

UNITED

PRECIOUS METAL REFINING, INC.

UNITED “STANDARD YELLOW” SILVER GRAIN # SY-3

United master alloy # **SY-3** has been formulated to be used in the manufacture of silver jewelry. Please note, this alloy is **NOT** recommended for making **STERLING SILVER JEWELRY**. This alloy has 15 % fine silver and is to be **directly** used for casting or for pouring into ingot for further sheet and wire making.

CASTING TEMP: **988° - 993° C / 1810° - 1820° F**

Do not overheat the metal. 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

QUENCHING TIME FOR FLASKS: **20 to 30 minutes.**

FLASK TEMP: **650 C - 675 C** depending on size of flask and type of jewelry.

POURING INGOT: Metal should be poured into a preheated, vertical, lightly lubricated, 2 piece, L shaped mold with a 1/8 inch opening. A steady even pouring motion should be used slowing at the end of the pour to prevent shrinkage in the top of the ingot.

INGOT QUENCHING: The metal ingot should be removed from the mold and quenched immediately in pickle solution or water.

FABRICATION: The metal ingot should be cleaned of all adhering oxide or fluxes before rolling. The ingot should be rolled to a 10% - 15% reduction in thickness each time. Anneal the sheet after 50 % reduction. Clean the ingot after each anneal. Keep rolls, dies and metal clean to prevent defects in the finished stock.

ANNEALING: Annealing temperature **350° - 500° C / 662° - 932° F** for **20 minutes**. **Be careful handling the silver ingots when hot, as they can be fragile.** Air-cool the ingots for a minute before quenching in water.

TECHNICAL ASSISTANCE Always available... Call 1-800-999-3463 / 1-800-999-FINE
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