Product Bulletin
Product Name: Quick Temper 275
Product Code: 2281017
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Quick Temper™ 275

Quick Temper 275 is a eutectic mixture of nitrate and nitrite salts formulated for a specific range of operating temperatures. It is basically used as a molten heat transfer or quenching bath salt. More rapid quenching of the parts can be obtained by agitation of the salt bath or by additions of small amounts of water. Salt bath furnaces are available which are equipped to add water in the required quantities at periodic intervals.

Quick Temper 275, because it is a eutectic mixture with a low, sharp melting point, is very fluid at the operating temperatures. Its cooling rates are comparable to the regular type quenching oils used for Martempering, etc. There are, however, several important advantages in using Quick Temper 275 as a quenching medium.

Features & Benefits

Chemically stable	Does not break down, long life, lower process cost
High purity	Consistent performance: high productivity, solidified salt is easily removed; high productivity
Wide operating range	Lower inventory footprint, one product multiple applications

Physical Data

Melting point	275°F
Temperature range	315°F – 650°F
Stable at temperatures up to	1000°F
Density	116 lb./cubic foot
Specific heat	0.37 calories / gram/ °C 168 calories / pound / °C 1.5 BRU / pound / °C 0.833 BTU / pound / °F

Typical Applications

- Quick Temper 275 is chemically stable over its wide operating range of temperatures
- It is only necessary to replace that which is lost through drag-out.
- Quick Temper 275 operates at a wide range of temperatures – 300°F to 1100° F.
- The salt bath, when heated, maintains its viscosity over temperature range with very little change.
- The parts, when immersed in the Quick Temper 275 salt bath, will attain the temperature of the bath faster than in oil.
- All chemicals used in Quick Temper 275 are water-soluble and do not form insoluble ones. Therefore, the solidified salt is easily removed from the work in hot water.
- Chemicals incorporated into the formulation are technical grade to insure high purity, high grade, trouble-free mixture.
- Drawing of tempering-hardened steels.
- Martempering, Au tempering, Modified Martempering and Au tempering, and Isothermal Quenching.

Control requirements

It is not usually necessary to control the Quick Temper 275 salt bath chemically, as the bath is chemically stable, and it is necessary only to replace the drag-out with new Quick Temper 275. When the salt bath is used for tempering steels or heat-treating beryllium alloys, replenishment of drag-out is all that is necessary.

Do not allow sodium cyanide or carburizing salts to be introduced into the molten Quick Temper 275 salt bath as a violent reaction would occupy or an explosion. Also, do not allow any organic materials into the salt bath.

EQUIPMENT

Standard salt bath pot furnaces are available which are heated either electronically, or by gas or oil. Cast, pressed steel, welded steel or ceramic pots can be used. Ceramic pots are used only with immersion electric heaters.

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