Niranium™
RELIABLE DENTAL LABORATORY PRODUCTS SINCE 1933
Crown & Bridge Alloys ......................................................... 2

Partial Denture Alloys ..................................................... 3

Partial Denture Investments ............................................. 4

Duplicating Materials, Precoat Paint-On & Dips ..................... 5

Waxes, Casting, Finishing & Repair Supplies ......................... 6

Polisher/Grinders, Dust Collector & Spindle ......................... 7

Physical Properties Charts, Dental Terms & Conversions ........ 8
FOR OVER 60 YEARS, the Niranium Company has been manufacturing and marketing outstanding products for use in the dental laboratory industry. Painstaking measures have been taken to keep product costs at a minimum - resulting in solid performance and prices more affordable than most competitive offerings. If you are not a Niranium customer, try our products and use them with confidence. If you are . . . thank you!

CROWN & BRIDGE ALLOYS

- Scientific blend of finest virgin materials
- Carefully inspected and tested for consistent reliability and handling
- Compatible with most popular porcelains
- Competitively priced and laboratory proven

NICERAM C & B ALLOY (Not Shown)
0701 1 Kg (2.2 Lb)
0712 250 Gm

NIRABOND II C & B ALLOY
A non-precious, nickel-chrome crown and bridge alloy uniquely formulated for use with European porcelains. Excellent bonding strength. Premium quality without the premium price.
804003K 1 Kg (2.2 Lb)
804003K-250 250 Gm

NIRANIUM 1-2-3 C & B ALLOY
Popular nickel-chrome, beryllium non-precious alloy formulated for use with many U.S. and European porcelains. Good for use with acid etching techniques. Excellent bonding strength.
804001K 1 Kg (2.2 Lb)
PARTIAL DENTURE ALLOYS

• Special formulations for the contemporary, modern dental laboratory
• A consistent blend of fine materials proven in dental laboratories throughout the world
• Economically priced to insure the “best-for-less”

NIR PREMIUM HARD ALLOY
A competitively priced, premium chrome-cobalt partial denture ingot alloy featuring above average physical characteristics. Additional “hardness” allows for a more delicate design without the fear of breakage.

801001K 1 Kg (2.2 Lb)

DOUBLE “N” ALLOY
Formulated from the purest, top-of-the-line materials available. ADA Accepted, this truly “premium” chrome-cobalt partial denture alloy is ideal for the discriminating dental laboratory. You can’t buy better quality at a better price!

801002K 1 Kg (2.2 Lb)

NIRANIUM ECONOMY ALLOY
An economical chrome-cobalt ingot alloy with above average hardness characteristics. Excellent performance with finer clasps and frameworks.

801046K 1 Kg (2.2 Lb)

HARD PEBBLE ALLOY

802002K 1 Kg (2.2 Lb)

See page 8 for Niranium alloy physical properties.
Niranium water-mix investments are manufactured from time-tested formulations using high-quality materials guaranteed to meet the demanding needs of the dental laboratory professional.

**EMERALD**
- Working Time: 3 Minutes
- Model Separation: 1 Hour
- Ready for Burnout: 1 Hour
- Burnout Temperature: 1800°F (982°C)
- Setting Expansion: 0.5%
- Thermal Expansion: 1.4%

**FOUR SEASONS**
- Working Time: 5 Minutes
- Model Separation: 1 Hour
- Ready for Burnout: 1 Hour
- Burnout Temperature: 1800°F (982°C)
- Setting Expansion: 0.25%
- Thermal Expansion: 1.4%

**EMERALD OXY-PHOSPHATE INVESTMENT**
A fine-grain, oxy-phosphate, “cristobalite enhanced” water-mix investment for casting partial denture frameworks. A special all-season liquid is provided for the refractory model to insure an accurate fit of the finished prosthesis. Compatible with Niraloid, Organa II and polysilaxane rubber duplicating systems.

- **805050** 55 Lb (25 Kg) Powder w/Special Liquid

**FOUR SEASONS WATER-MIX INVESTMENT**
A simple, water-mix investment for partial dentures developed for use with lower heat techniques. Good, consistent results without the necessity of special liquids.

- **805004** 55 Lb (25 Kg) Powder

**GOOD EARTH ETHYL-SILICATE INVESTMENT**
A quality two-liquid, ethyl-silicate investment for partial dentures providing for the laboratory’s required expansion needs. Simple liquid mix with consistent, reliable results.

- **805000** 100 Lb (45.4 Kg) Powder w/Liquids
- **805001** 100 Lb (45.4 Kg) Powder Only
- **805002** 50 Lb (22.7 Kg) Powder Only
- **805003** 1 Gal (3.79 Ltr) Liquid w/ “A”

**GOOD EARTH**
- Working Time: 10 Minutes
- Model Separation: 1 Hour
- Ready for Burnout: 1 Hour
- Burnout Temperature: 1800°F (982°C)
- Thermal Expansion: 1.7%
DUPLICATING MATERIALS, PRECOAT PAINT-ON & DIPS

Niranium duplicating materials are made from exacting, time-tested formulas comprised of only the finest virgin materials to insure trouble-free, consistent results.

