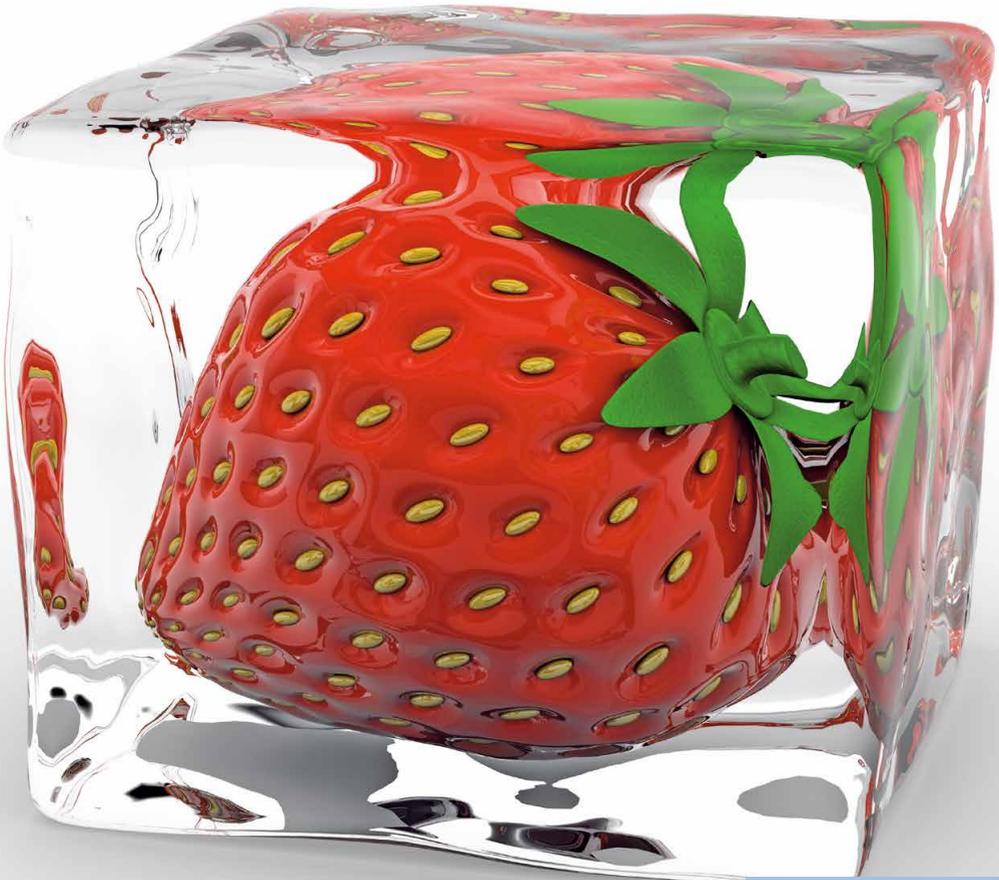


# Post-treatment processes for passivated surfaces

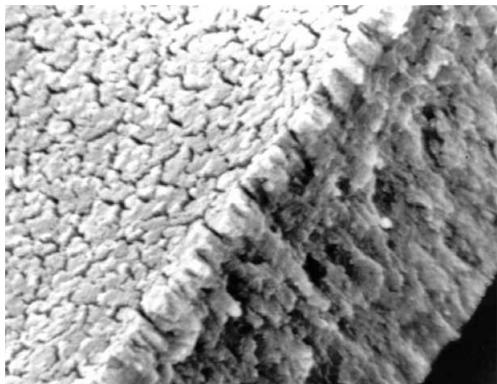
Perfect sealed.

organic sealants  
inorganic sealants  
organic / inorganic sealants  
post-treatment solutions



## Sealant SLOTOFIN 10

Sealant SLOTOFIN 10 forms after drying a clear, transparent, organic protecting layer which increases not only the corrosion protection but also enhances the resistance towards fingerprints as well as the appearance. Blue chromated or passivated zinc- or zinc alloy layers with a SLOTOFIN 10 treatment results in an uniform transparent appearance. The intensity of the colour and the appearance of black chromated respectively passivated surfaces can be increased by adding black pigments. We recommend sealing bulk articles outside the plating plant. Sealant SLOTOFIN 10 can be applied wet-to-wet as well as on pre-dried parts. The drying temperature may not exceed 140 °C since the coating becomes discoloured at high temperatures. Coatings from

