19.02.2018

Introductory note

DyStar Product Selection 01/2018 to meet the requirements of H&M® Chemical Restrictions (CR) Version January 2018, Apparel, Accessories, Footwear and Home Interior Textile Products

The H&M® CR Version January 2018 contains a list of substances that are prohibited or restricted for use in textile apparel, accessories, footwear and home interior products supplied to H&M.

DyStar has assessed its global product range for textile coloration and finishing against the a.m. H&M® CR and this document indicates the suitability of each product.

Recommendations are based on our experience with well-established test methods and on dye application tests performed under standard lab conditions. It may be that these are not always representative of the conditions used by our customers. The assessment and recommendations given in the following tables therefore do not absolve the user from making their own tests and controls to ensure that the finished textile article conforms to the H&M® CR requirements.

●	Green	Suitable without limitation according to H&M® CR
»	Amber	Suitable with certain limitations indicated by footnotes in the tables
X	Red	NOT suitable

As the world's leading manufacturer of textiles dyes and auxiliaries, DyStar shares H&M's concern for the health of its customers as well as for the environment and working conditions.

The use of high quality products from DyStar and the technical expertise of DyStar personnel offer customers the best assurance of meeting the high standards of the H&M® CR textile requirements.

The tables show all global core products for coloration and finishing of textiles on the DyStar product range which we recommend for H&M® CR (status: January 2018). The confirmation also is valid with the H&M Manufacturing Restricted Substances List (MRSL) of January 2018. None of the substances listed in this MRSL are intentionally added to our formulations or generated during production (please find remark on Ni- and Co-complexes below).

In case of missing items or uncertainties do not hesitate to contact your sales representative.

With best regards,

Dr. Anette Weber
Technology
Global Product Safety & Ecology

Dr. Christine Lorkowski
Technology
Global Product Safety & Ecology

Introductory remarks

In the case of a metal complex dyes there are different restrictions depending on the nature of the fiber.

1. Chromium complex dyes can be used for the dyeing of polyamide and polyamide blends (min. 5% PA) as long as the extractable chromium content of the dyed fabric does not exceed 1 mg/kg.

The H&M® CR requirement for extractable chromium is applicable to all its textiles.
DyStar has assessed or tested all its products. The results form the basis of our indication of suitability of these dyes in the product assessment tables. Most DyStar Supralan®, Isolan®, Lava Dye Antique and Diamond dyes may be used without limitation for the dyeing of polyamide and polyamide blends (min. 5% PA).

However for certain products the 1 mg/kg limit for extractable heavy metal may not be achievable in medium-deep shades. This is indicated in the assessment tables by a footnote.

It should be noted though that our standardized lab dyeing and finishing conditions may not always reflect the dyeing and finishing processes in our customers' plants. Our assessments therefore only give an indication and guidance for the pre-selection of H&M® suitable dyestuffs, but must not be regarded as a general suitability guarantee. It is the responsibility of our customers to make their own controls and tests to ensure that the finished textiles meet the H&M® limits for extractable heavy metals. This is especially important for deep shades on polyamide and polyamide blends (due to overloading effects) and for elastane-containing fiber blends.

2. The total chromium content of textiles (except those which are made from polyamide and polyamide blends (min. 5% PA)) must not exceed 100 mg chromium/kg of finished textile.

This means in practice that chrome complex dyes cannot be used for the dyeing of wool, cellulose fibers or silk, because the 100 mg/kg limit would be exceeded at very low dyestuff concentrations. As DyStar chrome complex dyes are normally not recommended for the dyeing of cellulose, this is not a significant restriction. But it does mean that our **Supralan® and Isolan®** dyes, which are chromium complex dyes, and also the **Diamond dyes, cannot be used for the dyeing of standard wool and silk**.

3. Cobalt and nickel complex dyes may currently only be used for the printing and dyeing of textiles, so long as the extractable nickel and cobalt content of the dyed/printed fabric does not exceed 1 mg/kg.

A few cobalt and nickel complex dyes which we would normally recommend for cellulose fibers should not be used for the dyeing of articles for H&M® as the 1 mg/kg limit for extractable metal may not be achievable unless they are applied in very pale shades or used as shading components.
It has to be noted that H&M® has listed Cobalt and Cobalt compounds as well as Ni and Ni compounds as group 2 restricted substances within their MRSL. Acceptance of respective metal complex dyes should be reconfirmed with H&M® prior to application of respective dye preparations.

4. There is an extractable limit for copper (Cu) of 25 mg/kg for products for children aged 0-3 years in the H&M® chemical restrictions (Version January 2017).

This means that there are some restrictions on the use of copper complex dyes. Please refer to the information in the product assessment tables.

Overview of DyStar product ranges

Textile Colorants

For cellulosic fibers

o Reactive dyes	Levafix®, Procion®, Remazol® and Lava Dye
o Direct dyes	Sirius®
o Vat dyes	Indanthren® Colloisol and liquid
o Dyes for Denim	DyStar Indigo, Cassulfon®
o Azoic / developing dyes	Fast dyes, Naphtol AS®, Phtalogen®

For polyester fibers

o Disperse dyes	Dianix®

For wool

o After chromed dyes	Diamond®
o Acid metal complex dyes	Isolan®
o Reactive dyes	Realan®
o Acid dyes	Supralan® and Telon®

For polyamide

o Acid metal complex dyes	Isolan®
o Acid dyes	Telon®
o Acid/MC dyes for fashion garment	Lava Dye Antique

For acrylic fibers

o Basic dyes	Astrazon®

For textile printing

o Pigment preparations	Imperon®
o Inks for digital printing	Colaris®
o Printing inks (liquid)	Jettex® A, Jettex® D and Jettex® R
o Powder ink concentrates	Jettex® highly purified dyes: Jettex® A and Jettex® R

Auxiliaries

o Pretreatment & Dyeing & Printing Auxiliaries	Sera®
o Finishing Auxiliaries	Evo®
o Laundry Auxiliaries	Lava®

DyStar products as per your *eliot* selection from **21.11.2018**

Postive List - H&M®
Chemical Restrictions, Version of January 2018 Apparel /

Dyestuff	Remarks	General remarks	babies 0-3 years	other textiles
Lava Zyme AET			●	●

●	Green	Suitable without limitation according to H&M® RSL for apparel
»	Amber	Suitable with certain limitations indicated by Footnotes in the table
x	Red	NOT recommended

DyStar products as per your *eliot* selection from **21.11.2018**

Footnotes, Postive List - H&M®
Chemical Restrictions, Version of January 2018 Apparel /

Committed to Sustainability

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

DyStar Colours Distribution GmbH
eliot@DyStar.com
www.DyStar.com