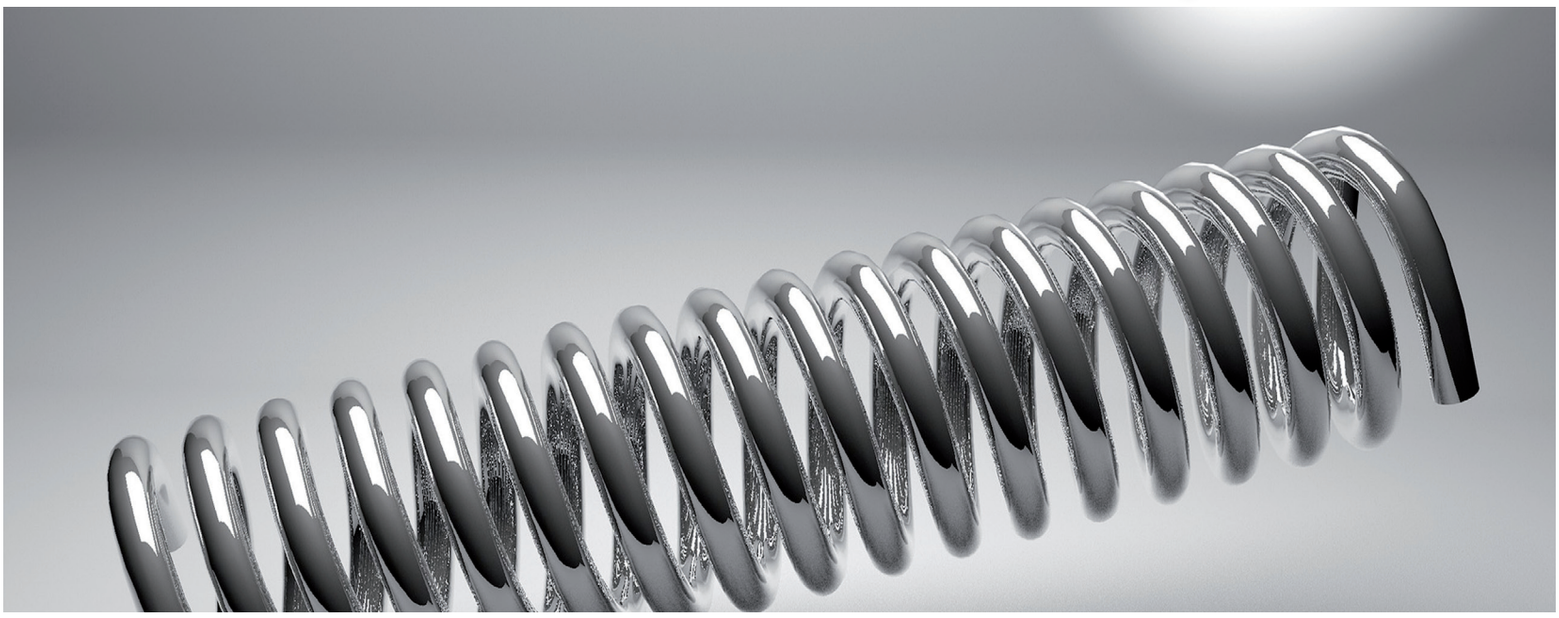
ZN/NI PROCESS
BASED ON ACID
ELECTROLYTE

ECOLUX STEEL



- ONLY ONE RECTIFIER
- ONLY 3 ADDITIVES
- EFFICIENCY 95%
- EASY ON IRON DIE-CAST
  AND HIGH ALLOY STEEL DEPOSITION
- SAFE TIME DEPOSITION: 50% LESS
- DOUBLED PRODUCTION
- SAFE COST OF ENERGY: 50% LESS
- FREE FROM HYDROGEN EMBRITTLEMENT

GLOMAX IS ENGAGED IN RESEARCH
FOR AN ENVIRONMENTAL-FRIENDLY CHEMISTRY

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CHEMICAL PERFORMANCE

ECOLUX STEEL

ECOLUX STEEL is a Zn/Ni process based on acid electrolyte with a nickel content of 10-16%. The deposits meets the automotive requirements and specifications for fasteners regarding nickel content and corrosion resistance. The process is economic, easy to handle both barrel and rack.

FEATURES

- ECOLUX STEEL is Zn/Ni process in acid electrolyte with a 10-16% of Nickel in the deposit
- Only one rectifier
- Compared to other Zn/Ni process from acid electrolyte, ECOLUX STEEL uses a weakly complexant to avoid problems in waste water treatment
- The electrolyte solution remains clear at room temperature and does not need to heat when the bath is not operative
- The solution remains clear in a wide temperature range
- It doesn't need a frequent maintenance of the tank, therefore a lower maintenance cost is required
- Additives have a high cloud point. The main cause of deterioration is drag-in and drag-out
- ECOLUX STEEL uses fewer additives than ordinary electrolyte systems, making the process simple and economical
- It is possible to use bath with mixed salts
- Suitable with transparent/iridescent or black passivation

MAKE-UP

	RANGE	OPTIMUM
Zinc metal	22 - 30 g/l	26,0 g/l
Zinc chloride	46 - 63 g/l	55 g/l
Nickel metal	22 - 30 g/l	26,0 g/l
Nickel chloride - $6H_2O$	89 – 121 g/l	105 g/l
Potassium chloride	160 - 200 g/l	180 g/l
Ammonium chloride	45 - 75 g/l	60 g/l
Ecolux steel A	10 - 20 ml/l	15 ml/l
Ecolux steel B	1 - 2 ml/l	1 ml/l
Ecolux steel C	10 - 20 ml/l	15 ml/l
Ecolux steel D	4 - 6 ml/l	5 ml/l

It's possible use also boric acid instead of ammonium chloride at 30-40 g/l.

OPERATIVE CONDITION

	RANGE	OPTIMUM
ZN/NI metal ratio	0,8 - 1,2	1,0
Temperature	30 - 35 °C	32°C
pH	5,0 - 5,5	5,3
Density of cathodic current	0,5 – 3,5 A/dm^2	-
ZN/Ni anodes ratio	1:2	-

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