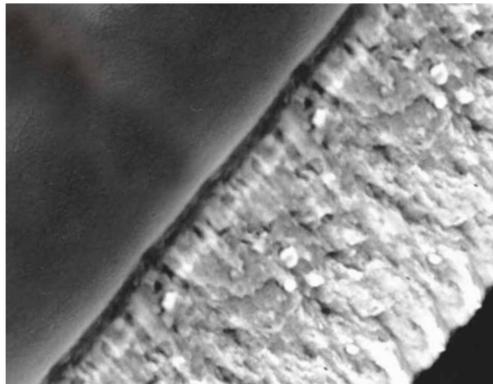


SEM without Sealant

### Concentrations and operating conditions

	Range
Sealing Concentrate	
SLOTOFIN 11 [ml/l]	150 - 400
Treatment time [sec.]	20 - 40
Drainage period [min.]	1 - 3
Operating temperature [°C]	18 - 45
pH range	8,5 - 10

racks or centrifuge baskets can be removed by a hot-soak degreaser combined with suitable degreasing additives. Therefore we recommend the products of our SLOTOCLEAN series.



SEM with Sealant

## Sealant SLOTOFIN 40

Sealant SLOTOFIN 40 is built on polymer-basis and contains nanoscale silicon compounds. For individual mixtures it can be operated with two sealing concentrates or with one component. After drying clear, transparent, inorganic-organic protection layer will be achieved. The sealer meets the highest requirements in corrosion resistance, especially in conjunction with an alternating climate test. That is why this sealer is recommended for fittings of doors and windows. Sealant SLOTOFIN 40 can be alkalined stripped.

### Concentrations and operating conditions

	Range
Sealing Concentrate	
SLOTOFIN 41 [ml/l]	150 - 300
Sealing Concentrate	
SLOTOFIN 42 [ml/l]	150 - 300
or alternatively:	
Sealing Concentrate	
SLOTOFIN 45 [ml/l]	300 - 600
Treatment time [sec.]	25 - 35
Drainage period [min.]	1 - 3
Operating temperature [°C]	35 - 50
pH range	8,5 - 10

## Post-Dip Solution SLOTOFIN 90

Post-Dip Solution SLOTOFIN 90 is used for post-treatment of passivated zinc- and zinc alloy surfaces. After drying, a clear transparent protective layer is obtained which not only increases the corrosion protection but also reduces the sensitivity towards touching and improves the appearance. The post-dip solution moves evenly on the parts and leaves no film or unsightly drop-shaped residues. By the treatment with Post-Dip Solution SLOTOFIN 90, blue passivated zinc- and transparent passivated zinc alloy coatings result in a uniform almost transparent appearance.

### Concentrations and operating conditions

		Bereich
Additive SLOTOFIN 91	[ml/l]	5 - 15
Additive SLOTOFIN 92	[ml/l]	50 - 150
Treatment time	[sec.]	30 - 60
Drainage period	[sec.]	30 - 90
Operating temperature	[°C]	20 - 40
pH range		8,5 - 10,0

## Sealant SLOTOFIN 80

Sealant SLOTOFIN 80 is an aqueous-alkaline solution for the post-treatment of zinc- and zinc alloy surfaces which contains inorganic polysilicates. Due to the inorganic character of the sealant it's also suitable for components with a higher temperature load. Research shows, that the corrosion protection on zinc plated and passivated parts can be increased to > 400 hours in the neutral salt spray test according to DIN ISO EN 9227.



### Concentrations and operating conditions

		Range
Sealing Concentrate		
SLOTOFIN 81	[ml/l]	70 - 200
Treatment time	[sec.]	30 - 90
Operating temperature	[°C]	30 - 45
pH range		10 - 11



unsealed



sealed

## Sealant SLOTOFIN 80 L

Sealant SLOTOFIN 80 L is also an aqueous-alkaline solution for the post-treatment of zinc- and zinc alloy surfaces which contains inorganic polysilicates. In order to make it possible to adjust a defined friction coefficient, gliding agents are applied here additionally.

### Concentrations and operating conditions

		Range
Sealing Concentrate		
SLOTOFIN 81	[ml/l]	70 - 130
Concentrate SLOTOFIN 82	[ml/l]	40 - 80
Treatment time	[sec.]	30 - 90
Operating temperature	[°C]	30 - 45
pH range		10 - 11

