



**Parolit PH...Formaldehyde-free leather**  
**Parolit CR...Hexavalent chrome-free leather**

## Parolit PH...Formaldehyde-free leather

Formaldehyde is an organic substance which is present in free form in many products used in the tannery sector like synthetic tannins, urea-formaldehyde, dicyandiamide, melamine etc resins being used as reagent to create their fibre weaving. Parolit PH is a nitro-oxygen derivative capable of reacting selectively in an irreversible process with the formaldehyde present in all types of leather, a stable composite, soluble in water, which is almost totally eliminated through the effluent of the tanning process.

Parolit PH can be used to reduce the minimum values, or even almost totally eliminate the free discoverable formaldehyde in finished leather.

Utilisation:

Applicable on wet leather (at the end of the retanning process or after the final dyeing process)

200% Water

2% Parolit PH – 40/60' a 40°C

Drain and wash

Application by spraying machine: Prepare a watery solution at 20% of Parolit PH and administer on the flesh side using 350 grams of the solution for each M<sup>2</sup> of leather.

### ANALYTICAL FEEDBACK

Formaldehyde analysis on retanned leather with synthetic tannins and amino resins using 2% of Parolit PH in the final washing.

PARAMETER	ANALYSIS METHOD	MEASUREMENT UNIT	VALUE	Incert. measurement
Formaldehyde	UNI EN ISO 17226-1:2008	mg/kg	<10	-

Formaldehyde analysis on retanned leather with synthetic tannins and amino resins without using Parolit PH.

PARAMETER	ANALYSIS METHOD	MEASUREMENT UNIT	VALUE	Incert. measurement
Formaldehyde	UNI EN ISO 17226-1:2008	mg/kg	217	+/- 43

## Parolit CR...Hexavalent chrome-free leather

The mechanism that oxidizes trivalent chrome to hexavalent chrome is influenced by different variables like quantity and type of fatliquor, neutralisation pH of the leather, thermic stress, storage conditions of the crust, quantity of fatliquor contained in the leather.

Parolit CR is an anti-oxidant recommended to avoid the formation of hexavalent chrome in chrome tanned leathers also after artificial aging, and/or retanned with chrome based salts.

The percentages of use vary from 1% to 2% calculated on the shaved weight of the leathers.

It is recommended to add Parolit CR to the fatliquor mix before this is added to the drum.

### ANALYTICAL FEEDBACK

Analysis of leather treated with 1.5% (on shaved weight) Parolit CR blended with the fatliquor.

PARAMETER	ANALYSIS METHOD	MEASUREMENT UNIT	VALUE
Chrome VI	UNI EN ISO 17075:2008	mg/kg (S.S.)	<3.0
Volatile substances	UNI EN ISO 4684:2006	%	10.4
Chrome VI on 24 hour aged leather at 80°C (test after one hour aging)	UNI EN ISO 17075:2008	mg/kg	<3.0

Analysis of leather not treated with Parolit CR.

PARAMETER	ANALYSIS METHOD	MEASUREMENT UNIT	VALUE
Chrome VI	UNI EN ISO 17075:2008	mg/kg (S.S.)	5.2
Volatile substances	UNI EN ISO 4684:2006	%	14.1
Chrome VI on 24 hour aged leather at 80°C (test after one hour aging)	UNI EN ISO 17075:2008	mg/kg	61.1

# Method of utilisation of Parolit PH

## Standard recipe with the use of products containing Formaldehyde and Parolit PH

Type of leather: wetblue bovine sides

Thickness: 1.0/1.1

% Referred to: Shaved weight

Product	°C	%	Rot. Min	Control Operations
WATER	40°	200		
OSSALIC ACID		0.5		
IDROFIL 800		0.3	40'	DRAIN WASH
WATER	30°	100		
FORMIC ACID		0.6	5'	pH 3/3.5
CHROME 33 SCH		5	30'	
EMULOIL SINT CONC		1	40'	
SODIUM ACETATE		3		
LEDER RIV PO2		1	120'	AUTOMATIC OVERNIGHT MORNING pH 5 DRAIN WASH
WATER	30°	100		
LEDERTAN RC		5	15'	
FILTAN MPS		3		
FILTAN BN		10		
QUEBRACHO ATO		3	30'	
FILTAN RR		5	75'	DRAIN
WATER	50°	150		
SOLFOIL E		3		
SOLFOIL HW		4		
EMULOIL HK		3		
IDROFIL SOAP		0.5		
SORBITOL		0.5	60'	
FORMIC ACID		0.5	20'	DRAIN COOL-OFF
WATER	40°	200		
PAROLIT PH		2	40'	DRAIN WASH WITH 200% COLD WATER

DYEING

HORSE OVERNIGHT SETTING OUT VACUUM 120" 45°C



# Utilisation method Parolit CR

## Standard recipe of chrome tanned leather utilising Parolit CR

Type of leather: N°1 ½ wetblue bovine side

Substance: 1.1/1.2

% Based on: shaved weight

Products	°C	%	Rot. Min	Control Operations
WATER	40°	200		
IDROFIL 800		0.3		
OSSALIC ACID		0.5	30'	DRAIN WASH
WATER	30°	100		
FORMIC ACID		0.2	5'	pH 3.5
CHROME 33 SCH		5	30'	
EMULOIL SINT CONC		1	40'	
SODIUM FORMATE		1	120'	AUTOMATIC OVERNIGHT MORNING pH 3.8 DRAIN WASH
WATER	40°	150		
NEUTRAL N/AS		2		
SODIUM FORMATE		1	10'	
SODIUM BICARBONATE		0.8	30'	pH 5 ø green DRAIN WASH
WATER	25°	100		
SOLFOIL HW		1	20'	
LEDERTAN RC		4	20'	
FILTAN BN		8		
FILTAN B EXTRA		3		
FILTAN MPS		5	60'	DRAIN
WATER	50°	200		
SOLFOIL HW		4		
LEDEROL ES/F		5		
IDROFIL SOAP		0.3		
PAROLIT CR		1.5	60'	
FORMIC ACID		0.5	30'	DRAIN

DYEING

HORSE OVERNIGHT SETTING VACUUM 120" 45°C





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