NIRALOID “CONCENTRATED” DUPLICATING MATERIAL
JUST ADD WATER . . . instantly you have whatever volume of duplicating material you need! A remarkable advance in colloid technology, NIRALOID is a unique material available in a special “concentrated” form. Proven in dental laboratories worldwide, it is the result of extensive field testing . . . long-term results indicate that NIRALOID delivers a noticeably longer life than regular, pre-mixed hydrocolloids. Use with confidence!

ORGANA I DUPLICATING MATERIAL
A reversible hydrocolloid recommended for ethyl-silicate investments, the “pour” technique, and the reproduction of hearing aid impressions. Yields consistent results.

ORGANA II DUPLICATING MATERIAL
An all-purpose hydrocolloid possessing a drier surface than that of Organa I for the reproduction of gypsum models and water-mix investments. Yields consistent results.

PRECOAT PAINT-ON
A liquid precoat investment designed to protect plastic patterns and waxes from the effects of ethyl-silicate investments. Assures smooth, bubble-free castings.

FLAKE MODEL DIP (Wax)
A reliable dipping material used to seal and strengthen investment models providing a suitable work surface for waxing. This economical product is in flake form ready for heating.

MODEL “COLD DIP” (Environmentally-Friendly)
A cold dipping material that is environmentally-safe and easy to use. Provides a strong and suitable work surface for waxing.
Time-tested laboratory products known for their reliability and consistency. Use with confidence!

**ELECTRO SOLUTION**
A specially formulated “deplating” solution designed to be used with electric polishing machines. Excellent results are obtained with all chrome-cobalt alloys.

- 809001  1 Gal (3.79 Ltr) Bottle

**POLISHING COMPOUND**
A “hi-shine” polishing compound specially formulated for chrome-cobalt alloys.

- 809002  1 Lb (454 Gm) Tube

**CASTING CRUCIBLE (Slotted)**
Classic Niranium-type, slotted clay crucible. Excellent for both induction and torch casting.

- 808017  Each

**BASE PLATE WAX (Hard Pink)**
Holds shape, flexible and provides a clean boil-out. Each sheet measures 3” x 6” (7.6 x 15 cm). Available in hard pink.

- 807043  5 Lb (2.27 Kg) Box

**BITE WAX (Flavored)**
A yellow, flavored wax used for bite registrations. Shape is maintained for dependable accuracy. Each sheet measures 3” x 6” (7.5 x 15 cm).

- 807063  5 Lb (2.27 Kg) Box

**WELD ROD**
Proven-quality worldwide for decades, Niranium Weld Rod is excellent for repairing all chrome-cobalt alloys. Easy-to-use, consistent quality.

- 808001  25 Gm Tube

**WELDING FLUX**
A quality powder flux for use with Niranium and other chrome-cobalt type weld rods. Aids in the proper welding of casework.

- 808005  2 Oz (56 Gm) Jar

**WESTERN HINGE**
Provides many important features in the construction of free end saddles. Eliminates lateral movement which is a common failure of most extension hinges. Protects abutment teeth and eliminates bulky saddles. Relieves stress and will not interfere with the setting of teeth. Insures a finished prosthesis that will provide greater comfort and cleanliness.

- 808060  Straight Hinge (Pair)
- 808061  Curved Hinge (Pair)
DEMCO Model B-1
VARIABLE, HI-SPEED POLISHER/GRINDER

- Most versatile grinder available. Finish gold or chrome on the same unit.
- Positive traction Polyflex duo-belt eliminates slippage.
- Variable speed control allows speed changes in seconds.
- Equipped with a fully-automatic spindle.
- Large, convenient working space with suction port.
- Two high-intensity lights provide excellent work area illumination.
- Tinted safety eye shield for glare elimination and facial protection.
- 11 5/16" W x 9 1/4" H x 11 9/16" D (28.7 cm x 23.5 cm x 29.4 cm)
- Available in 115V & 230V models • Shipping weight: 32 Lbs (14.5 Kg)

DEMCO Model E-96
TWO-SPEED POLISHER/GRINDER

- Positive traction Polyflex duo-belt eliminates slippage.
- Equipped with a fully-automatic spindle.
- Large, convenient working space with suction port.
- Two high-intensity lights provide excellent work area illumination.
- Tinted safety eye shield for glare elimination and facial protection.
- 10 1/4" W x 11" H x 12 3/4" D (26 cm x 27.9 cm x 32.4 cm)
- Available in 115V & 230V models • Shipping weight: 34 Lbs (15.4 Kg)

