Quartz Crucible Manual – GIRtech FUSION QZ

Composition: quartz glass-based GIR-QSP material

Usage:

- for fusing precious and non-ferrous metals (gold, silver, platinum, copper, etc.);
- for laboratory tests for carbon and sulfur content in fusions;
- for work with acidic and neutral substances at temperatures >1830°F.

Do not use crucible for handling alkaline agents.

Maximum refractoriness of the material: 3110°F.

Working temperature: 2280°F

Coating: uncoated.

Before melting, the inner crucible surfaces require pre-treatment with boron-containing substances (borax)

1. STORAGE

- store crucibles in dry locations
- stack in boxes only. Do not insert crucibles one into another.

2. TRANSPORTATION

- avoid bumping and impacting. This is due to the fragility of the material
- transport in special packing

3. PRE–STARTING PROCEDURE

- inspect crucibles for cracks, withdraw faulty ones from use

4. INSTALLATION

- install the crucible in the furnace without distortion. The crucible may not hang out
- the flame shall bend around the crucible rather than hit directly into it

- use crucible tongs wrapped in a soft material and corresponding to the shape of the crucible to install and remove the crucible,

5. CHARGING

- load ingots (charge) into the crucible carefully, avoiding their collision

6. MELTING

- before melting, pre-treat the crucible with boron-containing solution or powder

- melt metal as quickly as possible

- at temperatures <3000°F, it is not recommended to use the crucible for more than 6 minutes

- at temperatures <2010°F, it is not recommended to use the crucible more than 20 hours

- do not heat the crucible with metal solidified in it

- grip the crucible to remove it from the furnace at approximate half of its height

7. CLEANING

- before deactivating the furnace, empty the crucible

- at the end of the melting process, clean the crucible carefully from slag deposits