

## **AS 135**

### **Tempering salt**

#### **Data**

Working range: 160 - 550°C (320 - 1022°F), up to 600°C in non-scaling steel, pots or tubs  
Melting point: 135°C (275°F)

#### **Pots, Tubs**

Low carbon steel or non-scaling steel. These should be heated electrically externally or with heating elements internally. Gas heating can only be applied when indirect heating is guaranteed, this means the gas flame must not touch the pot, respectively tub directly.

#### **Application**

AS 135 is used for marquenching, austempering and tempering operations for carbon- and alloyed steels - also of carburized parts - in the temperature range of 160 - 550°C (320 - 1022°F).

AS 135 is also used for aluminium heat treatment.

AS 135 has a low viscosity at working temperature and therefore only a low drag-out loss - thus it is extremely economical.

#### **Properties**

- provides uniform hardness
- does not attack the pot material
- is completely water-soluble
- can be easily removed from the workpieces

#### **Important regulations**

Do not overheat the bath above 550°C (1022°F) in steel pots, resp. 600°C in non-scaling steel pots or tubs, and avoid the contact with organic substances.

Such salts are strong oxidizers and start to decompose and release oxygen at temperatures above the mentioned limits.

By the time, due to contact with the material at austenizing temperature such salt bathes form minor quantities of sludge.

When AS 135 is used for quenching from carburizing salt bathes, the cyanide content in the carburizing salt bath must not be higher than 10%, especially when smaller parts with a high surface/volume ratio are quenched (due to the reaction between cyanide residues and the AS 135 salt).

Carburizing and other high temperature heat treatment salts lead to the formation of bigger quantities of sludge in AS 135 bathes.

The sludge which precipitates on the bottom of the pot, resp. tub, has to be removed regularly.

### **Bath control**

Control of the temperature is very important. Usually, thermocouples are used, for lower temperatures the application iron-capped Hg-thermometers is possible.

In case the heating system should allow temperatures of or above 550 °C, special measures have to be taken to shut off the heating when this temperature limit is reached, recommended are double check-thermocouples for safety.

The information should be used in conjunction with the relevant EC-MSDS. Risk and safety-phrases and a use-by-date is provided on package labels and should be strictly adhered to.

**Warranty:**

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