The frameworks must be conditioned before the composite is used. This conditioning varies depending on which framework material is used together with a suitable luting agent in accordance with the manufacturer's instructions.
- The surfaces of the framework can also be coated with a Paste Opaquer. Please follow the relevant manufacturer's specifications.

10 Colour scheme

Colour according to Vita®	Paste Opaquer	anaxBlend Dentine Paste & Flow	anaxBlend Enamel Paste & Flow
A1	light	A1/B1	S 58
A2	light	A2/B2	S 58
A3	light	A3	S 59
A 3,5	medium	A 3,5	S 59

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Colour according to Vita®	Paste Opacuer	anaxBlend Dentine Paste & Flow	anaxBlend Enamel Paste & Flow
A4	medium	A 4	S 60
B1	light	A1/B1	S 57
B2	medium	A2/B2	S 58
B3	light	B3/B4	S 59
B4	medium	B3/B4	S 59
C1	medium	C1/D2/D3/D4	S 59
C2	medium	C2/C3/C4	S 59
C3	dark	C2/C3/C4	S 59
D2	light	C1/D2/D3/D4	S 60
D3	dark	C1/D2/D3/D4	S 59
D4	dark	C1/D2/D3/D4	S 60

11 Veneering of fixed or removable restorations with framework support

(i.e. veneering of crowns, bridges, adhesive/bonded bridges, implants and superstructures, long-term temporary solutions, cone-shaped and telescopic crowns, external attachment parts as well as customisation of prefabricated teeth made of plastic, repairs, aesthetic corrections and characterisation of existing restorations)

• **Note:** The incisal/effect compounds **must not be applied directly** to a framework or the surface of the luting agent or opaquer. After the luting agent is applied, the framework must therefore be coated with a layer of dentine compound in a preliminary step. This acts as an elastic or flexible interim layer, mitigating the effects of forces and tension. The final polymerisation step is performed after the incisal and effect compounds are applied, see polymerisation table.

• After applying the corresponding luting agent and the opaquer, remove the desired **dentine compound**, paste or flow from the syringe, apply to the area to be veneered and model to the desired form using brush or spatula.

• Maximum coat thickness is 2 mm. If the thickness of the area to be finished is greater than this, interim polymerisation is required after 2 mm (see table) followed by a second final dentine forming step.

• Forming is completed using one of the desired **incisal compounds** or **effect compounds**. The effect compounds are also perfectly suited for customisation and characterisation of the veneers due to their transparency and colouring.

12 Fabrication of fixed inlays, onlays, indirect veneers and fully veneered single tooth restorations without framework material

• **Note:** The incisal/effect compounds **must not be applied directly** to a framework or the surface of the luting agent or opaquer. After the luting agent is applied, the framework must therefore be coated with a layer of dentine compound in a preliminary step. This acts as an elastic or flexible interim layer, mitigating the effects of forces and tension. The final polymerisation step is performed after the incisal and effect compounds are applied, see polymerisation table.

• The stump is isolated in a first step (please follow the processing instructions for isolation). The second step involved applying the dentine compound (paste or flow, in the desired shade). This acts as an elastic or flexible interim layer, mitigating the effects of forces and tension. Remove the desired **dentine compound**, paste or flow from the syringe, apply to the area to be veneered and model to the desired form using brush or spatula.

• Maximum coat thickness is 2 mm. If the thickness of the area to be finished is greater than this, interim polymerisation is required after 2 mm (see table) followed by a second final dentine forming step.

• Forming is completed using the desired **incisal compounds** and/or **effect compounds**.

• The effect compounds are also perfectly suited for customisation and characterisation of the veneers due to their transparency and colouring.

• This is followed by final polymerisation, see polymerisation table.

13 Curing/polymerisation

• Final polymerisation of the structure is conducted in a suitable light polymerisation unit (see polymerisation table).

• Compound processing time is 1-3 minutes, depending on lighting conditions.

• A light polymerisation unit with an emission spectrum of at least 310-500 nm should be used. The physical characteristics required can only be achieved if the correct lamps are used. Regular checks of the light intensity in accordance with the manufacturer's specifications are therefore required.

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14 Polymerisation table

(Refer to section 16 for the press-on technique)

Polymerisation unit	anaxBlend Dentine/ Effect/ Enamel Paste & Flow		
	Interim polymerisation	Final polymerisation	Surface treatment
Spektra LED	30 sec.	3 min.	none
Spektra 2000	90 sec.	9 min.	7 min.
HiLite	90 sec.	180 sec.	180 sec.
Spektramat	1 min.	5 min.	5 min.
Labolight LV-II/III	0,5 min.	9 min.	9 min.
Solidilite EX	90 sec.	9 min.	14 min.

15 Surface treatment

- Yellowing of the material may occur after final polymerisation due to the catalyst used. Depending on the polymerisation unit used (see table), final treatment is required to achieve and fix the final shade.
- We recommend coating the entire veneered surface with a cover gel before final polymerisation. This prevents a new dispersion layer from forming, guarantees full polymerisation and facilitates finishing.

16 Application of composite when using the press-on/flask technique. (facing of crowns, bridges, adhesive/bonded bridges, implants and overdentures, telescopic and cone-shaped crowns)

The press-on technique can be used for time-saving, effective veneering of crowns and bridges and the aesthetic portions of partial dentures and dental implants with light-cured composite.

16.1 Preparation

- After the framework is fabricated and prepared, the final wax tooth mould is applied to the restoration.
- The flask is used in accordance with the manufacturer's specifications. You should have three forms after the wax is boiled away: a silicone key used to check the desired final form, a clear silicone key in the press-over flask and a socket with ventilation grooves (to catch any surplus) for final positioning of your structure in the flask.
- Sand blasting, applying luting agent and opaquer should be completed in accordance with the manufacturer's instructions.

