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POSITIVE *list*



OHYOUNG



Introduction

In the Zero Discharge of Hazardous Chemicals (ZDHC) Joint Roadmap, Version 2, ZDHC member brands are committed and develop a Manufacturing Restricted Substances List (MRSL) for the apparel and footwear industry. The MRSL addresses hazardous substances potentially used and discharged into the environment during manufacturing and related processes, not just those substances that could be present in finished products.

As a member of global leading dyestuff companies, OHYOUNG is ready to meet the requirements suggested by ZDHC MRSL and share its values with our customers.

During the years, OHYOUNG has accumulated its capability of how to detect harmful substances by proper investment on our lab and how to control these harmful substances in production. With our years of experience and expertise in business with textile industry, we can support our customers on how to better meet their ecological requirements by providing our eco-friendly products and technical information related.

OHYOUNG has developed a list of dyes which do not intentionally contain any of the substances in the priority chemical groups above the limits listed in the ZDHC MRSL (http://www.roadmaptozero.com/programme_documents.php) and therefore can be used to supply textiles to Brands that have signed up to the version 2 of the Joint Road Map. This confirmation is valid for the ZDHC MRSL version: October 2014. And the listed dyes are compliant with **H&M MRSL** (H&M Global Chemical Restrictions, Edition Jan 2016). The below lists also qualify for the dyeing, printing and is finished of textiles in compliance with the **H&M RSL** (H&M Global Chemical Restrictions, Edition Jan 2016).

We trust that this information will assist to all our valuable partners in the textile and clothing supply chain.

Restricted substances and groups of substances according to MRSL of ZDHC are :

- Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs)
- Chlorobenzenes & Chlorotoluenes
- Chlorophenols
- Dyes - Azo (Forming Restricted Amines)*
- Dyes - Navy Blue Colorant
- Dyes - Carcinogenic or Equivalent Concern
- Dyes - Disperse (Sensitizing)
- Flame Retardants
- Glycols
- Halogenated Solvents
- Organotin Compounds
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Perfluorinated and Polyfluorinated Chemicals (PFCs)
- Phthalates - including all other esters of ortho - phthalic acid
- Total Heavy Metals**
- Volatile Organic Compounds (VOC)

* azo dyes that can undergo reductive cleavage of the azo bond(s) to release carcinogenic amines as defined in Annex XVII of REACH or 2,4- and 2,6-xylylidine

** We do not recommend metal(chromium) complex dyes because MRSL of ZDHC does restrict heavy metal of chromium and Chromium is widely restricted by RSL of many brands and retailers.

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Reactive dyes for textile dyeing

Suncion P

Suncion Yellow P-6G pwd.&liq.

Suncion Violet P-3R

Suncion Yellow P-5G

Suncion Brown P-6R 150%

Suncion Yellow P-4G

Suncion Blue P-3RC pwd.&liq.

Suncion G/Yellow P-2RN pwd.&liq.

Suncion Turquoise Blue P-A

Suncion Yellow P-3R

Suncion Turquoise Blue P-GL

Suncion Orange P-2R pwd.&liq.

Suncion Green P-4BD

Suncion Red P-2B

Suncion Navy Blue P-2R

Suncion Red P-BN liq.

Suncion Black P-GR 150%

Suncion Red P-4B

Sunfix HS

Sunfix Yellow HS

Sunfix Deep Red HS

Sunfix Orange HS

Sunfix Navy Blue HS

Sunfix Red HS

Sunfix Black HS

Suncion H-E

Suncion Yellow H-E6GN

Suncion Red H-E7B

Suncion Yellow H-E4G

Suncion Turquoise Blue H-A

Suncion Yellow H-E4RN

Suncion Blue H-EGN 125%

Suncion Orange H-E2G

Suncion Blue H-ERD 125%

Suncion Orange H-ER

Suncion Navy Blue H-ER 150%

Suncion Scarlet H-E3G

Suncion Green H-E4BD

Suncion Red H-E3B

Suncion Black H-EM

Suncion H-EL

Suncion Yellow H-EL

Suncion Navy Blue H-EL

Suncion Red H-EGL

Suncion Navy Blue H-ELN

Suncion Crimson H-EL

Sunfron SN

Sunfron Yellow SN-2R

Sunfron Red SN-2BL

Sunfron Orange SN-R

Sunfron Blue SN-R

Sunfron Red SN-3G

Sunfron Navy Blue SN-GN

Sunfron Red SN-R

POSITIVE *list*

Sunfix SPR

Sunfix Yellow SPR

Sunfix Red SPR-F

Sunfix Red SPR

Sunfix Blue SPR

Sunfix SPD

Sunfix Yellow SPD conc.

