Zinc polycarboxylate cement

The powder is essentially zinc oxide and magnesium oxide .

Liquid is a water solution of polyacrylic acid (32% to 42%).

Properties:

1-chemical adhesion to enamel and dentin by chelate of calcium in enamel and dentin.

2-low irritant to the pulp because large particle size cant penetrate to the dentinal tubules

3- Short setting time (2-6 mins)

4-sensitive to disintegration and solubility more than zinc P C .

Uses:

1- luting agent

2-base material

3- orthodontics for cementation of bands

Glass ionomer cement

1- powder is fluoro-alumino-silicate glass.

2-liquid is 47.5% solution of 2: 1polyacrylic acid and itaconic acid copolymer.

Uses:

1-luting agent

2-filling material specially RMGIC

3- base material.

properties

1-compressive strength is greater than ZPC

2-very sensitive to contact with water

3- glass ionomer cement bond to tooth structure chemically by ionic interaction with calcium and phosphate ions .

4- fluoride release and anti-cariogenic effect

(bacteriostatic)


Zinc Polycarboxylate Cement
Zinc Polycarboxylate Cement
CE


MASTER-DENT
GLASS IONOMER
LUTING CEMENT
REF: 10-400
CONTENTS:
15g Powder
15ml Liquid
LOT 4110019
2017-11
CE
0470


Micron superior
A2
Micron
Glass Ionomer
restorative material A2

Resin cement

- Consist of resin matrix with inorganic fillers that are bonded to the matrix with monomers .
- The fillers are silica or glass particles and the fillers level vary from 40%-80% by weights.

Polymerization of resin cement

1- chemical reaction (self cure)
2-light activation (light cure)
3- both (dual-cure)

properties

- 1- insoluble in oral cavity
- 2-higher filler particles result in higher mechanical properties
- 3- fluoride release

Cavity varnishes

- They are solution of natural resin or synthetic resins dissolved in solvent such as alcohol , chloroform or aceton .
- Function:
- 1- placed on enamel or dentin to reduce penetration of oral fluid around amalgam
- 2- to reduce penetration of acid from zinc phosphate cement
- 3- reduce post operative sensitivity .


Cavity Varnish with Fluoride
Copal-F
Cavity Varnish with Fluorid
An ideal cavity liner provide
perfect protection to th
exposed surfaces of dentine ar
well as reducing oral flu
leakage around margins of th
tooth restoration interfac
REF 40009
PREVESTDenPro
Copal-F
15ml

