Grinding and Contouring
- Use suitable grinding instruments at slow speeds
  - Sprue Removal and Rough Contouring: Fine Aluminum Oxide stone
  - Medium – Fine Contouring: Fine grain diamonds (<60um)
  - Finishing and Smoothing Margins: Medium – fine diamond polishers
- Do not use carbide grinding burs
- Do not blast with aluminum oxide or glass beads, can damage the bonding surface

Cleaning Restorations
- Restoration must be cleaned prior to initial try-in and any characterization
- Approved Cleaning Techniques (most effective listed first):
  1. Ultrasonic in alcohol for 3 – 5 minutes
  2. Toothbrush, soap and water for 15 seconds
  3. Steam Cleaner
  4. Ultrasonic in di-ionized water for 3 – 5 minutes
  5. Wipe with Alcohol
  6. Toothbrush and water for 15 seconds
- Regardless of technique, restoration must be free of any cleaning residue prior to proceeding

Preparation of Restoration
- Fill inside of the restoration with IPS Object Fix Flow beyond the margins and insert crystallization pin, slotted end first
- Use a brush dampened with IPS e.max CAD Crystall Stain & Glaze Liquid to remove any IPS Object Fix that is on the outer surface of the restoration
- Be sure restoration is dry before proceeding with application of stains or glaze

Mixing IPS e.max CAD Crystall Materials
- Extrude IPS e.max CAD Crystall Glaze Paste onto ceramic plate
  - Mix to a creamy consistency with mixing instrument or end of brush. Test consistency by pulling Glaze Paste up from pile with mixing instrument about ½ inch. If material stays intact, drops down to the pile and smooths out, no IPS e.max CAD Crystall Stain & Glaze liquid is needed*
  - Place a couple of drops of IPS e.max CAD Crystall Stain & Glaze Liquid next to the pile of Glaze Paste.
    - Use this to clean brush between applications of different materials.
      *If needed, wet mixing instrument with Stain & Glaze Liquid then mix into Glaze Paste

Optional Characterization
- Extrude IPS e.max CAD Crystall Shades/Stains onto ceramic plate and mix to a creamy consistency
  - Stain/glaze liquid is usually not necessary – Crystall Stains apply and dry better when creamy, not runny
- Shade Paste: Chroma modification (1 for A1, A2, A3, A3.5; 2 for B1, B2, B3, B4, D4
- I1 or I2 Shade Paste: Incisal translucency modification (I1 for A&B shades; I2 for C&D shades)
- White or Cream Stain: Cusp tips and marginal ridges
- Sunset or Copper Stain: Central groove chroma modification
- Mahogany Stain: Pits and fissures
Applying Characterization Materials

- Apply an even layer of Glaze Paste, remove excess from occlusal grooves
  - Too thin will result in a rough appearance
  - Too thick will result in white or cloudy areas
- Carefully work Shades and Stains into Glaze Paste with a dabbing motion
  - Brushing Shades and Stains into Glaze will result in rough surface due to lack of Glaze Paste remaining
  - Subtle effects are best, colors fire the same as they look before firing

Crystallization and Glaze Combination Firing

- Program 1 in Programat CS for IPS e.max CAD Crystall Glaze Paste Technique
  - Use Program 1 when any paste materials are used, including shades/stains with glaze spray over top
- Three restorations at one time is a safe maximum to allow thorough drying
  - Paste require 6 minute closing time to dry thoroughly
  - Inadequate drying will result in gray or black glaze
- When firing process is finished, allow furnace hood to open completely before removing crystallization tray
- Allow crystallization tray to set on cooling platform until restorations are cooled to room temperature (no external fans or cooling sources)
- **NOTE:** If cutback and layer technique is used, restoration must be crystallized first, then characterized with IPS e.max Ceram Glaze, Shades and Essences

Once characterization and crystallization is complete, follow ceramic preparation and cementation procedures accordingly.