

25.07.2014

# RIAG Clean 687

## Degreasing process with very high cleaning efficiency

The **RIAG Clean 687** is a degreasing process with an excellent cleaning performance, which is intended to be used for iron and steel. The main applications are industrial parts cleaning, cleaning before and after heat treatment, especially before gas- and plasma nitriding. There are no negative influences of remaining cleaner on the part.

### Properties

- Liquid
- Suitable for steel and magnesium (depending on the alloy)
- Spraying possible above 60 °C
- Demulsifying
- Temporary corrosion protection
- Usable with tap water

### Ingredients

- Amines
- Organic acid sodium salt
- Nonionic surfactants
- Anionic surfactants

### Make up of 100 Litres

#### RIAG Clean 687 Additive

Temperature

Time

	Range	Optimum
RIAG Clean 687 Additive	1 – 4 L	2.5 L
Temperature	40 – 80 °C	70 °C
Time	5 – 30 min.	

### Make up

The tank is filled to  $\frac{2}{3}$  with water. Add the calculated amount of **RIAG Clean 687 Additive** and stir well. Finally add 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	Immersion heaters, but thermostatic control is essential.
Fume extraction	Recommended
Water	Tap water may be taken for the make up, however the use of low calcium or DI water is recommended.

## Maintenance

**RIAG Clean 687** is used in different concentrations, due to the various possibilities of application. 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.

## Liability

This instruction manual was compiled with reference to the state of the art and all current standards, and is based on the long-term knowledge and experience of RIAG. However, RIAG cannot monitor compliance with this instruction manual and the methods described herein at the customer/end-user's premises. Work carried out with RIAG products must be adapted accordingly to meet local conditions. In particular, RIAG cannot accept liability for damage, loss or cost incurred due to a failure to adhere to this instruction manual, improper application of the methods, unauthorised technical modifications, insufficient maintenance or the absence of maintenance in respect of the requisite technical hardware or equipment, or in the event of use by unqualified personnel. RIAG is not liable for damage or loss caused by RIAG or its employees except where intention or gross negligence can be proved. RIAG furthermore reserves the right to make changes in relation to products, methods and the instruction manual without prior notice.

Our goods and services are subject to the General Terms and Conditions for Delivery of the Association of Surface Technology Suppliers (VLO), which can be viewed at [www.riag.ch](http://www.riag.ch) (link "General Terms and Conditions", document "RIAG Oberflächentechnik AG (Wängi, Switzerland) 50 KB", version 1/2014), which we would be glad to send to you on request.

This transaction is governed by material Swiss law (Law of Obligations), excluding private international law (conflict of laws) and intergovernmental treaties, specifically the CISG.

RIAG Oberflächentechnik AG  
Murgstrasse 19a  
CH- 9545 Wängi  
Tel. + 41 (0) 52 / 369 70 70  
Fax + 41 (0) 52 / 369 70 79  
[www.riag.ch](http://www.riag.ch)  
[info@riag.ch](mailto:info@riag.ch)

## Analysis (Analytical methods)

### Sample preparation:

Take sample from a well-mixed location and allow to cool down to 25 °C.

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

Procedure:                      50 mL              **RIAG Clean 687** are transferred via pipette into a  
   250 mL             beaker, add  
   50 mL              deion. water, add  
   5 drops             methyl orange solution  
   Titrate with hydrochloric acid 1 mol/L from yellow to red

Calculation:                      **RIAG Clean 687 Additive** (g/L) = use of HCl in mL x 8.33

### Attention:

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