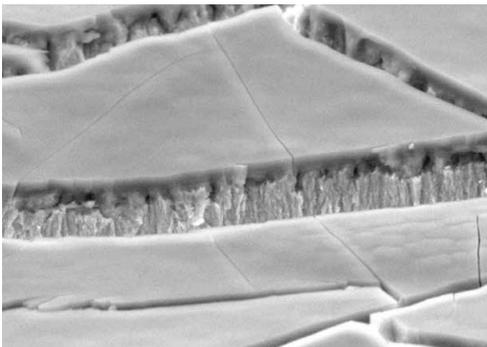
## Post-Dip Solution SLOTOPAS NT 10

The Post-Dip Solution SLOTOPAS NT 10 is applied on already passivated zinc-nickel alloy layers. It is an alternative to the usually necessary sealants. Post-Dip Solution SLOTOPAS NT 10 on black passivated layers and makes them less sensitive towards touching, abrasion and ensures the necessary corrosion protection. Transparent passivated zinc-nickel coatings treated with Post-Dip Solution become almost insensitive to fingerprints. This simplifies the handling of the parts enormously. SLOTOPAS NT 10 is a purely inorganic post-treatment which can be applied where organic based sealers are forbidden.

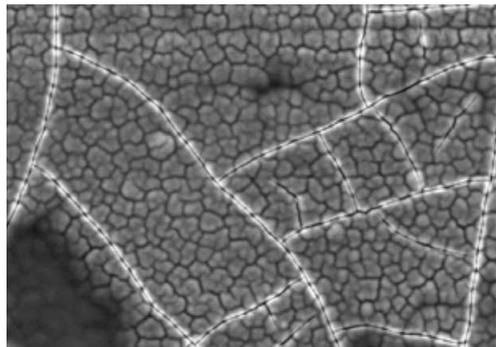
### Concentrations and operating conditions

		Range
Concentrate Rack		
SLOTOPAS NT 11*	[ml/l]	100 - 150
Concentrate Barrel		
SLOTOPAS NT 11*	[ml/l]	150 - 200
Treatment time	[sec.]	15 - 30
Operating temperature	[°C]	20 - 50
pH range		4,6 - 5,0

\* The make-up concentrations are correspondingly lower than for transparent passivated parts.



brittle fracture



view of a SLOTOPAS NT 10 treated surface

## Conservation SLOTOPROTECT FE 1050

Conservation SLOTOPROTECT FE 1050 is being applied in an immersion process and is a temporary corrosion protection to prevent from film rust on ferrous materials. The possible fields of application are:

- Temporary storage of degreased parts prior to further processing.
- Prevention from internal corrosion at hollow ware, chrome plated in a trivalent chrome electrolyte.
- Prevention from internal corrosion at zinc-nickel coated hollow ware.

The parts treated in Conservation SLOTOPROTECT FE 1050 normally dry off spot-free. The product has no interfering influence on subsequent processes like e.g. powder coating or lacquering.



# Conservation SLOTOPROTECT FE 1250

Conservation SLOTOPROTECT FE 1250 is being applied in an immersion process and is a temporary corrosion protection to prevent from film rust on ferrous materials. The possible fields of application are:

- Temporary storage of degreased parts prior to further processing.
- Prevention from internal corrosion at only zinc coated hollow ware.

The parts treated in Conservation SLOTOPROTECT FE 1250 normally dry off spot-free. The product has no interfering influence on subsequent processes like e.g. powder coating or lacquering.

## Sealers / Post-Dip Solutions

Bath- Name No.	Composition	Dip.- Time	Temperature	Zn-Ni Coating		area of application
				transparent Pass.	black Pass.	
09033 Sealant SLOTOFIN 10	organic	20 - 40 sec.	18 - 45 °C	0,17	--	Sealer universal applicable
09064 Sealant SLOTOFIN 40	organic/ inorganic	25 - 35 sec.	35 - 50 °C	0,14	--	Mix-Sealer contains nanoscale particles, lacquer like appearance
09067 Sealant SLOTOFIN 70	organic	20 - 45 sec.	15 - 25 °C	0,2	--	Sealer for complicated part geometries; best corrosion protection results
09068 Sealant SLOTOFIN 80	inorganic	30 - 90 sec.	30 - 45 °C	0,16	--	Sealer for complicated part geometries; best corrosion protection results
09071 Sealant SLOTOFIN 80 L	inorganic	30 - 90 sec.	30 - 45 °C	0,11	--	contains lubricant
09057 Post-Dip Solution SLOTOPAS NT 10	inorganic	15 - 30 sec.	20 - 50 °C	--	0,3	Post-Passivation for black coatings
		15 - 30 sec.	20 - 50 °C	--	--	for transparent coatings
09069 Post-Dip Solution SLOTOFIN 90	organic/ inorganic	30 - 60 sec.	20 - 40 °C	--	--	uniform transparent appearance; insensitive to fingerprints and no pellicle formation

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DIN EN ISO 9001:2008  
DIN EN ISO 14001:2004