Sunfix Blue SPD conc.

Sunfix Red SPD conc.

Sunfix Navy Blue SPD conc.

Sunfix EX

Sunfix Yellow EX

Sunfix Blue EX

Sunfix Red EX

Sunfix Navy Blue EX

Sunfix Special

Sunfix Yellow S3R 150% spec.

Sunfix Navy Blue SBF 150% spec.

Sunfix Red S3B 150% spec.

Sunfix FE-A

Sunfix Red FE-6BA

Sunfix Navy Blue FE-BNA

Sunfix Royal Blue FE-FR

Sunfix SS

Sunfix Yellow SS

Sunfix Red SS-2B

Sunfix Yellow SSR

Sunfix Deep Red SS

Sunfix Orange SS

Sunfix Dark Blue SS

Sunfix Red SS

Sunfix Navy Blue SS

Sunfix MF-D

Sunfix Orange MF-D

Sunfix Red MF-SB

Sunfix Red MF-GD conc.

Sunfix Navy Blue MF-D

Sunfix Red MF-3G

Sunfix Navy Blue MF-GD

Sunfix Red MF-2BS

Sunfix Navy Blue MF-RD

Sunfix Red MF-3BD

POSITIVE *list*

| Sunfix | |
|-------------------------|----------------------------|
| Sunfix Yellow S3R 150% | Sunfix Red SBS 150% |
| Sunfix Red S3B 150% | Sunfix Ruby S3B |
| Sunfix Navy Blue SB | Sunfix Violet S5R |
| Sunfix Yellow S4GL | Sunfix Blue SF-RL 200% |
| Sunfix Yellow S4GL 150% | Sunfix Blue SSR |
| Sunfix Yellow S4GL 200% | Sunfix Blue SBR |
| Sunfix Orange S2R 150% | Sunfix Green S4B |
| Sunfix Orange S2RN | Sunfix Navy Blue SGN |
| Sunfix Scarlet S2G 150% | Sunfix Navy Blue S2G |
| Sunfix Red S2B | Sunfix Navy Blue SB conc. |
| Sunfron C | |
| Sunfron Yellow C-4G | Sunfron Red C-R |
| Sunfron Yellow C-R | Sunfron Red C-2BL |
| Sunfron Yellow C-RG | Sunfron Blue C-R |
| Sunfron Yellow C-2R | Sunfron Navy Blue C-GN |
| Sunfron Orange C-R | Sunfron Navy Blue C-R |
| Sunfron Red C-2G | |
| Sunfix MF-CN | |
| Sunfix Yellow MF-CN | Sunfix Blue MF-CN |
| Sunfix Orange MF-CN | Sunfix Navy Blue MF-CN |
| Sunfix Red MF-CN | Sunfix Black MF-CN |
| Sunfix Deep Red MF-CN | |
| Sunzol GRB | |
| Sunsol G/Yellow GRB | Sunsol Ultra Red GRB |
| Sunsol UltraYellow GRB | Sunsol Blue GRB |
| Sunsol UltraYellow GRBN | Sunsol Ultra Navy Blue GRB |
| Sunsol Red GRB | Sunsol Navy Blue GRB |
| Sunsol Deep Red GRB | |

POSITIVE *list*

| Sunzol | |
|--------------------------|------------------------------|
| Sunzol Yellow SRN | Sunzol Turquoise Blue G 133% |
| Sunzol Red SBN | Sunzol Turquoise Blue G 266% |
| Sunzol Blue SRN | Sunzol Blue RS |
| Sunzol Yellow GL | Sunzol Blue RS 150% |
| Sunzol Yellow GR | Sunzol Blue R special 150% |
| Sunzol G/Yellow 2RN 150% | Sunzol Blue BB 133% |
| Sunzol Orange 3R | Sunzol Navy Blue GG |
| Sunzol Red BB 150% | Sunzol Gray RL |
| Sunzol Red F3B | Sunzol Black B |
| Sunzol Red RB 133% | Sunzol Black B 133% |
| Sunzol Red 3B | Sunzol Black B 140% |
| Sunzol Violet 5R | Sunzol Black B 150% |
| Sunzol Green GG | |

