

Positive product list **ZDHC**

Golden Issue: July 2020 based on ZDHC
version 1.1, December 2015

In 2011, a group of major apparel and footwear brands and retailers made a shared commitment to help lead the industry towards zero discharge of hazardous chemicals by 2020.

As a part of the commitment and first steps towards ZDHC, the group of brands published a Joint Roadmap in November 2011. The document demonstrates the group's collaborative efforts in leading the apparel and footwear industry towards ZDHC (Zero Discharge of Hazardous Chemicals) for all products across all pathways by 2020.

The Joint Roadmap is highly ambitious; It is a plan that sets a new standard of environmental performance for the global apparel and footwear industry. It includes specific commitments and timelines to realize this shared goal.

The current Signatory Members welcome additional members and look forward to continuing to receive the support from all stakeholders and constituencies as needed for the Joint Roadmap to be successful. Signatories of the Joint Roadmap are the owners and managers of it.

Ensuring transparency, the group of brands will report regularly and publicly the progress of Joint Roadmap timeline (annually from 2013-2020). Additional information and news coming from the activities under this ZDHC Programme will also be communicated through this website: <http://www.roadmaptozero.com>

Golden Technology is committed to produce any unnecessary environmental damage in the textile industry, people and the communities that surround it.

To support the goal "Towards Zero" in the discharge of hazardous chemicals, Golden Technology has developed a list of dyes and chemicals that do not contain any of these priority groups of chemicals, and therefore can be used to provide textiles for companies that follow this orientation.

The 11 priority groups of chemicals are:

- APEOs / NPEOs
- Azo dyes ^[1]
- Brominated and chlorinated flame retardants
- Chlorinated solvents
- Chlorobenzenes
- Chlorophenols
- Heavy metals [cadmium, lead, mercury, chromium (VI)]
- Organotin compounds, e.g. TBT (tributyltin)
- Phthalates (ortho-phthalates)
- Perfluorinated chemicals (PFCs)
- Short-chained chlorinated paraffins (SCCP)

^[1] Those Azo dyes that may release carcinogenic amines as defined in Annex XVII of REACH



For oil, water and stain repellent finishing products, under trade name GOLDGUARD, these products contain perfluorinated chemicals as active ingredients.

Our products based on fluorochemicals contained in this list do not use or are made with PFOA in the manufacturing process. However, PFOA is an involuntary sub-product reaction which is present in low concentrations in some of these products. As part of our overall commitment to product management, since 2012, Golden Technology is sells these products and removes traces of PFOA and PFOA direct precursors in our products.

Our objective is to have only textile products that presents PFOA contents below LOQ (limit of quantification), which is defined as 2 ppm (Parts per Million) according to a peer-reviewed, published method [The Journal of Chromatographic Science - JCS 2006, 110 (1-2), 117-124)].

Our GOLDGUARD products listed in this document are based on shortchain chemistry that cannot break down the PFOA and provide a step-change reduction in trace impurities below the limit of detection.

We also have GOLDGUARD additives line 100% free of FC (fluorocarbons), such as: GOLDGUARD BOOSTER.

AUXILIARIES	
GOCLEAN SYN	GODYE PA ONE
GODYE PA TWO	GODYE PA ZERO
GOLDACID SACA CONC.	GOLDCLEAR CH-EA
GOLDCOM INP	GOLDCOM TA
GOCONTROL AK	GOLDFAST CLP
GOLDFINISH AF	GOLDFINISH IMP
GOLDFIX DI CONC.	GOLDGEN ABP
GOLDGEN PA	GOLDGEN PES
GOLDGEN PES CONC.	GOLDGEN RM
GOLDLUB AQS	GOLDLUB AR EA
GOLDLUB FI 50%	GOLDLUB LM
GOLDMUL BV	GOLDPAL BSJ
GOLDPAL CO EA	GOLDPAL DE EA
GOLDPAL ESL	GOLDPAL LUB
GOLDPAL NRA	GOLDPAL TMZ
GOLDPAL TQE M	GOLDPRET DS
GOLDPUR RXF	GOLDRED EKO
GOLDSOFT CLN	GOLDSOFT CNI
GOLDSOFT COB	GOLDSOFT CP
GOLDSOFT HH	GOLDSOFT HID
GOLDSOFT MIC	GOLDSOFT NSC
GOLDSOFT WB	GOLDSPERSE CM-EA
GOLDSPERSE MCF	GOLDSPERSE NG
GOLDSPERSE UG	GOLDSTAB OX
GOLDWASH EC	GOLDWASH HR
GOLDWET AOL	GOLDWET RB
GOLDZIMA BPC	GOLDZIMA DAS

