2017 NORTHERN LIGHTS: GUIDELINES FOR SUCCESSFUL ADHESIVE BONDING TO TEETH

Generally, bonding agents are defined as etch-and-rinse, or self-etching materials that have a primer and adhesive (in two bottles, or combined in a single bottle). Universal adhesives are a hybrid of the two.

1 Follow Manufacturer's Instructions

Bonding agents are **not all the same.**

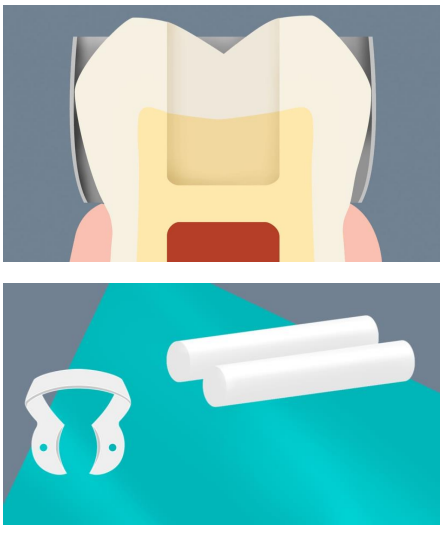
Some bonding agents are **incompatible with dual-cure** resins.

Check **expiry date.** Do not use expired products

❷ Dispensing Bonding Agent

Only dispense or open unit dose containers of bonding agent just before use.
Replace tops of bottles to **prevent solvent evaporation.**

❸ Moisture Control



Successful bonding requires **complete control** of bleeding, sulcular fluids, saliva, tongue and cheeks.

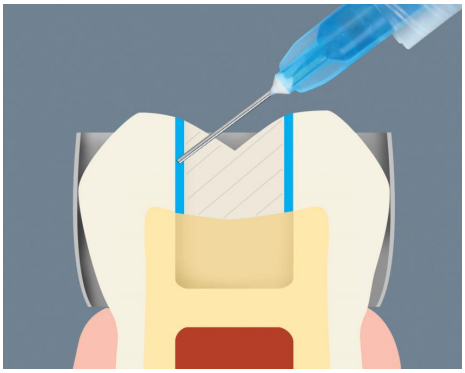
Avoid contaminating the bonding surfaces with hemostatic agents.

4 Preparation

Prepare peripheral tooth structure to reach **sound (non-demineralized) enamel and hard dentin**.

Slightly roughen hard sclerotic dentin with a bur.

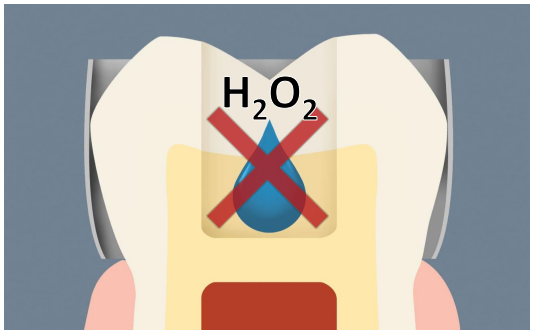
Etch enamel with phosphoric acid, even when using a self-etching adhesive.



5 Cavity Disinfection

If you wish to disinfect the cavity, only use approved products.

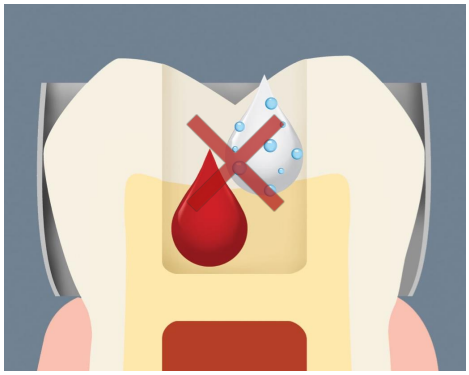
Never use a peroxide product in the cavity prior to bonding.



6 Moisture Dentin/Enamel

Most instructions recommend that you leave dentin moist prior to applying the bonding agent.

Moist does not mean it is contaminated with saliva or blood.

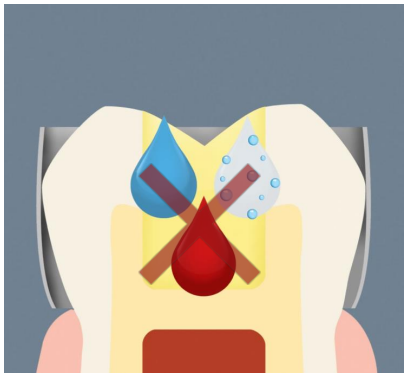


7 Contamination

If tooth surface becomes contaminated, **do not proceed.**

Instead, reapply the bonding agent as described in the **Instructions for Use.**

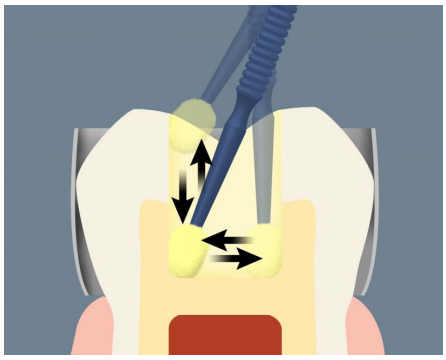
Some instructions may require re-etching the enamel.



