

# riag Act 653

## Pickling of aluminium alloys

**riag Act 653** is used for low alloy or copper alloyed aluminium. The alloy compounds are removed efficiently without attacking the base material. The carrying capacity of copper particularly is very well. **riag Act 653 Salt** doesn't contain any nitrate, chloride or fluoride. The sulphuric acid serves as a stabiliser.

### Make up of 100 Litres

#### riag Act 653 Salt

Sulphuric acid 96 %

Standard value

5 – 15 kg

2 L

### Make up

The tank is filled at  $\frac{2}{3}$  with DI-water and the calculated amount of sulphuric acid 96 % is carefully added. We recommend wearing safety glasses, gloves and protective clothing while working with concentrated sulphuric acid. Finally add the **riag Act 653 Salt** and stir until dissolved. If necessary top up to the working level, the solution is ready to use.

### Operating parameters

Temperature	18 – 25 °C
Treating time	Depending on material ( mainly 10 – 60 seconds)
Agitation	Recommended
Tanks	Plastic or lined steel
Fume extraction	Recommended

## Maintenance

riag Act 653 should be analysed and if necessary corrected.

## Specification

At 20 °C	appearance
riag Act 653 Salt	white powder

## Environmental considerations

All concentrates, rinse waters and waste solution must be treated and discharged in accordance with local effluent control regulations. It is possible to alkalise the solution with caustic soda or chalk. Attention: persulphate may react like hydrogen peroxide due to the possibility of splitting off oxygen. Do not mix the solution with hydrochloric acid or high concentrated chloride solutions due to the possibility of creation of chlorine. Further information can be gleaned from the MSDS.

## Liability

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## Analysis (Analytical methods)

### Sample preparation:

The sample must be taken from a well-mixed location and allowed to cool down to 25 °C.

Reagents	10 % sulphuric acid 10 % potassium iodide 0.1 mol/L sodium thiosulphate 1 % starch solution (freshly prepared)
Process	Pipette 5 mL passivation bath into a 250 mL beaker, add 100 mL DI water, then add 2 mL Sulphuric acid, add 10 mL Potassium iodide solution, titrate with 0.1 mol/L sodium thiosulphate until the solution is only slightly yellowish, then add Some mL starch solution and titrate until the blue colour disappears.
Calculation	$\text{g/L riag Act 653 Salt} = \text{consumption of sodium thiosulphate mL} \times 3.22$