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**# 384 DARK YELLOW ALLOY FOR 20 K – 22 K YELLOW GOLD  
CASTING & SHEET, PLATE, AND WIRE FABRICATION**

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United # 384 dark yellow alloy is formulated for **20 K to 22 K** Dark Yellow Gold Casting and sheet, plate & wire fabrication giving a **Dark Yellow color**. The # 384 Dark Yellow Alloy **can also be used for Investment Casting if desired**.

**MELTING**

The # 384 Dark Yellow Alloy and fine gold should be melted together in a clean crucible. Put alloy in the bottom of the crucible and fine gold on top. Initial melting temperature should be **1066° - 1116° C / 1950° - 2040° F**. Drop temperature somewhat before pouring as listed below. Boric acid flux may be used to keep the metal clean during the melting process. The metal should be mixed well with a stirring rod before pouring to assure a good mix.

**POURING TEMP  
FOR INGOTS**

20 K – 22 K - **1100° - 1110° C**  
**2012° - 2030° F**

**POURING**

Metal should be poured into a preheated, vertical graphite or lightly lubricated iron mold. A steady even pouring motion should be used slowing down at the end of the pour to prevent shrinkage in the top of the ingot. Use a round rod mold for wire and a 2 piece L shaped mold for plate and sheet.

**QUENCHING**

The metal ingot should be removed from the mold and quenched immediately in pickle solution or water. For heavy ingots a one-minute cool down before quenching prevents quench cracking.

**FABRICATION**

The metal ingot should be cleaned of all adhering oxide or fluxes before rolling. The ingot should be rolled or drawn to a 50% reduction in size before annealing. After annealing continue the reduction at 50% before annealing again. Clean the ingot after each anneal. Keep rolls, dies and metal clean to prevent defects in the finished stock.

**ANNEALING**

Annealing temperature **675° C / 1250° F** for **20 minutes**. **Quench immediately in water or pickle solution**. A boric acid fire coat should be applied before annealing in open atmosphere ovens to protect the metal from heavy oxidation. Avoid over-annealing wire or plate stock as this can cause excessive grain growth creating orange peel effect on the surface of finished goods.

**REMELTING**

Use a 50% scrap to fresh mix when re-melting to prevent oxide build up in the metal.

**TECHNICAL  
ASSISTANCE**

Always available... Call 1-800-999-3463 / 1-800-999-FINE  
E-mail / [doc@unitedpmr.com](mailto:doc@unitedpmr.com) Web-Site / [www.unitedpmr.com](http://www.unitedpmr.com)

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