### INNOVATIONS



# ORGANIC TANNING METAL FREE

## METAL FREE WHITE LEATHERS

- KLF TECNOKIMICA has for years refined a METAL FREE tanning process able to realise white leathers with a shrinkage temperature of about 80°C, without using tanning metal salts (Chrome, Aluminium, Zirconium, Titanium), whose concentrations are in compliance with the current legislation.
- The process is based on the combined action of two chemicals, PAROLIT FC and PAROLIT JX, whose primary composition is



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 Leathers are reactive with fatliquoring products too, which fix to the fibre providing the desired softness.

## DESCRIPTION OF THE TANNING PROCESS WITH PAROLIT FC AND PAROLIT JX

- During the pre-tanning phase, a good swelling of the collagenous fibres is essential to prepare hides and skins to the subsequent phase of retannage and fatliquoring and to get the desired features of fullness and softness.
- The combination of **PAROLIT** FC and **PAROLIT JX** products provides a tanning stability similar to the one provided by glutaraldehyde and by natural tannins with the benefit of getting white leathers with absolutely higher fastness to light.
- The products used during retannage and fatliquoring have high levels of exhaustion, are **formaldehyde-free**, and provide an excellent fastness to light.
- Formulates have been duly selected to get leathers with high chemical-physical resistances, with the eclecticism of chrome tanned leathers and able to meet all market and fashion requests.



- Polymeric retanning and fatliquoring agents: LEDERTAN RC, FILTAN PAN, FILTAN XS, FILTAN GUM.
- Fatliquors: LEDEROL ES/F, SOLFOIL WX, EMULOIL HK CONC, SOLFOIL 912H, SOLFOIL HR, EMULOIL CRS.

#### **CHEMICAL AND PHYSICAL TESTS**

The following tables show the results of the chemical and physical tests carried out on finished leather:

CHEMICAL ANALYSES							
	Sheep Skins	Cow Hides					
РН	5.00	4.8					
DIFFERENTIAL FIGURE	0.52	0.6					
HUMIDITY (%)	10.30	10.7					
ASH (%)	5.50	4.80					
FORMALDEHYDE (mg/kg)	10.2	9.5					
XENOSTEST (grey scale)	4	4					
SHRINKAGE TEMPERATURE	75	80					
METALS	NOT PRESENT	NOT PRESENT					

PHYSICAL TEST									
Assessment of tear load: method 2 specimen with slot (UNI EN ISO 3377/2)		Measurement of grain spread and tensile strength Method of the ball (I.U.P.9UNI EN ISO 3379)		Assessment of tensile strength and per cent extensibility (I.U.P.9 UNI EN ISO 3376)		Water vapour permeability (UNI EN ISO 14266:2006)			
Sheep Skins	Cow Hides	Sheep Skins	Cow Hides	Sheep Skins	Cow Hides	Sheep Skins	Cow Hides		
58.1N	91.7N	11.18mm	10.44mm	18.86 n/mm2	20.23 n/mm2	16.8 mg(cm2h)	13.7 mg/(cm2h)		



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