

# riag Clean 612

## All-purpose degreasing process

**riag Clean 612** is an alkaline degreasing process for iron, steel, non-ferrous metals and zinc die cast. **riag Clean 612** can be used as immersion cleaner as well as electrolytic degreaser without being rinsed in between. The use of an ultrasonic cleaning system is also possible.

### Properties

- Alkaline powder
- Suitable for zinc die cast, non-ferrous-metals, copper and iron
- Emulsifying

### Ingredients

- Silicates
- Hydroxids
- Carbonates
- Phosphates
- Nonionic surfactants
- Salts of organic acids

### Make up of riag Clean 612

<b>riag Clean 612 Salt</b>	<b>electrolytic degreaser</b>	<b>immersion cleaner</b>
Zinc die cast	45 – 60 g/L	30 – 45 g/L
Brass	45 – 60 g/L	45 – 60 g/L
Copper	60 – 90 g/L	45 – 60 g/L
Steel	80 – 120 g/L	45 – 60 g/L

### Make up

The tank is filled to  $\frac{2}{3}$  with water and heated to approx. 40 °C. Add the calculated amount of **riag Clean 612 Salt** and stir until the salt is dissolved. Adjust the required amount water up to the working level. Once the cleaner has reached its working temperature, it is ready for use.

## Operating parameters

Agitation	Recommended (shorter treating time), as it supports the cleaning process
Tanks	Plastic or lined steel, when using ultrasonic high alloy steel
Heating	High alloy steel or immersion heaters, thermostatic control is recommended
Fume extraction	Recommended
Water	To ensure a long service life and trouble-free use, we recommend the use of reverse osmosis, demineralized or deionized water.

## Immersion cleaner application

	Temperature	Time
Zinc die cast	50 – 60 °C	1 – 2 min
Other metals	50 – 80 °C	2 – 10 min

## Electrolytic degreaser application

	Temperature	Anodic current density	Time
Zinc die cast	35 – 45 °C	2 – 6 A/dm <sup>2</sup>	10 – 30 s
Brass	40 – 50 °C	3 – 8 A/dm <sup>2</sup>	20 – 40 s
Copper	40 – 50 °C	3 – 8 A/dm <sup>2</sup>	20 – 40 s
Steel	40 – 50 °C	8 – 12 A/dm <sup>2</sup>	30 – 120 s

In barrel applications current densities of 1 – 2 A/dm<sup>2</sup> may be reached.

## Maintenance

Depending on the application, **riag Clean 612** can be used with different concentrations. The concentration has to be checked after each make up by analysis or density to stay in the desired working range.

## Environmental considerations

All concentrates, rinse waters and waste solution must be treated and discharged in accordance with local effluent control regulations. Further information can be gleaned from the MSDS. Chemicals may not be stored below 10 °C:

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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:** Hydrochloric acid 1 mol/L  
Methyl orange solution 0.1 % in water

**Procedure:** 20 mL **riag Clean 612** are transferred via pipette into a  
150 mL beaker, add  
30 mL deion. water, add  
3 drops methyl orange solution  
Titrate with hydrochloric acid 1 mol/L from yellow to red

**Calculation:** **riag Clean 612 Salt** (g/L) = use of HCl in mL x 3.69

If the degreasing process doesn't work properly anymore, even though the concentration is within the desired range, a new makeup is necessary.

**Attention:**

Chemicals not intended to be added to the process may disturb and influence the quality of the processed surfaces.