

**A Brand Division of American Tooth Industries**

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## Justi Shots

### A premium Alloy. The Best in the World

070-29-0003 1 lb. Regular  
070-29-0003/H1 1 lb. Hard

#### Instructions For Use

##### Investment

Only use investments which are acceptable and recommended for high-heat Chromium-Cobalt partial denture alloys. Consult the investment manufacturer's instructions for proper investing procedures. Burnout at the specifications recommended by the investment manufacturer or at a minimum of 1,850°F (1,010°C) for 1.5 hours.

##### Torch Casting

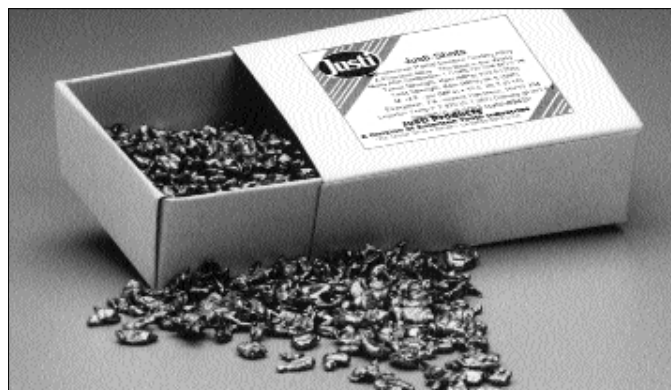
1. Use a single-orifice tip comparable to a Linde #8 or a multi-orifice tip.
2. Set the gauges at 20 psi oxygen and 8 psi acetylene.
3. Light the torch and increase the acetylene and oxygen flow until you hear a hissing sound.
4. Using the acetylene valve, adjust the torch so that the bright cone is approximately 1/8" (3mm) from the tip and the second inner cone approximately 1.5" (38mm) from the tip. Beyond this second tip will be the outer cone or brush flame.
5. If a spring type casting machine is used, give the arm three and a half to four turns for an average casting.
6. Place sufficient alloy in a preheated crucible.
7. Apply the flame to the metal, keeping the inner cone (second larger cone) about 1.5" (38mm) from the metal. With a slight rotary motion, heat the alloy uniformly until the metal begins to melt. At this point drop a pinch of flux together. As soon as all the metal has melted in to single mass, release the casting machine arm.
8. Allow the casting arm to rotate for a minimum of 20 seconds, then stop the machine arm, remove the mold and set it aside to bench cool.

##### Induction Casting

Follow the manufacturer's instructions as to the operation of your specific equipment. Exercise care in placing metal in the crucible. Do not drop ingots, but rather use large tweezers to load the crucible. For manual machines, when all the metal has melted and joined together as one mass, release machine immediately to prevent over-heating of the metal.

##### FINISHING

1. Remove buttons by cutting the sprues close to the casting with a thin cut-off wheel.



2. Using a heavy cut-off wheel, trim remaining metal from sprues and shape to the case design.
3. Use a Large Barrel Stone #5 to grind the surface of lingual and palatal bars and shape the finish line areas on upper cases.
4. Clean up the inside of clasps and uprights with a Taper Stone #3 and avoid grinding under the rest areas.
5. Trim or grind tight areas with an inverted cone #2.
6. After fitting the casting to the model, go over the entire case with a Small Barrel Stone #1, which will prepare the surface for polishing.
7. Do not stone stippled surfaces. They should be electropolished or harperized and then shined.
8. The casting should now be sandblasted and ready for polishing.

##### Conventional Electropolishing

Only use conventional electropolishing systems which are recommended for high-heat Chromium-Cobalt partial denture alloys. Consult the manufacturer's instructions for proper operating procedures and chemical/material requirements. Once conventional electropolishing is complete, remove case from the solution and rinse thoroughly in water. Areas that have been ground will require rubberizing to attain a smooth surface. Rubber wheel large areas, saddle areas and finishing lines. Rubber point all clasps and go over all surfaces that have been rubber wheeled. Attach a bristle brush to a low speed lathe (1750 RPM) and apply a pre-buff compound directly to the bristles. Go over the entire case in this manner to remove all surface marks left by the rubber point. Apply a high-shine compound to a felt wheel and point to attain a brilliant finish and then clean the case in an ultrasonic cleaner.

#### Products for Better Dentistry

**Additional questions, to place your order, or for the Dealer nearest you, please call the  
Tooth Express Order Desk at 800-628-1437.**

### Acetylene/Oxygen Welding

1. Prepare the parts to be welded by grinding or sandblasting to a clean surface and then invest.
2. Thick areas should be ground to a "V" shape so that the top surface is wider than the bottom surface.
3. Adjust the gauges to 1 psi oxygen and 1 psi acetylene.
4. Light the torch and adjust to a neutral flame with approximately 1/2" (12mm) blue cone extending from the torch tip.
5. Heat the end of the welding rod and dip it into the powdered flux (not necessary when using paste flux).
6. Heat both parts to be welded and bring to an even cherry red color. Place the welding rod between the parts to be welded and proceed to melt.
7. Keep the torch about 1/2" (12mm) from the area to be welded.

### Appliance Care

For the best appliance hygiene and care, clean frequently with ADA professionally recognized toothbrushes and ADA accepted dentrifices.

#### Grp/Item Description

- 070-29-0003      1 lb. Regular / Justi Shots - A non-precious partial denture casting alloy.  
 070-29-0003/H1   1 lb. Hard / Justi Shots - A non-precious partial denture casting alloy.

#### Applications

Partial Denture Frameworks

#### Composition

Co 63.5%   Cr 27.0%   Mo 5.5%

#### Mechanical Properties

	Regular	Hard
Tensile Strength, Kpsi(MPa)	109.5 (755)	109.5 (755)
Yield Strength, Kpsi (MPa)	86.5 (597)	98.0 (675)
M. of E., psi (MPa) x 106	26.1 (0.18)	26.1 (0.18)
Elongation, %	7	6
Vickers Hardness, HV 10	354	359
Density, g/cm <sup>3</sup>	8.7	8.7
Liquidus Temperature, °F (°C)	2,520 (1,382)	2,500 (1,371)

### Other Reliable Justi Products

- Hardened Plastic Teeth:
    - Justi Imperial® Anterior and Posterior
    - Justi Blend® Anterior
    - Dymon-Hue® HPT Anterior and Posterior
  - Porcelana
    - Low Fusing, Synthetic Porcelain
  - Justi Imperial Plastic Facings
  - Pyroplast Veneering Material
  - Namilon Crown and Bridge Material
  - Justi-Pakto Crown and Bridge Resin
  - Justi Rainbow Liquid
  - Justi Repair Material
  - Justi Tray Material
  - Wax Solvent No. 20
  - Milling and Polishing Cream
  - Justi Opaquer
  - Justi Denture Base Material
  - Justi Cold-Cure Ortho Resin - High Impact
- and Much More . . . . .

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