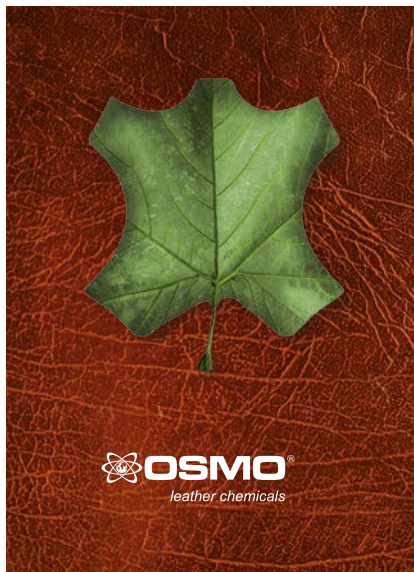




COSMOWHITE™. The leather revolution.

the COSMOWHITE™ leather life cycle





“In environmental and economic sciences, development conditions able to satisfy the needs of the current generation without jeopardizing the potential for future generations to achieve their needs.”

Enciclopedia Italiana, Treccani.it

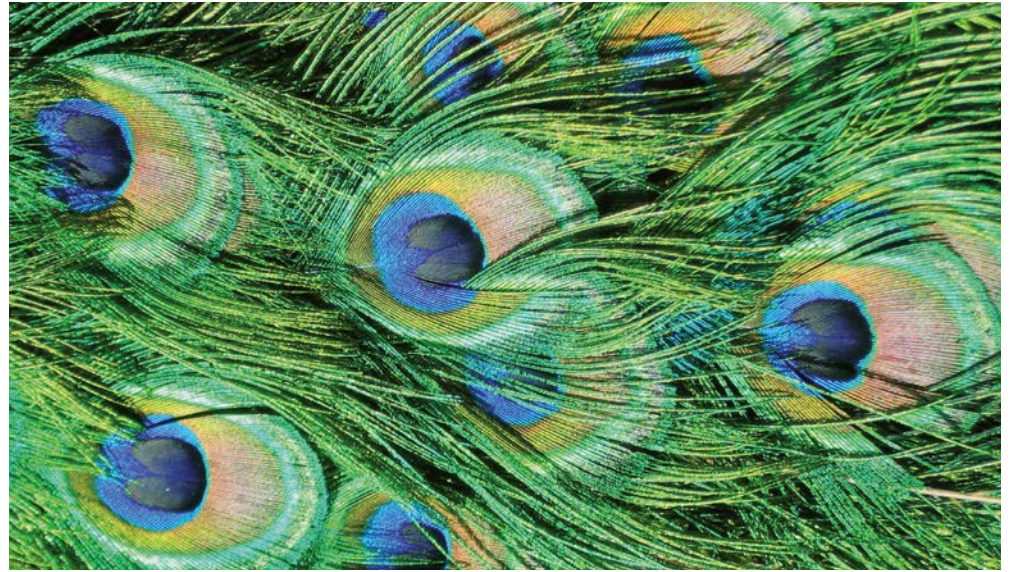
Sustainability.

This is the password of the new millennium: economic sustainability, resource sustainability, and production process sustainability. The strictest laws regarding environmental impact, increasing ecological awareness on behalf of public opinion and the requests of ever more demanding consumers all force leather producers to use eco-sustainable, non-toxic, an-allergic and metal-free leathers. Nonetheless concessions are not made regarding quality, handle and raw material performance.

The quest for really sustainable production processes able to keep leather quality high truly represents the challenge of our age for the tanning field. Having said that it is also a great opportunity for development in an ever more global market.

OSMO, leader in the production of products and dyestuffs for leather puts forward a proposition to be earmarked for current and future challenges of the tanning field in high quality tanning and sustainability. A natural inclination, know-how, perpetual research have all led OSMO to a watershed hard to imagine until some time ago. A proper revolution in the tanning field.





COSMOWHITE™. The leather revolution.

COSMOWHITE™* comes about, innovative process enabling completely metal-free leather with a negligible amount of formaldehyde that is well below the amounts currently required by any supply specifications. Leathers tanned with COSMOWHITE™ are more than 90% biodegradable, do not release any phyto-toxic or toxic chemical matter, in harmony with eco-toxicology criteria, safeguarding health and the environment as per Reach norms.

COSMOWHITE™ enables eco-sustainable leathers with high tolerability for wearers while respecting extremely high quality, handle and performance of leathers processed with traditional products.

*patent pending



WHY COSMOWHITE™ ?



Biodegradable leathers.