8 Adhesive Application Time

SCRUB and INFUSE the bonding agent into dentin/enamel according to the manufacturer's instructions.

Reapply if necessary.
Do not rush this step.



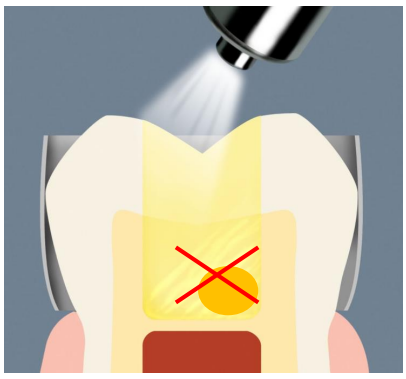
9 Solvent Removal: Air Drying Adhesive thinning

Check that you are using a **CLEAN and DRY** air source.

GENTLY evaporate solvent with moderate air pressure until you see no liquid movement and the surface remains shiny.

Thin the bonding agent in the preparation.

Some bonding agents need longer drying times.



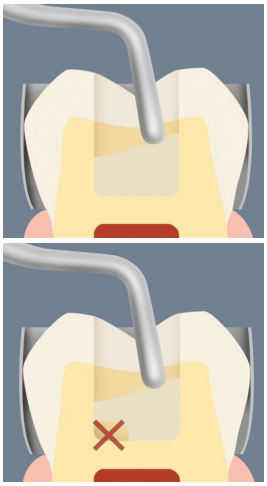
Do not leave streaks or puddles on the surface.

10 Composite Placement

Place composite immediately after light curing the adhesive.

Carefully adapt composite to the cavity and avoid entrapping air. This may mean using small increments of composite, heating the composite, or using flowable composite as the first layer.

Do not exceed maximum increment recommended by manufacturer.



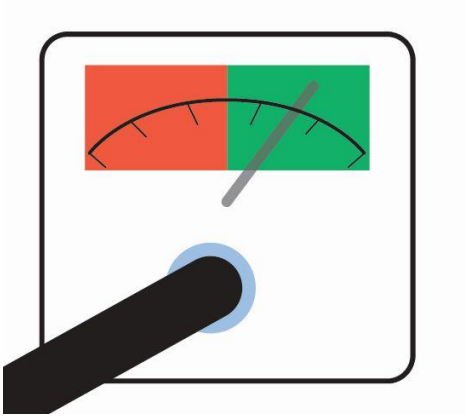
11 Instrument Contamination

A damp alcohol wipe works well to keep instruments clean.

Do not contaminate the composite by dipping your instruments into the bonding agent.

⓬ Light Curing

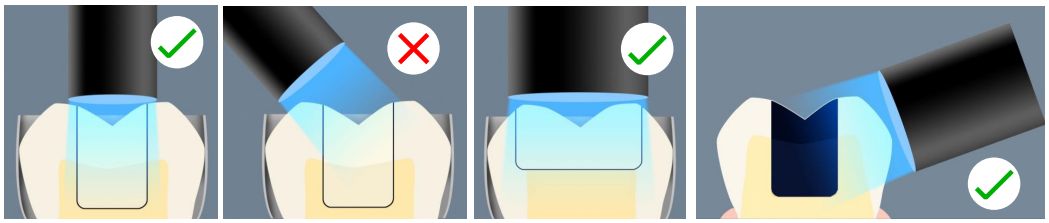
Regularly check that your curing light is in good working order.



⓭ Light Curing

Use and position the light correctly, so that all bonding surfaces receive direct light.

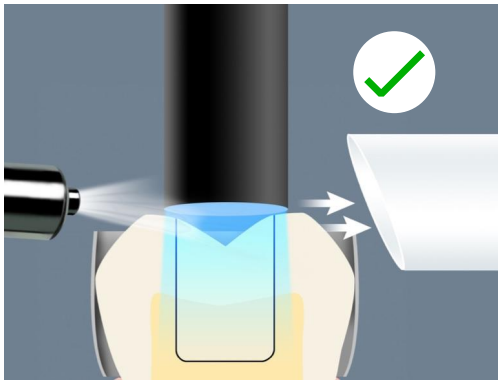
Class II restorations will benefit from additional light curing from the buccal and lingual surfaces after removing the matrix.



⓮ Light Curing

To avoid overheating the pulp it is not recommended to use a high-power light where remaining dentin is thin.

If needed, use cooling techniques to prevent overheating the pulp.



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