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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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econfidence<sup>®</sup>  
from DyStar



# Cadira<sup>®</sup> Polyester

Get a Move On



Cadira<sup>®</sup> Concept

What is Cadira Polyester?

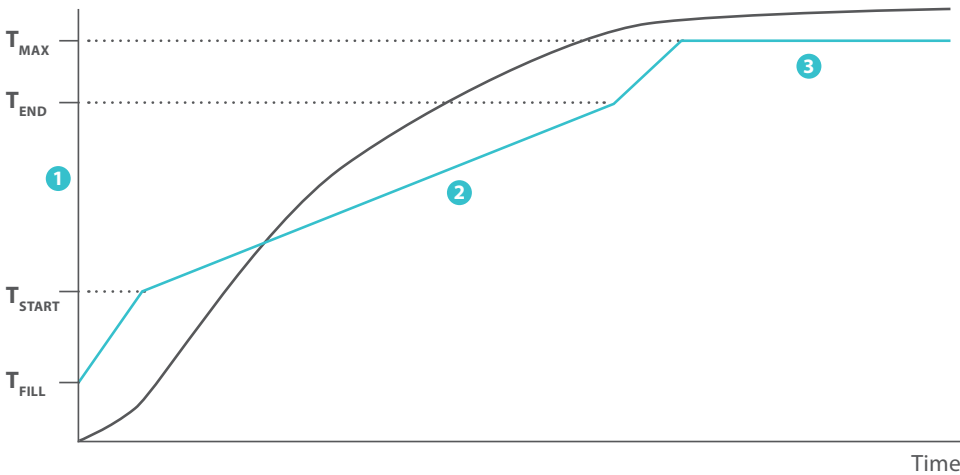
- ✓ **Environmentally Friendly Exhaust Processing of Polyester Fibers With Dianix<sup>®</sup> Dyes and Sera<sup>®</sup> Process Auxiliaries**
  - Reliable application technology by use of Optidye<sup>®</sup> PES
  - Further resource saving options by use of scour/dyeing and in-bath reduction clearing
  - Sera alternatives for reduction clearing

Why Cadira Polyester?

- ✓ **Optidye PES – Improve Right-First -Time Performance**
  - Reduced energy consumption
  - Reduced water consumption
  - Reduced chemical/auxiliary consumption
  - Reduced effluent load
- ✓ **Scour/Dyeing and In-Bath Reduction Clearing**
  - Reduced energy consumption
  - Reduced water consumption
- ✓ **Alternatives in Reduction Clearing**
  - Reduced effluent load

Cadira Polyester reduces the greenhouse gas emission.

Optidye PES – Temperature/Time Profile for Dyeing Polyester



- 1 **Critical Temperature Range**  
Dyestuff groups  
Concentration  
V-value
- 2 **Rate of Rise**  
Levelling properties  
Levelling agents  
Circulation time  
Contact cycle
- 3 **Dyeing Time at Max. Temperature**  
Dyestuff diffusion  
V-value

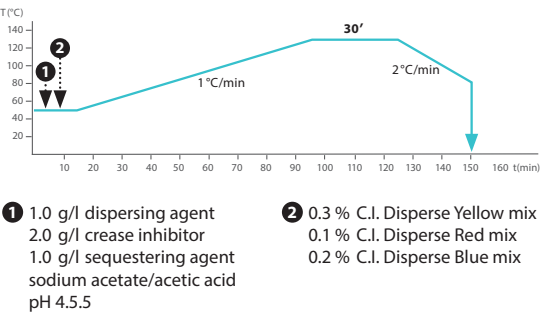
Benefits of Reliable Application Technology



Water and Energy Savings

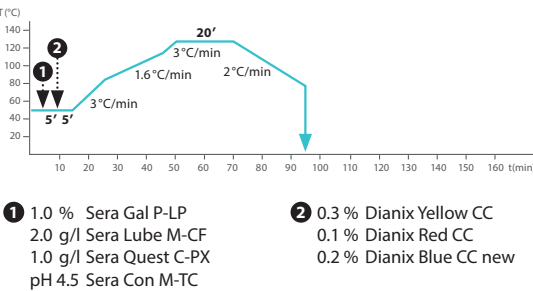
Dianix<sup>®</sup> dyes & Sera<sup>®</sup> process auxiliaries in combination with Optidye<sup>®</sup> PES program

STANDARD DYEING PROFILE  
Pale Shades



V-value = 1

OPTIDYE<sup>®</sup> PES OPTIMIZATION  
Pale Shades / Optidye PES Calculation



Benefits in Processing

- ↓ 34 % less electricity
- ↓ 5 % less steam
- ↓ 25 % less process time

Benefits in Productivity

- ✓ 35 % productivity increase
- ✓ Higher RFT performance achieved with Optidye PES

Benefits of Full Optimization

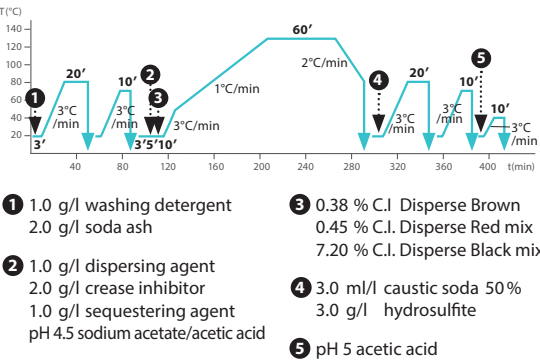


Water and Energy Savings

Dianix<sup>®</sup> dyes & Sera<sup>®</sup> process auxiliaries through Scour/dyeing, Optidye<sup>®</sup> PES and optimized reductive clearing

CONVENTIONAL PROCESSING  
For Medium to Dark Shades

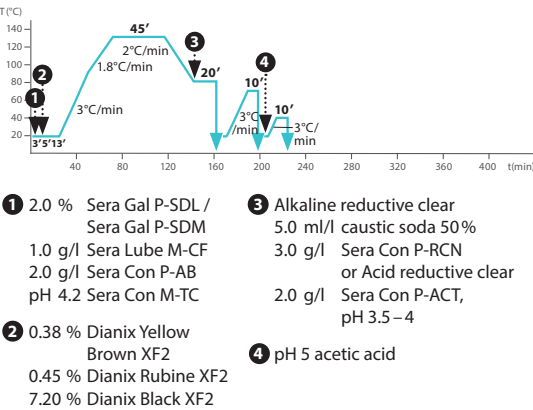
Process time: 415 min, 6 baths



V-value = 1

OPTIMIZED PROCESSING  
With Scour/Dyeing, Optidye Pes Calculation and Reductive Clearing in Dyeing Bath

Process time: 225 min, 3 baths



Benefits in Processing

- ↓ 43 % less electricity
- ↓ 46 % less steam
- ↓ 50 % less water
- ↓ 46 % less process time

Benefits in Productivity

- ✓ 58 % productivity increase
- ✓ Higher RFT performance achieved with Optidye PES

Less environmental impact through use of hydrosulfite alternatives in reductive clearing