

Renewability range

Discover our bio-based
wet end solutions for excellent
leather performance



Let's never run out of raw materials



Towards full circularity

Royal Smit & Zoon promotes the use of leather chemicals based on bio-based ingredients. Our chemical innovations are aimed at replacing fossil-based raw materials by bio-based alternatives. The final goal is to create leather chemicals which are completely based on renewable origins.

Our renewable wet end solutions provide excellent leather performance, provide easy handling during the leather making process and can be processed efficiently in the effluent treatment with a minimal environmental footprint.

Ultimately, our goal is to provide solutions for leather making that enable full circularity.

Discover our Renewability range

The Renewability range encompasses retanning agents and fatliquors to maximise the renewability. They exhibit excellent haptics and properties to enable a more sustainable leather production. The range offers a combination of existing products, as well as innovative new products, allowing environmental and ecological advantages, while ensuring the right performance in leather making.

By using these products as a basis, in combination with similar renewable finishing solutions, it is possible to improve the renewability of a leather article while still achieving high quality leather.

To Royal Smit & Zoon, 'renewability' is not just hype. We have set strict criteria for our Renewability range:

- Sustainably sourced renewable raw materials
- Sound performance on effluent [*]
- High level of bio-based raw materials in the type of product
- Safety for both tannery and environment
- Fulfilment of highest environmental standards by ZDHC level 3 certification
- Taking into consideration minimizing supply chain and process complexity
- Taking end-of-life of chemicals and leather into consideration

Royal Smit & Zoon uses the Mass Balance approach to indicate the renewability level of its chemicals.

[*] This is based on Royal Smit & Zoon Product Passport definitions and standardized testing definitions. Effluent values are dependent on the specific article process and the tannery set-up and resources.



Simplify your post-tanning processes and maximize the use of renewable chemicals

Create real impact and optimize your entire leather recipe. In doing so, you can obtain leather articles with high bio-based content and maximize environmental benefits, such as reducing water usage and waste. All of these advantages help create a more sustainable leather value chain, together.

Our tool: EcoSimplicity

EcoSimplicity maximizes the use of existing and new innovative renewable chemicals and reduces the risk of mistakes when chemicals are added during post-tanning processes by reducing their complexity.

When supporting a tannery with optimizing their leather recipe and processing on renewability we perform a (re)design based on criteria from eco-design¹ with the right chemicals (higher renewability and ZDHC compliant), while improving water management and energy management following our original Simplicity approach. The process involves fewer steps, often enables water and energy saving, and is safer for operators because there is less handling involved on the busy factory floor.

Here to support you

With in-depth knowledge on renewability and C14 content of our products, we can provide excellent support when developing leather articles with high bio-based content. We can assist from process to products and optimize your leather recipes, together with you.

Is your company concerned about boosting the sustainability of the leather processing industry and are you ready to play a pioneering role? Contact us and find out how your company and Royal Smit & Zoon can together work towards a sustainable future.

¹ Eco-design as defined by UNEP in 2001, http://www.unep.org/pc/cp/network/cp_worldwide.htm; Eco-design is the integration of environmental aspects into the product development process, by balancing ecological and economic requirements. Eco-design considers environmental aspects at all stages of the product development process, striving for products which make the lowest possible environmental impact throughout the product life cycle.