Use of COSMOWHITE™* aids the natural biodegradation process at the end of the leather product usage cycle. Biodegradability is established by measuring the effective metabolic conversion of carbon dioxide of compostable material. Leathers tanned with COSMOWHITE™ are tested and certified as more than 90% biodegradable. Innovation at the service of sustainability.

REGULATIONS: C.4 "determination of ready biodegradability" as per Re. EU 440/2008 as modified by Reg. UE 260/2014 and as per norm ISO 14855:1999 (> 90% in 180 days)

"Biodegradability is the ability of substances and organic matter to be degraded into simpler matter by means of micro-organism enzyme activity. If this biological process reaches completion, full conversion of organic matter starting as plain inorganic molecules such as water, carbon dioxide and methane is achieved. The phenomenon of biodegradation is part of the natural cycle of life on earth concentrating on carbon."

Enciclopedia Italiana, Treccani.it

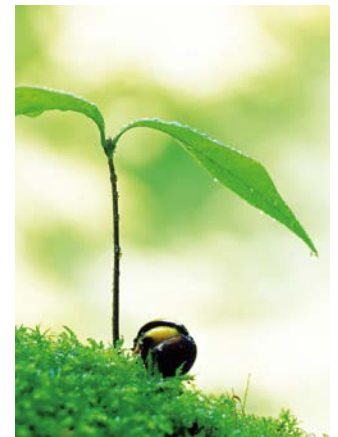
Leathers that cut the risk of allergies.

The natural consequence of leather biodegradability when articles are tanned with COSMOWHITE™* is the whole lack of toxic matter. This way health hazards are restricted for users.

Compostable leathers.

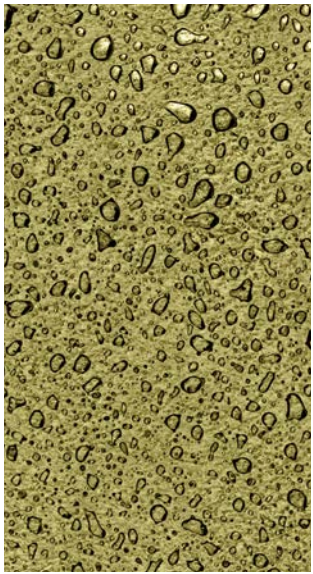
COSMOWHITE™ meets all the requirements established by art. 184-ter of Decree of Law n.152 dated 03 April 2006 following amendments (awaiting implementation of a decree) :
at the end of its cycle once it has thoroughly biodegraded, leather can become compost and be used in the production of fertilizers or agricultural –drugs. This all goes to show the greatest respect for the environment.

REGULATION: C.4
“determination of ready biodegradability” as per Reg. EU 440/2008 as per amendment by Re. EU 260/2014 and as per norm ISO 14855:199



“ Compostability is the ability of an organic material to transform into compost by means of the process of composting. This process exploits the biodegradability of starting organic materials to transform them into an end product called compost. As a result compost is the outcome of disintegration and aerobic biodegradation (namely in the presence of oxygen) of organic material (generally waste) : natural compost looks like fertile topsoil and thanks to its plentiful organic matter, it can be used as a fertilizer.”

Enciclopedia Italiana, Treccani.it



Innovative leathers.

Unique leathers are derived from innovation. Leathers tanned with COSMOWHITE™* not only are biodegradable, compostable, Metal-free and non-toxic but they share superior quality, are a cut above others for handle and exhibit avant-garde technical performance. Trying is believing.

Undoubted production advantages

Production advantages that turn into immediate financial advantages. Even in this respect COSMOWHITE™ makes all the difference. First and foremost, environmental pluses. No more heavy metal polluted waste water. Water consumption will be cut both in the tanning stage (-30%) and in retanning (-40%). Thanks to their biodegradability the leather residue can be disposed of as compost as per article 184-ter of the Decree of Law n. 152 dated 3rd April 2006 (awaiting implementation of decree and application criteria). There are considerable advantages during the stages of production and storage, too. COSMOWHITE™ tanned leathers can be processed with full thickness and with special attention can be stored for long periods of time without deteriorating or running the risk of permanent damage such as demurrage folds. They can be dried in the case of transport or keeping goods for a long time in the warehouse. In the case of the drying process, it will be possible to eliminate use of anti-mould agents during processing.

