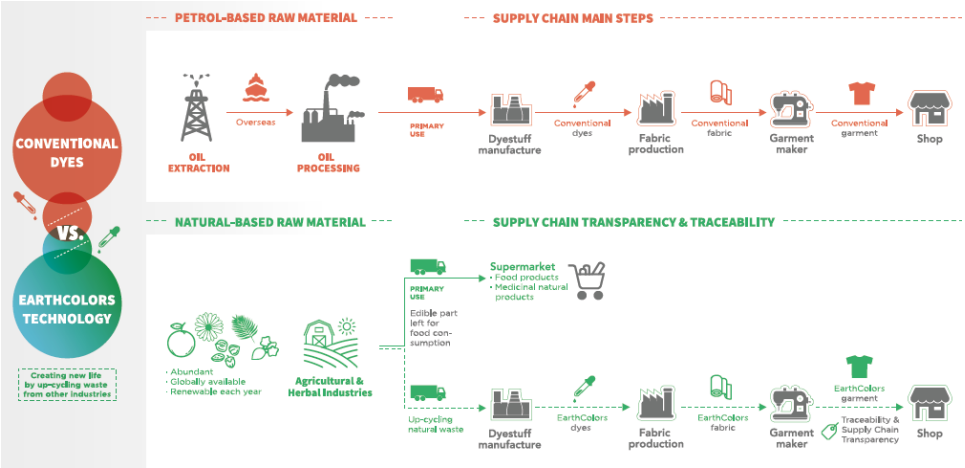
EARTHCOLORS BY ARCHROMA
Factsheet

RE-INVENTING DYESTUFF, WHERE NATURE MEETS TECHNOLOGY

With the boom of the petrol-based chemical industry at the turn of the 20th Century, synthetic dyestuffs of higher performance and bigger volumes started to be commercialized around the world.

EarthColors is Archroma's patented new method of synthesizing dyes to produce warm shades from nature.

Archroma's EarthColors technology creates fully traceable biosynthetic dyes derived from natural waste products of the agriculture and herbal industries; leaving the edible part still available for food consumption.



CREATING A NEW, COLORFUL LIFE FOR AGRICULTURAL & HERBAL WASTE

EarthColors are available in a range of seven dyes that are made from waste left over by the agricultural and herbal industry, covering a palette of natural shades for cellulosic based fibers such as cotton, viscose, linen, bamboo, kapok, etc.

- **Diresul® Earth-Oak** manufactured using 100% of ALMOND SHELLS from the food industry
- **Diresul® Earth-Maple** manufactured using 100% of ROSE MARY waste from the herbal industry
- **Diresul® Earth-Cotton** manufactured using 100% of COTTON PLANT residues from the cotton industry
- **Diresul® Earth-Sand** manufactured using 90% of BITTER ORANGE residues from the herbal industry
- **Diresul® Earth-Clay** manufactured using 90% of BEET residues from the food industry
- **Diresul® Earth-Forest** manufactured using 90% of SAW PALMETTO residues from the herbal industry

- **Diresul® Earth-Stone** manufactured using 70% of SAW PALMETTO residues from the herbal industry

The EarthColors by Archroma (Photograph: Archroma)
ARCHPR081b

The EarthColors by Archroma (Photograph: Archroma)
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PROTECTING THE PLANET AND ITS PEOPLE

The EarthColors technology helps to reduce the negative impact on water footprint, and preserve human wellness, natural resources and climate change compared to conventional synthetic dyes (Based on internal LCA comparative screening).

Moreover, the fact that waste is up-cycled from other industries contributes to a circular economy.

Using natural waste based raw materials has no negative impact in any other steps of the dye manufacturing, such as water and energy consumption or waste generation.

During the synthetization of EarthColors, 100% of the natural raw material is transformed to a new dyestuff, guaranteeing full waste management into own production.

EMBRACING TRACEABILITY, FROM NATURE TO FASHION

Archroma's dyes, manufactured using patented EarthColors technology, are fully traceable – from natural waste material to the store.

Archroma is providing brand owners with the possibility to offer traceability for EarthColors; tracking from the origin of the raw material and progress of the specific EarthColors batch along the supply chain. Traceability information is available on smart hangtags which are attached to each item of clothing.

The EarthColors by Archroma (Photograph: Archroma)
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AWARDED TECHNOLOGY, CERTIFIED ENVIRONMENTAL BENEFITS

EarthColors was honored with the prestigious Outdoor Gold Industry Award 2017 in the Sustainable Innovations category. EarthColors dyestuffs are bluesign® and GOTS approved products.

EarthColors by Archroma receives OutDoor Industry Award 2017. (Photograph: Archroma) ARCHPR085b

FREQUENTLY ASKED QUESTIONS

Are Diresul® EarthColors dyes suitable for all fibers?
At present, they are available for cellulosic fibers such as cotton, viscose, linen, bamboo, kapok, etc. Our experts in R&D are continuously working in order to make EarthColors available for other fibers.

How is EarthColors technology commercialized?
EarthColors is currently exclusive to brand owners only. EarthColors dyestuffs are only supplied to approved textile mills, supporting the efforts of the brand owners towards transparency and traceability.

What's the applicability for Diresul® EarthColors dyes?
Archroma's dyes, manufactured using patented EarthColors technology, can be applied by dyeing technologies well established within the textile industry. EarthColors dyes are suitable for yarn and woven continuous dye equipment, as well as garment dyeing facilities at close atmospheric conditions.

What's the performance level of Diresul® EarthColors dyes?
Archroma's dyes, manufactured using patented EarthColors technology, have good affinity for cellulosic fibers and during dyeing process they are directly linked to the fiber by covalent bolds. Therefore, EarthColors dyes equal the fixation rate, fastness and overall performance of Archroma's existing range of sulfur dyes made from conventional petroleum based raw materials.

Where are Diresul® EarthColors dyes currently produced?
Archroma uses its dyes facilities nearby Barcelona with state-of-the-art manufacturing equipment specially adapted to produce Archroma's dyes produced using patented EarthColors technology. Raw materials are mainly sourced within less than 500 km from the production site.

Are Diresul® EarthColors dyes REACH registered?
Archroma's dyes, manufactured using patented EarthColors technology, are exempt of REACH regulation because both raw material and final product are not considered harmful for human health neither environment.

Is any brand already using EarthColors at Scale?
Yes, major brands from the USA, Europe, Asia and Australasia have already launched collections based on EarthColors, e.g. Patagonia, G-Star or Kathmandu.

Watch our EarthColors video to see how it works: https://youtu.be/QNygMP6su38