INDICATIONS FOR USE
Dental partial denture frameworks.

SURVEYING
Survey and design the master model using accepted laboratory procedures.

DUPLICATING
Follow the instructions of Investment and Hydrocolloid you are using. Recommended hydrocolloids and investments:

Nobiloid All-Purpose (#1002) for Yellow Stripe, Good Earth, Green Stripe and Four Seasons Investments.

Instaloid Concentrated All-Purpose (# 72-10) for Yellow Stripe, Good Earth, Green Stripe and Four Seasons Investments.

NOBIL-X (#1009) for Yellow Stripe, Good Earth and Purple Stripe Investments.

SPRUING
Most cases can be successfully cast using three, 6 gauge sprues. Always place the sprues in the bulkiest areas of the wax-up. Exceptions may be for those cases having pontics and extra heavy areas. Cases of this type may require addition of auxiliary sprues and reservoirs.

BURNOUT
Consult the specific burnout direction from the investment you are using. In general, burnout is accomplished in two stages, first stage 500°F (260°C) hold for 60 minutes. Second stage is 1850°F (1010°C) heat soak time is one hour.

MELTING AND CASTING
Use all new or a 50/50 mixture of new alloy and buttons that are free of investments and oxides. The alloy may be melted by either induction melting equipment or a gas/oxygen torch with multi-orifice tip.

Caution: Wear OSHA approved eye protection recommended for torch melting.

When using Oxygen and Acetylene: The gauge for oxygen should be set at 10 lbs and the acetylene set at 8 lbs.

When using Oxygen and Propane: The oxygen pressure should be set at 20 lbs and the propane set at 10 lbs.

When using Natural Gas and Oxygen: The Oxygen pressure should be set at 30 lbs and the natural gas valve open at full pressure. Heat alloy in crucible until it collapses, then remove mold from furnace and place in casting machine. Cast after flame causes wave. Note: The slag being left in the crucible after casting should be removed to avoid being carried into the next casting.

**Physical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>64% Cobalt, 28.5% Chromium, 5.25% Molybdenum (C, Fe, Mn, Si, N) &lt;1%</td>
</tr>
<tr>
<td>Density</td>
<td>8.3 g/cc</td>
</tr>
<tr>
<td>Hardness</td>
<td>Vickers 350 VHN1</td>
</tr>
<tr>
<td>Proof Stress</td>
<td>0.2%: 645 MPa</td>
</tr>
<tr>
<td>Ultimate Tensile Strength</td>
<td>980 MPa</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td>204 GPa</td>
</tr>
<tr>
<td>Elongation</td>
<td>13%</td>
</tr>
<tr>
<td>Fusion Range</td>
<td>2375°C-2500°F (1302°-1371°C)</td>
</tr>
<tr>
<td>Burnout Temperature</td>
<td>1850°F (1010°C)</td>
</tr>
<tr>
<td>Casting Temperature</td>
<td>2750°F (1510°C)</td>
</tr>
</tbody>
</table>

**Premiuum Chrome-Cobalt Partial Denture Alloy NOBILSTAR ULTRA TM**
INDUCTION MELTING
Set power to high and make sure shadow is disappearing and alloy slumps. Automatic casting machines should be set at a temperature of 2750°F (1510°C) with a 5 second heat-soak.

REPAIR OF FRAMEWORK
Prepare parts to be welded by grinding or sand blasting to a clean surface and invest in Nobilium Welding and Soldering Investment (#2033). Thicker areas should be ground to a “V” shape. Adjust gauges to 1 lb oxygen and 1 lb acetylene. Heat the end of the welding rod and dip into powdered flux. Heat both parts to be welded and proceed to melt. Keep torch about 1/2 inch (12 mm) from the area to be welded. Framework may be finished and polished in the usual manner.

CARE OF A NOBILSTAR ULTRA RESTORATION
It is extremely important that you convey to your customer, the Dentist, that use of hypochlorites or soaking in common household bleach can damage a chrome alloy denture. It is not possible to determine whether or not a commercial denture cleaner contains hypochlorites by reading the label. To avoid unnecessary problems, a safe and effective way to daily clean a partial denture is to use a stiff brush and tooth paste. After thoroughly scrubbing the partial, rinse in running tap water. If overnight soaking is desired, use only distilled water.

WARNINGS
The use of a respirator and a dust/fume collection system is required, see SDS for proper handling instructions.
NOBILSTAR ULTRA is a prescription only device under the direction of a dental technician or dentist.
NOBILSTAR ULTRA is intended for use by dentist and trained dental technicians.
Do not use if patient is known to be allergic to any components of the alloy.
Remove partial denture before entering any MRI.
CAUTION: Wear OSHA approved eye protection recomended for torch melting.