| Sunzol Black | |
|-----------------------|---------------------------|
| Sunzol Black FS | Sunzol Black CNG liq. |
| Sunzol Black DN conc. | Sunzol Black CNN liq. |
| Sunzol Black GN conc. | Sunzol Black FXB liq. |
| Sunzol Black RN conc. | Sunzol Black FXL liq. |
| Sunzol Black BN conc. | Sunzol Black FSL liq. |
| Sunzol Black MT conc. | Sunzol Black GXL liq. |
| Sunzol Black CN conc. | Sunzol Black GXL CPB liq. |
| Sunzol Black WN conc. | Sunzol Black MTL liq. |
| Sunzol Black EXF | Sunzol Black NWD liq. |
| Sunzol Black GR conc. | Sunzol Black NWR liq. |
| Sunzol Black GSP 120% | Sunzol Black NWS liq. |
| Sunzol Black G | Sunzol Black ON 400 liq. |
| Sunzol Black DW liq. | Sunzol Black PFL liq. |

Disperse dyes for textile dyeing

Suncron S-FW

Suncron Yellow S-FW

Suncron Red S-FW

Suncron G/Yellow S-3FW

Suncron Turquoise Blue S-FW

Suncron Yellow Brown S-FW

Suncron Blue S-FWN

Suncron Brill. Scarlet S-FW

Suncron Navy Blue S-FW

Suncron Red CBN

Suncron Navy Blue S-FWN

Suncron Red S-3FW

Suncron Black S-FW

Suncron Crimson S-FW

Suncron Black S-FWH

Suncron Brill. Red S-FWH

Suncron Black S-FWS

Suncron T-FW

Suncron Yellow T-FW

Suncron Rubine T-FW

Suncron Yellow Brown T-FW

Suncron Maroon T-FW

Suncron Orange T-FW

Suncron Violet T-FW

Suncron Scarlet T-FW

Suncron Navy Blue T-FW

Suncron Crimson T-FW

Suncron Black T-FW

Suncron S

Suncron Yellow S-4G

Suncron Turquoise Blue S-GL 200%

Suncron Rubine S-BL

Suncron Turquoise Blue G-GL 200%

Suncron SP-SE

Suncron Yellow SP-SE

Suncron Rubine SP-SE

Suncron G/Yellow SP-SE

Suncron Blue SP-SE

Suncron Orange SP-SE

Suncron Dark Blue SP-SE

Suncron Red SP-SE

Suncron Deep Black SP-SE

Suncron SE

Suncron Red SE-F3BS 150%

Suncron Blue SE-3RT

Suncron Black S-N 300%

Suncron Liquid

Suncron Black S-RN liq.

Suncron Black LS liq.

Suncron Black ECO-RD liq.

Acid dyes for textile dyeing

Suncid E

Suncid Brill. Flavine E-8G

Suncid Red E-2B

Suncid Yellow E-3R

Suncid Blue E-R 200%

Suncid Yellow E-4R

Suncid Blue E-4R

Suncid Rhodamine E-B

Suncid Blue E-BRL

Suncid N

Suncid G/Yellow N-3RL

Suncid Blue N-RH

Suncid Red N-2RL

Suncid Blue N-BLF

Suncid Rubine N-5BL

Suncid Navy Blue N-RL

Suncid Blue N-BL

Suncid Black AG

Suncid F

Suncid Yellow F-5GL

Suncid Red F-B

Suncid Yellow F-4G

Suncid Violet F-BL

Suncid Orange F-GSN

Suncid Blue F-6B

Suncid Red F-GS

Suncid Brill. Green F-6GL

Suncid S

Suncid Black LDC 140%

Suncid Black S-LDX

Suncid NF

Suncid Brill. Yellow NF

Suncid Red NF-2B

Suncid G/Yellow NF

Suncid Red NF-3B

Suncid Scarlet NF

Suncid Royal Blue NF

Suncid Brill. Red NF

Sunset PA

Sunset Yellow PA

Sunset Blue PA

Sunset Red PA

POSITIVE *list*

| Sunset | |
|--------------------------|--------------------|
| Sunset Yellow 4GN | Sunset Green B |
| Sunset Yellow 2R | Sunset Navy Blue R |
| Sunset Red 2B | Sunset Grey G |
| Sunset Red G | Sunset Black HWF |
| Sunset Bordeaux B | Sunset Black EWF |
| Sunset Blue 2R | Sunset Black BWF |
| Sunset Turquoise Blue 5G | Sunset Black AWF |