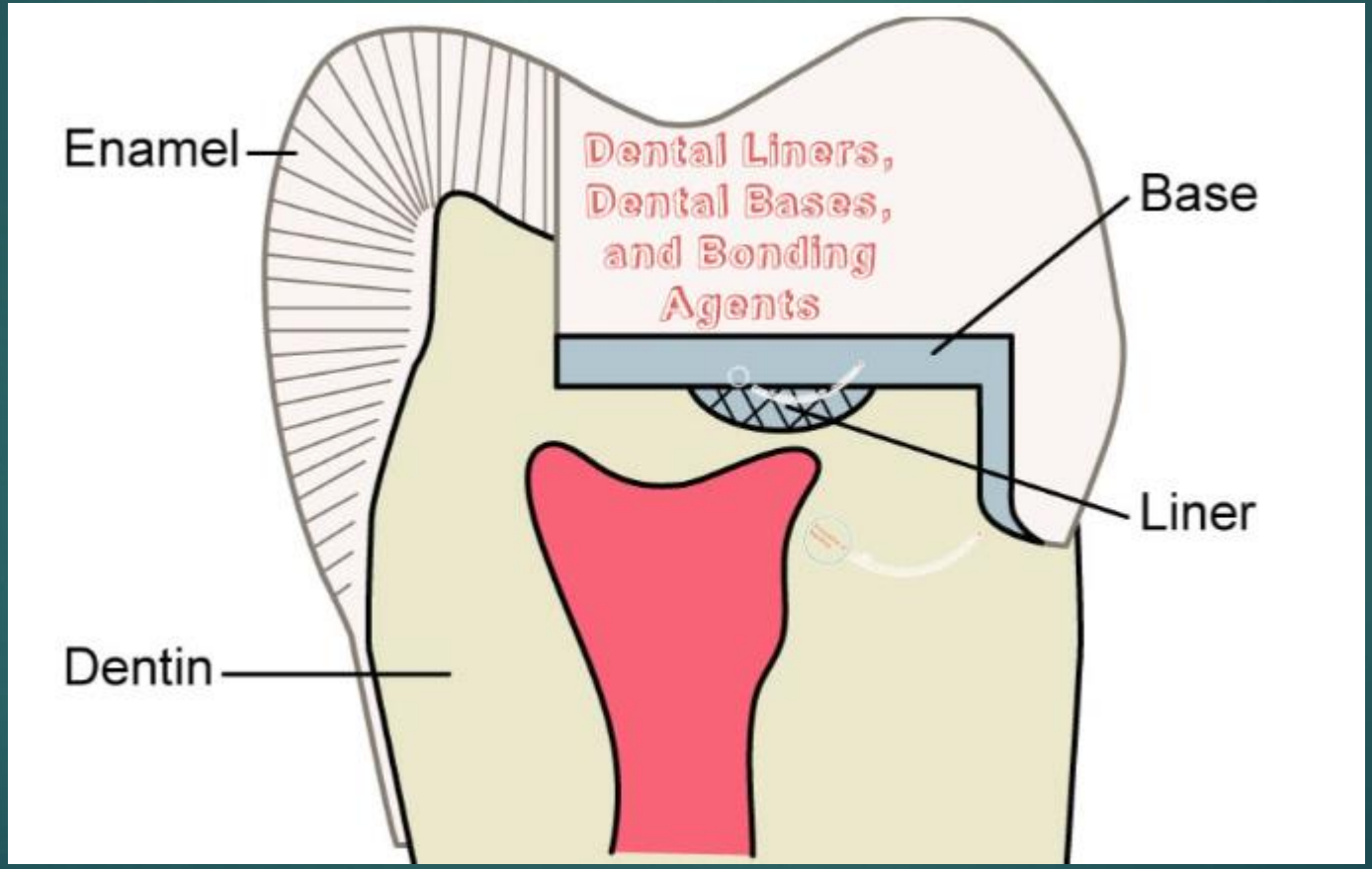

MASTER-DENT
COPAL PLUS
CAVITY VARNISH
CONTENTS:
15ml Liquid
REF 11-300
LOT 6186
2015-03
CE
0470
Dentonics, Inc., Monroe, NC, USA
COPAL PLUS
CAVITY VARNISH
15ml

