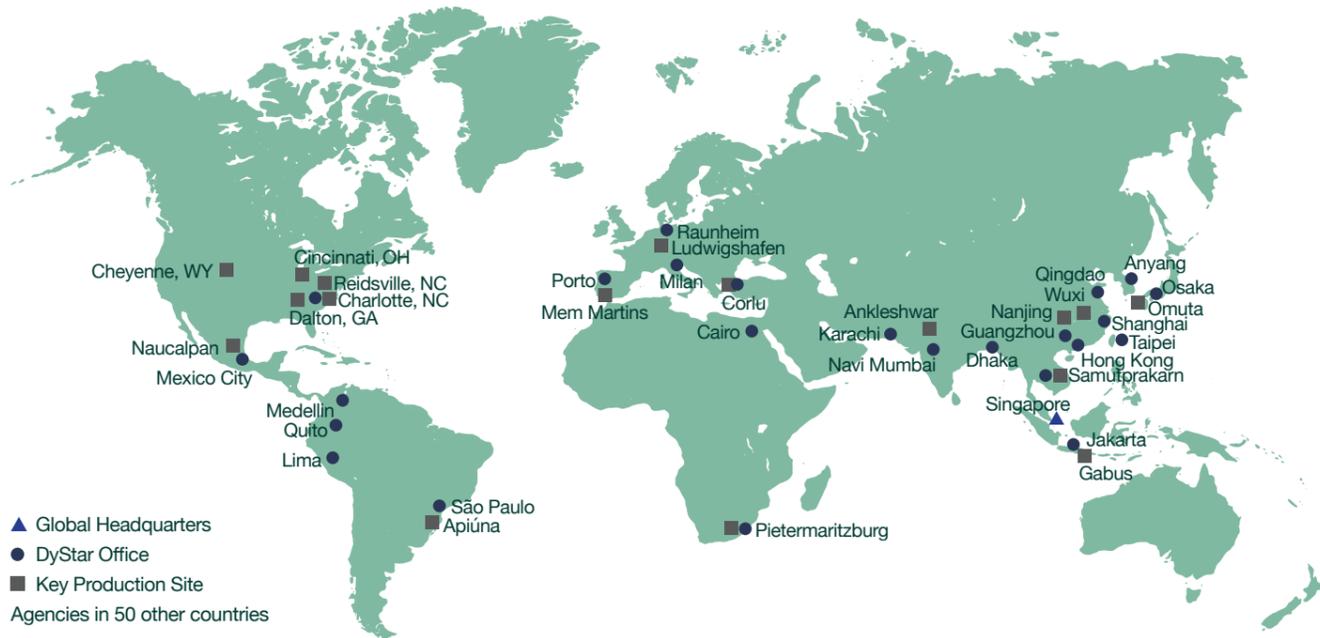


Committed to Sustainability.

At DyStar, our products and services help customers worldwide reduce costs, shorten lead times and meet stringent quality and ecological specifications.



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Agencies in 50 other countries

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econfidence[®]
from DyStar[®]

DyStar[®]

Cadira[®] Recycled Polyester

Saving Valuable Resources



Cadira[®] Recycled Polyester

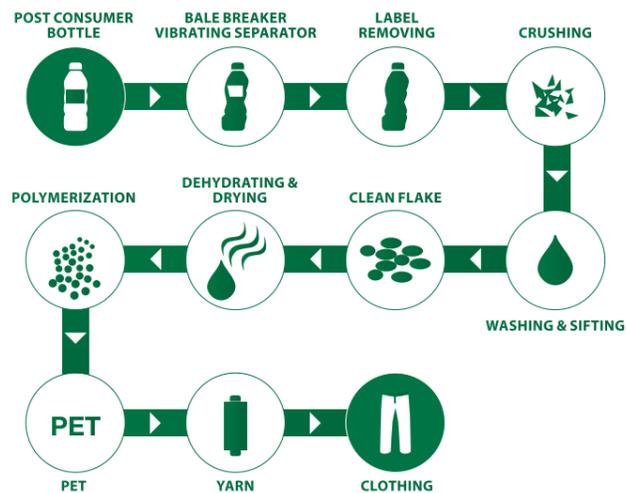
The Cadira Polyester concept was introduced in May 2016. That module provides information about environmentally friendly exhaust processing of polyester fibers with Dianix[®] dyes and Sera[®] process auxiliaries using best available technology (BAT).

All processes, dyes and auxiliaries which are mentioned in the Cadira Polyester module, can be used for dyeing of recycled polyester without any restrictions.

Why is recycled polyester (rPET) considered as a green and sustainable option in textiles?

- ▶ 33% to 53% lower energy consumption needed in production compared to virgin polyester
- ▶ Diverting PET bottles into rPET fibers reduces landfill and thus less soil contamination, air and water pollution
- ▶ No need to use petroleum as raw material

Production process of mechanically recycled polyester:



Which types of recycled polyester are available?

Mechanically recycled polyester

- ▶ Principle: melting PET bottles and re-extrusion into yarn
- ▶ This rPET has often a yellowish self-shade
- ▶ This process is mainly used as rPET for industrial textiles

Chemically recycled polyester

- ▶ Principle: breaking polyester polymer into its molecular parts and reforming the molecules into yarn
- ▶ Same quality as virgin polyester
- ▶ More expensive process compared to mechanically recycled polyester
- ▶ This rPET can be used again in textile application, also in apparel
- ▶ Example: Teijin ECO CIRCLE

Post-industrial hybrid polyester

- ▶ Composition: 80% post industrial waste of virgin PET and 20% PET bottles
- ▶ Suitable for a wide range of shades
- ▶ Used in textile applications

Dianix[®] Dyes for Recycled Polyester

The Cradle to Cradle Products Innovation Institute launched the **Fashion Positive Initiative**, which is intended to encourage apparel and fashion brands and retailers to adopt a “circular economy” approach in their garment design and manufacturing via embracing the Cradle to Cradle principles.

DyStar had 39 textile dyes assessed against the criteria of the Material Health category in the Cradle to Cradle Certified[™] Product Standard and were awarded a **Gold Level Material Health Certificate** by the Cradle to Cradle Products Innovation Institute. These certified dyes can be used for manufacture of such garments.

For more information on this topic, please refer to the following website: www.c2ccertified.org
To find all certified DyStar items please refer to eliot[®] on www.dystar.com



DyStar's Dianix Dyes which have received the Cradle to Cradle Products Innovation Institute's Gold Level Material Health Certificate

- ▶ Dianix Yellow AM-SLR 200%
- ▶ Dianix Yellow S-3G
- ▶ Dianix Yellow XF2
- ▶ Dianix Orange AM-SLR
- ▶ Dianix Yellow Brown XF2
- ▶ Dianix Red XF2
- ▶ Dianix Red AM-SLR
- ▶ Dianix Rubine XF2
- ▶ Dianix Brilliant Violet R
- ▶ Dianix Blue XF
- ▶ Dianix Blue S-BG
- ▶ Dianix Turquoise S-BG
- ▶ Dianix Eco Black HF