*patent pending





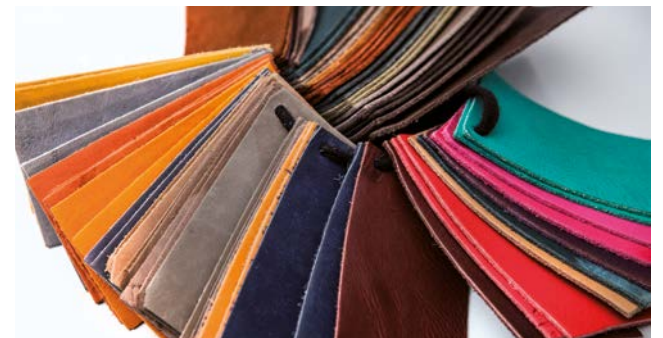
Great flexibility

With a suitable finishing treatment COSMOWHITE™* enables achievement of footwear, clothing, upholstery and automotive leathers. Furthermore, first stage tannage with COSMOWHITE™ becomes the supporting frame for any further articles should biodegradability not be required. These articles can range from classical wet-white, to vegetable-tanned, aluminium-tanned to traditional chrome.

Unprecedented Technical performance

If COSMOWHITE™ is used, unprecedented performance can be achieved from a technical point of view. What's more, the leathers are metal-free. Strict tests have even revealed less than 100 ppm chrome content enabling enhanced contact tolerability while formaldehyde readings are nearly zero. Additionally, a contraction temperature above 80°C can be found along with greater tear resistance compared with traditionally tanned leathers.

*patent pending





Zero environmental impact

The environment is the field where using COSMOWHITE™* can bring the greatest benefits. COSMOWHITE™ is sustainable because it comes from the earth and once it has done its task, it returns to the earth in a completely natural cycle. Waste water completely lacks any heavy metals while leather residues are fully biodegradable. COSMOWHITE™ tannage requires less water compared with traditional tannage and the possibility is offered to eliminate the use of anti-mould products. In a nutshell, the environment is grateful!



Great discernible value product.

COSMOWHITE™* tanned leathers turn into the most impressive example of eco-compatible leather. COSMOWHITE™ is indeed considered as a watershed in the tanning process which has often found itself in the limelight of public opinion over the past few years regarding environmental impact. It has therefore been perceived very positively on behalf of the end consumer. The same positive awareness is shared by the producers seeing as COSMOWHITE™ gives them the chance to satisfy requests of ever more updated, careful and demanding consumers. Respecting the environment and health.

Definite competitive pluses.

COSMOWHITE™ is the first tested and certified product for tanning regarding environmental sustainability. Using COSMOWHITE™ means offering customers a fully environmentally integrated leather that is also integrated into the eco-system. It stands for giving one's own customers potential to offer leather articles which are suitable for all consumers even to those who are sensitive to chemical substances used in traditional tannage. It means all of this without increasing production costs because tannage costs with COSMOWHITE™ are more or less the average of other types of metal-free tannages. Are you still sure you can go without?

*patent pending



COSMOWHITE™ in short

INNOVATION

- metal-free
- biodegradability
- compostability

PRODUCTION PLUSES

- Waste water is heavy metal-free.
- Full thickness leathers can be processed.
- Tanned leathers can be stored per a long time without spoilage or permanent physical damage such as demurrage folds.
- Leathers can be fully dried should it be necessary (transport, long planned storage).
- It is also possible not to use anti-mould products should the leathers be dried.
- Leather residue (trimmings, shavings etc. . . .) are biodegradable and can be composted.
- Water consumption is lower both in tanning and retanning stages.

FLEXIBILITY

- Tanning versatility

TECHNICAL PERFORMANCE

- Metal-free
- Chrome content lower than 100 ppm.
- Formaldehyde readings nearly zero
- High tear resistance
- $T_c > 80^\circ\text{C}$

ENVIRONMENTAL IMPACT

- Waste water is metal-free
- Leather residue is biodegradable e compostable.
- Low water consumption
- It is possible to eliminate anti-mould during the stage of tanning
- COSMOWHITE™ blends in with the environment. It comes from the earth and returns to it in a completely natural cycle.

PRODUCT ADDED VALUE

- Excellent awareness on behalf of the end consumer.
- Excellent awareness on behalf of the market
- Leather Physical-mechanical properties and performance are enhanced
- Eco-sustainable

COMPETITIVE ADVANTAGES

- There are no products on the market currently with this certification
- Companies who choose COSMOWHITE™™ will be the first to propose articles achieved with leathers which can fully blend with the environment and the eco-system.
- COSMOWHITE™ makes it possible to accomplish leather products suitable even for consumers with poor tolerability to chemical substances normally in use during tanning stages
- Processing costs are in the average of other chrome-free tanning agents
- Now there is a concrete possibility to counter eco-leather (plastic material) with a truly ecological leather which comes from the earth and ends its cycle where it started off from.



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