16.2 Coating and polymerisation of materials using the press-on technique

- Apply a coating of anaxBlend Dentine Paste in the desired shade. Half-close the flask, drape with a dark covering and place it in a warm site such as an evaporator.
- Close and seal the flask after approx. 10-15 min and polymerise the material in a suitable lighting unit, i.e. a device with sufficient internal space to accept the press-on flask.
- Polymerisation time: 5 min
- Remove the flask from the lighting unit. Open the flask and remove surplus; take the workpiece out of the silicone socket. Return the workpiece to the lighting unit for polymerisation of the intaglio surfaces and undercut areas.
- Polymerisation time: 2 min
- Mill back the area that is to be finished with incisal compound (see 15.)
- After finishing, restore the dispersion layer by coating with a bonder followed by polymerisation (please follow separate manufacturer's instructions).
- If you wish to characterise the workpiece, stains may be applied and polymerised in accordance with the manufacturer's specifications.
- **Note:** The surface must not be touched or milled after polymerisation. Avoid contamination with oil, dust or dirt. The dentine core should be coated directly to guarantee that the incisal compounds are adapted properly.
- Now coat with anaxBlend Enamel Paste and/or one of the effect compounds. Half-close the flask, drape with a dark covering and place it in a warm site such as an evaporator. Close and seal the flask after approx. 10-15 min and polymerise the material in a suitable lighting unit with sufficient internal space to accept the press-on flask.
- Polymerisation time 5 min
- Remove the flask from the lighting unit, open it, remove any surplus and mill the surface until the desired form is achieved (see 17).
- The next step is polishing as described in 18.

17 Finishing the material

- Silicone polishers (square-edge or knife-edge wheels or cylinders), tungsten carbide cutters and diamond instruments are suitable for finishing, for example.
- **Note:** As with all plastics, a fine abrasive dust is formed when anaxBlend Dentine/ Enamel / Effect Paste & Flow is milled. We recommend working over a suction system and wearing gloves.

18 Polishing

- The material is polished with the handpiece with, for example, goat hair brushes, polishing paste and cotton buffs. Careful surface finishing and polishing is necessary for an optimal result and largely prevents the formation of deposits (nicotine, caffeine etc.) as well as the discolouration associated with this.
- **Note:** We also recommend working over a suction system and wearing gloves for this step.
- After polishing the structure can be cleaned with water and dried with oil-free compressed air.

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19 Corrections and repairs

- The composite to be modified is roughened up to 2 mm over the correction/repair boundary, coated with a bonder and grafted in the light-curing unit to create a new dispersion layer. Please observe separate manufacturer's instructions.
- The desired composite compound is then applied and finished as described above.

20 Characterisation

- The effect compounds, or suitable dental stains, can be used for characterisation. The stains that are particularly suitable are white (increases opacity and hue in the papilla area or near the bone), red (increases intensity of pink composite and imitates blood vessels) and blue (enhances colour effect in moulds and imitates smaller blood vessels).

21 Troubleshooting

Fault	Cause	Corrective action
composite does not solidify	compound is applied too thickly	maximum layer thickness 2 mm
	inadequate polymerisation	observe the polymerisation times check lamp and replace if necessary
coating peels off	opaquer not properly polymerised / applied too thickly	only apply opaquer in a wash-like coating or in very thin layers wrong polymerisation times / check lamp and replace if necessary
	framework malformation	model frameworks optimally so that compounds are supported (protecting incisal edge). prevention of premature contacts.
voids	compounds mixed together	Do not mix compounds but apply successive coats.
material is too solid in the syringe	syringe stored below 10°C	store material at room temperature, bring to room temperature in good time prior to processing
surface remains greasy	inadequate polymerisation	observe the polymerisation times
		check device / service device regularly

material cannot be polished	inadequate polymerisation	observe the polymerisation times check lamp and replace if necessary	
	matte surface	polish adequately use suitable polishing paste	
discolouration and increase in plaque deposition	inadequate polymerisation	check light output on polymerisation units correct positioning of objects in unit observe polymerisation times for composites observe layer thicknesses of compounds	
		insufficient surface treatment	sealing of surface by thorough polishing.
		faulty coating	do not use instrument to remove paste directly from syringe, twist material when removing apply sufficient compound and spread evenly do not mix compounds but apply successive coats

22 Processing time for compounds

1-3 minutes, depending on lighting conditions

23 Polymerisation

- Polymerisation depth is 2 mm. Layer thickness should therefore not exceed max. 2 mm for optimal physical characteristics.
- A light polymerisation unit with an emission spectrum of at least 310-500 nm should be used. The physical characteristics required can only be achieved if the correct lamps are used. Regular checks of the light intensity in accordance with the manufacturer's specifications are therefore required.

24 Information on storage and handling

To maintain long-term stability, the material is stored at 10°C - 25°C. Close the syringe tightly immediately after use and protect against direct light sources. Turn the spindle back one rotation to stop material leaking out.

25 Shelf life

The maximum shelf life is printed on the label of each syringe. Do not use after the expiry date.

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26 Side effects

With proper preparation and use of this medical device, adverse effects are extremely rare. However, immune reactions (such as allergies) or local discomfort cannot be ruled out completely. All serious incidents which occur in connection with the use of this product are to be reported to the manufacturer indicated below and the competent authority in each case.

27 Instructions for disposal

Leftover quantities and packaging materials are to be disposed of according to the local and/or statutory regulations.

