



HIGH-WAVE

INSTRUCTIONS

GENERAL DESCRIPTION

High-Wave denture base resin made with cross-linked acrylic polymer. It is designed for 3 minutes microwave heat curing. It is reinforced to increase its impact resistance and its flexibility. It does not contain cadmium to reduce the risk of allergic reactions. A multi-fibres process is used to produce a natural appearance. High-Wave resin has a short dough time combined with a long working time. **IMPORTANT: HIGH-WAVE POWDER MUST BE USED WITH HIGH-WAVE LIQUID ONLY FOR MICROWAVE CURING.**

CONTRAINDICATIONS

HIGH-WAVE resin is contraindicated for patients and users with a history of allergic reaction to methyl methacrylate monomer.

WARNINGS

HIGH-WAVE liquid contains polymerizable monomers which may cause skin sensitization (redness, irritation) or other allergic reactions in susceptible persons. Avoid vapor inhalation and do not swallow.

ADVERSE REACTIONS

Allergic contact dermatitis and other allergic reactions may occur in susceptible individuals. Residual monomer in fully cured materials can be minimized by soaking the cured prosthesis in warm water for several days. Particulates will be generated when grinding cured acrylic resins. Eye, skin and respiratory irritation may occur if appropriate protective equipment are not used.

HEALTH AND SAFETY INFORMATION

Please refer to the Safety Data Sheets (SDS) for information on any hazardous properties before handling. As the liquid is not miscible with water, it should not be eliminated via the municipal sewerage system.

Table 1

Powder : Liquid ratio (volume)	3.3 : 1
Weight equivalent 33 cc = 23.4 g	33 cc : 10 ml or 30 cc : 9 ml
Handling time at 21 °C (70 °F)	
Gel time	8 ± 1 minutes
Snap time	13 ± 1 minutes
Working time	at least 35 minutes
Flasking Material	Plastic flask with gypsum investment
Curing method:	3 minutes at 700 W
Cooling methods:	
Fast cooling:	minimum 30 min. bench then 20 min. in water
Recommended cooling:	bench to room temperature

MICROWAVE OVEN REQUIREMENT/CALIBRATION

A microwave oven with a nominal power of 700W and a turntable is required for uniform irradiation. The calibration to nominal power of 650-700W is required especially when the power of a microwave oven exceeds 700W. If your microwave oven has a different power, we recommend testing your oven at different levels of power before the fabrication of a real case.

Suggested setting for micro-wave ovens:

Full power, Watts	500	700	850	1000	1200
Suggested power level	10	10	8	7	6
Power (W)	500	700	680	700	720
Curing time, Minutes	4	3	3	3	3
Microwave energy (J/s min)	2000	2100	2040	2100	2160

The initiation system of **High-Wave** is designed for 3 minutes irradiation. Combining short time of less than 3 minutes with higher power should never be used.

PREPARATION

A wax denture is fabricated in the usual manner and is invested in a **plastic flask designed for microwave curing**. Once the gypsum is hardened, the

wax is softened in microwave oven for 30 - 45 seconds and then removed in one piece. The residual wax must be thoroughly flushed out with boiling water.

To increase the chemical reaction between acrylic and teeth, **the grinding of the base of each tooth is highly recommended. You can also improve mechanical retention by cutting a groove with a separation disk.** This will increase the contact surface of the tooth with the acrylic and therefore increase the bonding. Apply your preferred separating liquid to all gypsum surfaces. Allow the liquid to dry through before the resin is packed. Before packing, **surface of teeth should be thoroughly cleaned with a repair monomer** to get rid of any residual wax and contamination of separating liquid.

MIXING OF POWDER AND LIQUID

Shake powder well. Use the powder : liquid ratio specified in table 1. **DO NOT MANIPULATE LIQUID NEAR AN OPEN FLAME.** Pour the required amount of liquid into a mixing jar, then add the recommended portion of powder. Using a clean metal spatula, mix thoroughly for about 30 seconds to obtain a homogeneous mixture. It takes approximately one minute for powder to absorb completely the monomer. Cover the jar to prevent drying prior to packing. High-Wave resin requires less monomer by design. **DO NOT ADD EXTRA LIQUID; EXCESS MONOMER SUBSTANTIALLY INCREASES GEL AND SNAP TIME AND COULD GENERATE POROSITY.**

The following table provides an indication for various denture sizes:

Table 2

CASE	Ratio 3.3 :1	
	Powder	Liquid
Large	40 cc	12 ml
Average	30 cc	9 ml
Partial	20 cc	6 ml

PACKING

Dough consistency should be reached in about 6 minutes at 21 °C (70 °F). At this point the dough is no longer tacky. It can be worked with hands into a homogeneous, putty-like mass and ready for packing. For large denture, the recommended packing stage is when the dough reaches the "snap point", i.e., when stretched, the dough breaks cleanly with a clear, popping sound. **To increase the adhesion of teeth to acrylic, it is recommended to keep the closed flask on the bench for 30 minutes before the microwave curing.**

PROCESSING

Place the flask in calibrated microwave oven at the nominal power of 700W and cure for 3 minutes. For partial denture with metal frames, cure for 1 ½ minutes then turn over for an additional 1 ½ minutes. **CURE ONE FLASK AT TIME.**

Bench cool the flask at least for 30 minutes then in water for complete cooling before deflasking. Trim and polish in the usual manner.

SHIPPING AND CARE

It is recommended to deliver the finished denture in a wet environment. Prosthesis must be cleaned regularly to reduce bacterial contamination.

REPAIR

It is recommended to use DP-Repair materials that are available in the same shades as this heat cure resin.

To order or for information:

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