Fatliquors	Properties			Application								
	Unique product performance	Product description	Renewability score	Car seat	Steering wheel	Shoe (regular)	Shoe (sport)	Shoe (water-proof/repellent)	Bag leather	Furniture upholstery	Garment	Leather goods
BioSoft OS 761	For very soft types of articles with excellent lubrication of inner fibres Silky and warm touch with very good milling properties Very good emulsion properties with good stability to electrolytes	Biobased polymer fatliquor	88%	●	●	●●	●●		●●	●●	●●	●●
Sulphirol AF 300	Full round handle with a uniform milled grain. Neutral odor and good heat yellowing properties Made from natural oils which have been sourced exclusively from partners having no impact on food or feed supply chains	Sulphited natural and synthetic oils	61%	●●	●●	●●	●●		●●	●●	●●	●●
Sulphirol C	For exceptional softness with a well balanced feel Round and warm handle Made from fish oil which has no impact on food or feed use	Sulphited natural oils	90%			●●	●		●●	●●	●●	●●
Sulphirol CLWN	Can be used as a single or as the main fatliquor promoting a bold and pronounced milled grain	Sulphited natural and synthetic oils	62%			●			●●	●●	●●	●
Sulphirol FL 328	For extremely soft leathers. For a soft and airy fullness Improves penetration and fixation with an elegant, lightweight touch when used in combination with other products	Natural & synthetic phosphated fatty polymer	70%	●●	●●	●●	●●		●●	●●	●●	●●
Sulphirol HF 377	Good fastness properties compared to many other marine fatliquors Elegant and full touch Made from fish oil which has no impact on food or feed use	Special sulphited-deodorized marine oils	85%	●●		●●	●		●●	●●	●●	●●
Synthol CH 777	Yields soft leather with a silky touch and a lightweight feel Highly regular and well-defined milling patterns Promotes even buffing which imparts a silky, warm nap	Emulsified synthetic and natural oils	79%	●●	●●	●●	●●		●●	●●	●●	●●
Synthol CS 588	Full round handle and a uniform milled grain Neutral odor and good heat yellowing properties For leather with notably reduced bellies and flanks	Mixture of sulphited and sulphated natural oils	72%	●●	●●	●●	●●		●●	●	●	●●
Synthol DS 600	Suitable for waterproof articles including Zeology-based chrome free waterproof leather Medium softness with a full and rubbery handle Very good grain tightness and a pleasant, smooth touch	Waterproofing fatliquor for the highest requirements	11%			●	●●	●●	●●		●●	●
Synthol GT 616	For soft leather with a silky touch Yields highly regular and well-defined milling patterns Low emission profile	Natural & synthetic phosphated fatty polymer	81%	●●	●●	●●	●●		●●	●●	●●	●●
Synthol LA 915	Imparts a finely lubricated grain enhancing moisture control Notable fullness with a warm and waxy handle Pronounced writing effect for nubuck and suede leather	Sulphited natural, synthetic oils and lanoline	67%	●●	●●	●●	●●		●●	●●	●●	●●
Synthol LC	For soft articles with a tight grain and a very full, elastic and round handle Provides full and brilliant shades Imparts deep inner softness even at higher substances	Natural and synthetic oils, sulphited-triglycerides	72%			●	●	●	●			●
Polyol CT 688	For a high degree of uniform grain tightness with medium softness Imparts leathers with good fastness, low fogging, low emission and low odour properties	Sulphated natural oils	70%	●●	●●	●●	●●		●●	●	●	●●
Polyol HT 820	Concentrated lecithin fatliquor with a silky touch Strong lubricating effect on the leather fibres	Emulsified natural phospholipids	77%	●●	●●	●	●		●●	●●	●	●●



RENEWABILITY RANGE

● = Suitable ●● = Good ●●● = Excellent

Retanning agents	Properties			Application								
	Unique product performance	Product description	Renewability score	Car seat	Steering wheel	Shoe (regular)	Shoe (sport)	Shoe (water-proof/repellent)	Bag leather	Furniture upholstery	Garment	Leather goods
BioSyn AP 82L	Pronounced grain tightness, compact elastic smooth grain Excellent light fastness and heat yellowing properties Improved fullness and roundness	Animal protein based bio polymer	94%	●●	●●	●●	●●	●	●●	●●	●	●●
BioSyn SC 63L	Full round handle Good grain tightness Full and level shades	Vegetable based biobased polymer	94%	●●	●●	●●	●●	●	●●	●●	●●	●●
BioTan XP 01L	Partly biobased phenol syntan For medium soft and full leather A fine, smooth and tight grain Low or bisphenol free leather and low formaldehyde leather	Lignin-phenol sulphonic acid condensate	25%	●●	●●	●●	●	●	●●	●	●	●●
Safetan BB 003	Improved tightness and fullness of the leather A fine, flat grain	Modified bio based polymers	70%	●	●	●●	●	●	●●	●●	●●	●●
Safetan DD 001	Improved fullness and roundness Improved filling in selected areas of the hide Imparts an even milled pattern for furniture leathers	Formaldehyde free dicyandiamide resin, aromatic sulfonic acid condensate	51%	●●	●●	●●	●	●	●●	●●		●●
Safetan DK 007	Filling of empty flanks therefore imparting good tightness and a regular break Better dye levelness Improved fullness and roundness	Formaldehyde free dicyandiamide resin, aromatic sulfonic acid condensate	50%	●●	●●	●●	●●	●●	●	●●		●●
Safetan LD 006	Improved filling of the more open structured areas of the hides and skins Improved fullness and roundness Excellent but relaxed grain firmness Improved tightness and softness of hides and skins	Formaldehyde free dicyandiamide resin, aromatic sulfonic acid condensate	80%	●●	●●	●●	●●	●●	●	●●		●●
Safetan MW 005	Suitable for Zeology-based chrome free waterproof leather For improved fullness and roundness Improves filling of emptier parts of the hide	Formaldehyde free melamine resin, aromatic sulfonic acid condensate	40%	●●	●●	●●	●●	●●	●●	●		●●
Syntan DF 585	Notable improvement in grain tightness Improved fullness and roundness Medium soft handle	Dicyandiamide, urea, formaldehyde condensate aromatic sulfonic acid condensate	49%			●●	●●	●●	●●	●●		●●

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More information

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