DEMCO Model D-1
DUST COLLECTOR

- Easy-to-use, moves anywhere quickly . . . take to job instead of job to it!
- Versatile operation . . . use in either the horizontal or vertical position.
- Powerful 10 amp, thermal-protected motor with 2-stage blower.
- Positive, 96 CFM pulling power.
- Durable, all-metal construction.
- Reusable cloth filter bag.
- 6 foot suction hose included.
- 15 5/8" W x 8 1/2" H x 11 3/4" D (39.7 cm x 21.6 cm x 29.8 cm)
- Available in 115V & 230V models • Shipping weight: 21 Lbs (9.5 Kg)

DEMCO Model D-S1 & S1-B
HI-POWER, FULLY-AUTOMATIC SPINDLES

- Save time & money . . . no need to stop motor to change tools!
- Precision machined by craftsmen to the highest possible tolerances.
- High quality bearings for cooler, quieter operation.
- Quality spindle repair service! Always thorough and meticulous to insure the highest possible performance in your genuine rebuilt DEMCO part.
### ALLOY PHYSICAL PROPERTIES

#### CROWN & BRIDGE ALLOYS

<table>
<thead>
<tr>
<th>ALLOY</th>
<th>DENSITY g/cc</th>
<th>SUGGESTED CASTING TEMP °F/C</th>
<th>HARTNESS VICKERS VHN1</th>
<th>TENSILE STRENGTH PSI/MPa</th>
<th>PROOF STRESS PSI/MPa</th>
<th>ELONGATION %</th>
</tr>
</thead>
<tbody>
<tr>
<td>NiCeram</td>
<td>8.30</td>
<td>2700</td>
<td>320</td>
<td>102,500</td>
<td>90,700</td>
<td>5.5</td>
</tr>
<tr>
<td>Nirabond II</td>
<td>8.50</td>
<td>2500</td>
<td>363</td>
<td>105,000</td>
<td>79,750</td>
<td>8.0</td>
</tr>
<tr>
<td>Niranium 1-2-3</td>
<td>8.50</td>
<td>2500</td>
<td>434</td>
<td>135,000</td>
<td>118,900</td>
<td>8.0</td>
</tr>
</tbody>
</table>

#### PARTIAL DENTURE ALLOYS

<table>
<thead>
<tr>
<th>ALLOY</th>
<th>DENSITY g/cc</th>
<th>SUGGESTED CASTING TEMP °F/C</th>
<th>HARTNESS VICKERS VHN1</th>
<th>TENSILE STRENGTH PSI/MPa</th>
<th>PROOF STRESS PSI/MPa</th>
<th>ELONGATION %</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIR Premium</td>
<td>8.11</td>
<td>2700</td>
<td>439</td>
<td>119,000</td>
<td>84,970</td>
<td>3.0</td>
</tr>
<tr>
<td>Hard</td>
<td>8.20</td>
<td>2700</td>
<td>439</td>
<td>120,000</td>
<td>87,000</td>
<td>3.5</td>
</tr>
<tr>
<td>Double “N”</td>
<td>8.11</td>
<td>2700</td>
<td>439</td>
<td>119,500</td>
<td>86,000</td>
<td>3.0</td>
</tr>
<tr>
<td>Hard Pebble</td>
<td>8.50</td>
<td>2500</td>
<td>434</td>
<td>115,000</td>
<td>84,970</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### DENTAL TERMS & CONVERSIONS

#### WEIGHT
- 1 Troy Grain = 1 Avoir Grain
- 1 Troy DWT = 1.555 Grams
- 1 Troy Ounce = 1.097 Avoir Ounces
- 1 Troy Ounce = 31.10 Grams
- 1 Troy Pound = 13.17 Avoir Ounces
- 1 Troy Pound = 35.28 Avoir Ounces
- 1 Avoir Ounce = 28.35 Grams
- 1 Avoir Ounce = 1.215 Troy Pound
- 1 Gram = 0.03528 Avoir Ounces
- 1 Gram = 15.43 Grains
- 1 Troy DWT = 0.643 Troy Ounces
- 1 Kilogram = 2.205 Troy Pounds
- 1 Kilogram = 35.28 Avoir Ounces
- 1 Kilogram = 7.05 Troy Ounces

#### VOLUME
- 1 Fluid Ounce = 29.57 Cubic Centimeters
- 1 Pint = 473.2 Cubic Centimeters
- 1 Quart = 946.2 Cubic Centimeters
- 1 Gallon = 3785 Cubic Centimeters
- 1 Liter = 1000 Cubic Centimeters
- 1 Kilogram = 1.057 Quarts
- 1 Kilogram = 2.205 Avoir Pounds
- 1 Kilogram = 815.71 Troy Ounces
- 1 Kilogram = 7.05 Troy Pounds