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# RIAG Strip 891

Cyanide free stripper for nickel

## Properties

- Stripping of electroless nickel (up to approx. 11 % P) and galvanized plated nickel
- Base materials: Steel, iron, brass, copper, aluminium and zinc die-casting
- Process temperature 20 – 100 °C
- Stable electrolyte

## Make up

	Diluted Version	Regular Version
Water (tap water)	750 mL/L	500 mL/L
<b>RIAG Strip 891 Additive 1</b>	150 mL/L	300 mL/L
<b>RIAG Strip 891 Additive 2</b>	100 mL/L	200 mL/L
Best temperature	100 °C	80 °C

The necessary amounts of **RIAG Strip 891 Additive 1** and **RIAG Strip 891 Additive 2** are diluted in water and heated to the desired working temperature. **RIAG Strip 891** is now ready to use. The higher the working temperature the higher the strip rate.

## Safety advice

Please follow the recommendations according to the MSDS and the general advices when working with chemicals. Chemicals must not be stored below 10 °C.

## Operating parameters

Temperature	<p><b>Diluted:</b> 100 °C (80 – 100 °C) Works best when slightly boiling, the strip rate doubles compared to the regular version.</p> <p><b>Regular:</b> 80 °C (20 – 80°C) Already works at room temperature, but best at 80 °C.</p>
pH	strongly alkaline, no monitoring necessary
Strip rate	<p>depending on temperature, agitation and age of the solution, as soon as the strip rate decreases significantly a new make-up is necessary</p> <p><b>Diluted:</b> at about 100 °C approx. 150 µm/h Cannot be applied at room temperature, at 80 °C the strip rate is approx. 35 µm/h</p> <p><b>Regular:</b> at about 80 °C approx. 75 µm/h Already works at room temperature, but the strip rate is only 6 µm/h</p>
Agitation	mechanical rod movement or mechanical agitation of the electrolyte is recommended, the efficiency of the strip rate can be increased
Tank material, racks	stainless steel, ceramic or glass (short-term unalloyed steel possible), rubber and plastic as well as chromium corrode and contaminate the <b>RIAG Strip 891</b>
Heaters	ceramic or glass heaters, thermostat-controlled temperature control is recommended
Cooling system	not necessary
Exhaust	absolutely necessary <b>RIAG Strip 891</b> process produces corrosive, harmful and flammable vapours of ethylenediamine.
Maintenance	<b>RIAG Strip 891 Additive 2</b> evaporates during longer usage, overheating and not covering properly. Therefore the stripper may be reconditioned.
Capacity	the regular version of the <b>RIAG Strip 891</b> process can absorb approx. 30 – 35 g/L nickel
Waste water treatment	has to take place with sodium sulphide in a very low pH range, due to formation of hydrogen sulphide this has to happen using a very strong exhausting system. Nickel can also be retrieved with electrolysis at a pH of 3.5

## Pre-treatment

The stripped parts (chrome stripped) have to be cleaned with alkaline solution before the nickel removal. It is important to activate the nickel coating with either diluted hydrochloric acid or diluted sulphuric acid before stripping. An acid drag in the **RIAG Strip 891** should be avoided.

## Post-treatment

The stripped parts are covered with a dark mud / sludge. It has to be removed as follows:

Copper / - Alloys	The muddy layer is being removed by dipping the parts in a sodium cyanide solution (5 – 10 %)
Iron and steel	The muddy layer can be removed by dipping the parts in diluted hydrochloric acid (1 : 1). Should the result not be satisfying, dipping in a sodium cyanide solution (5 – 10 %) first will improve the outcome. Of course it is very important to thoroughly rinse the parts in between.

## General

Idle time should not occur, the make-up of **RIAG Strip 891** has to be planned accordingly. Contaminations of any kind, particularly chrome and copper, must be avoided.

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