PRINTING	
AMARELO OCTAMINE FT-N5K	AMARELO OCTAMINE FT-R
AZUL OCTAMINE FT-C2H	AZUL OCTAMINE FT-SNGA
GOLDCRYL ECP	GOLDCRYL GLP
GOLDPRINT BRJ	GOLDPRINT NY
GOLDPRINT WET	LARANJA OCTAMINE FT-GG
MARINHO OCTAMINE FT-DKPN	NAT TAM
VERDE OCTAMINE FT-M2C	VERMELHO OCTAMINE FT-CAPS
VERMELHO OCTAMINE FT-JPCK	VERMELHO OCTAMINE FT-Z5K
VERMELHO VIOLETA OCTAMINE FT-J4F	VIOLETA OCTAMINE FT-H4K

DYESTUFF	
AMARELO BG-4G	AMARELO BG-R CONC
AMARELO BRILHANTE GOLDFLASH N 50/50	AMARELO CATIONICO GL EC 250%
AMARELO CATIONICO X-GL	AMARELO FLUORESCENTE CATIONICO 10GFF 300%
AMARELO GOLDFLASH N 50/50	AZUL BG-2G
AZUL BG-R CONC	AZUL CATIONICO GR 250%
AZUL CATIONICO X-GRL	AZUL DC-2G
AZUL R GOLDFLASH N 50/50	AZUL TURQUESA BG-SG CONC
CRIMSON DC-R	LARANJA BG-2R
MARINHO BG-SB	MARINHO CATIONICO RN 250%
OURO GOLDFLASH N 50/50	PRETO BG-WN
PRETO CATIONICO NS	PRETO GOLDFLASH AL 35
PRETO INTENSO 2R	RUBI GOLDFLASH AL 50/50
SUPER BLACK PRINT CEL-R	TURQUESA GOLDFLASH N 50/50
TURQUESA GOLDFLASH N 67/33	VERMELHO BG-3B
VERMELHO CATIONICO GRL 250%	VERMELHO CATIONICO X-GRL
VERMELHO FLUORESCENTE CATIONICO X-SGN 250%	

OPTICAL BRIGHTENERS

GOBLANC BMAE	GOBLANC BMVE
GOBLANC ENG2B	GOBLANC ENG2V
GOLDBLANC BHA	GOLDBLANC BHB
GOLDBLANC BHV	GOLDBLANC PABX
GOLDBLANC PAVX	GOWHITE PRO

TEXTILE EFFECTS

GOCOAT NI	GOFASTDRY PES
GOLDEN EASY CARE HFF	GOLDGUARD BOOSTER
MIKRACAT B	MIKRAFIX
R-ESCENTIAL 260 LOVELY LAVENDER	

CONTINUOUS PROCESSES

ICHO BORDEAUX GP	ICHO ORANGE RD MQ
ICHO RED 3GL	ICHOTHOL AS-CA20

GARMENT WASH

NEW FIX-VI	NEWCo. 1540
NEWCo. 1793	NEWCo. 1983
NEWCo. 2040	NEWCo. 3DD
NEWCo. ACG	NEWCo. DET
NEWCo. DET-03	NEWCo. ESP
NEWCo. LUB	NEWCo. OIL
NEWCo. PCC K	NEWCo. PO 05
NEWCo. POWDER MZ	NEWCo. SN
NEWCo. SOFT PLUS	NEWCo. T-45