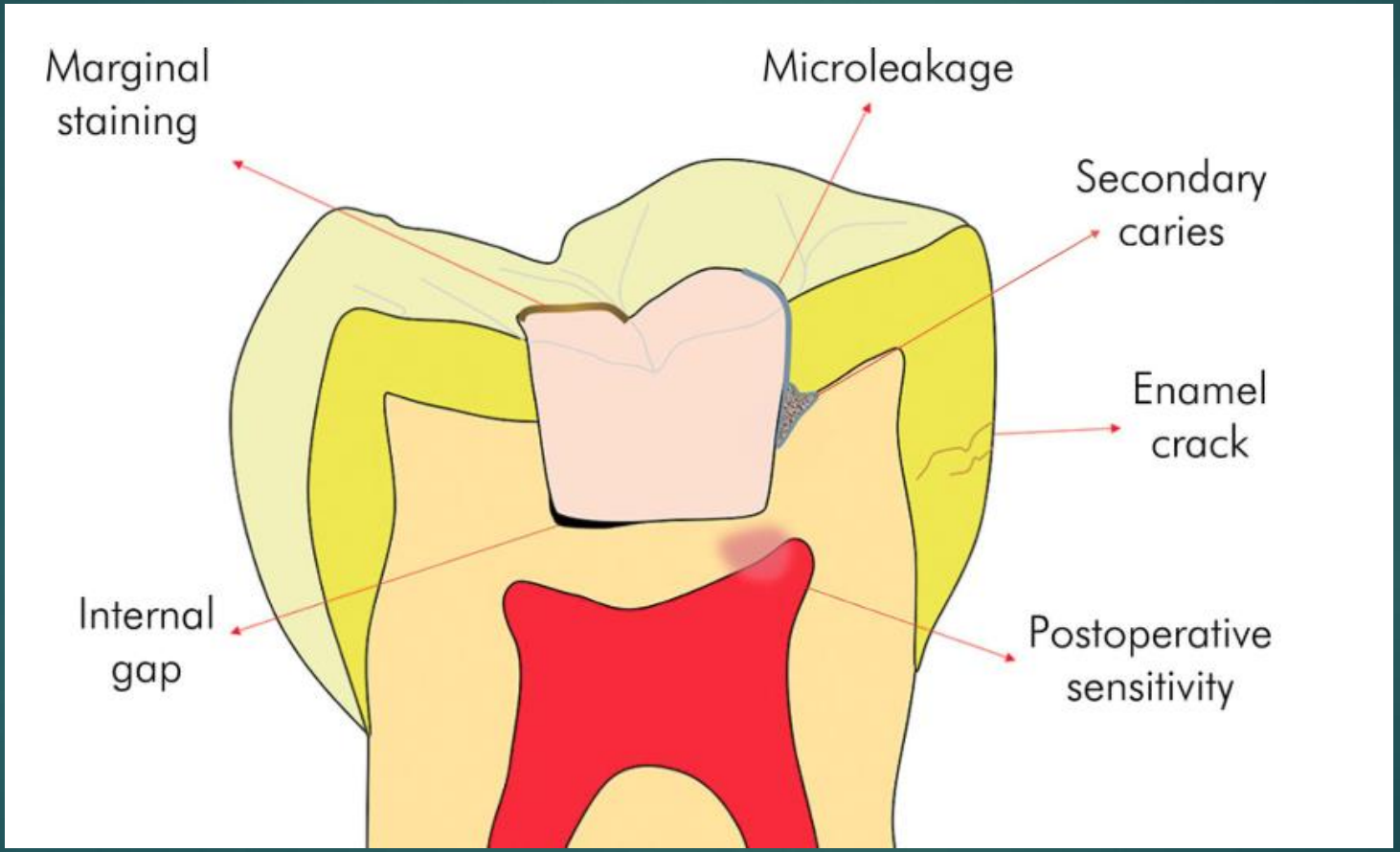
Bonding agent

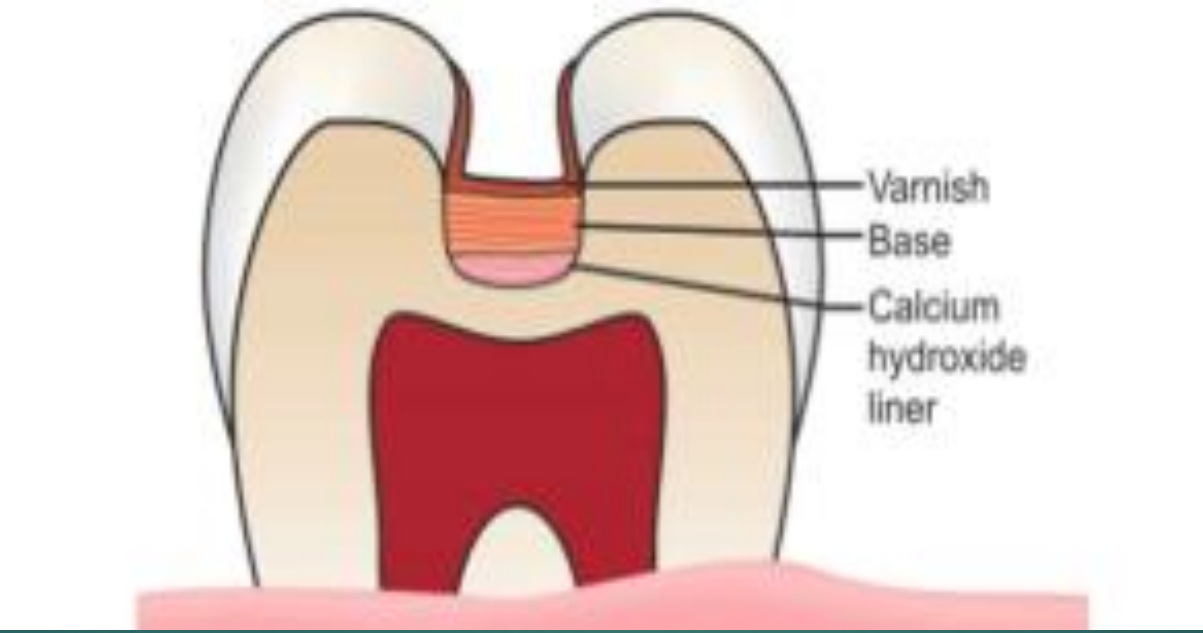
- Also known as a "bonderizer" **bonding agents** (spelled *dentin bonding agents* in American English) are resin materials used to make a dental composite filling material adhere to both dentin and enamel.
- The conditioning is achieved by using of 37% phosphoric acid for 15-30 sec then washing then dryness.

Calcium hydroxide

- Act as liner ,intermediate base ,or pulp capping agent,example dycal and calcipulp ,and also supplied by base and catalyst.
- Stimulate odontoblast cell to formation of secondary dentin act as direct pulp capping
- Act as antimicrobial action make it used indirect pulp capping .


Enamel
Dental Liners,
Dental Bases,
and Bonding
Agents
Base
Liner
Dentin


Marginal staining
Microleakage
Secondary caries
Enamel crack
Internal gap
Postoperative sensitivity


Varnish
Base
Calcium
hydroxide
liner


THANK YOU!