

RUDOLF GmbH - commitment to the Zero Discharge of Hazardous Chemicals Manufacturing Restricted Substances List - Edition 3

In the Zero Discharge of Hazardous Chemicals (ZDHC) Joint Roadmap, Version 2, ZDHC member brands are committed to define and develop a Manufacturing Restricted Substances List (MRSL) for the apparel and footwear industry. The ZDHC 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.

The ZDHC MRSL is a list of chemical substances subject to a usage ban, meaning that the MRSL-listed chemical substance or group of substances may not be used to achieve a desired function or effect during production of the raw material or product (that is, no intentional use). Due to the existence of manufacturing impurities in chemical formulations, a minor or trace amount of the restricted substance is permitted within defined concentration limits. Chemical formulations containing restricted substances that exceed these limits are not compliant with the MRSL.

Restricted substances and groups of substances according to MRSL of ZDHC (details on chemicals and individual limits see MRSL) are:

- Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs)
- Chlorobenzenes & Chlorotoluenes
- Chlorophenols
- Dyes – Azo (Forming Restricted Amines) ¹⁾
- Dyes – Navy Blue Colorant
- Dyes – Carcinogenic or Equivalent Concern
- Dyes – Disperse (Sensitizing) ¹⁾
- Flame Retardants ¹⁾
- Glycols ¹⁾
- Halogenated Solvents
- Organotin Compounds
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Perfluorinated and Polyfluorinated Chemicals (PFCs) ¹⁾
- Phthalates – including all other esters of ortho-phthalic acid
- Total Heavy Metals
- Volatile Organic Compounds (VOC) ¹⁾

Please be advised that, based on the information available to us from our raw material suppliers, the current products offered in the product lines listed below do not contain any of the substances or group of substances (i) as intentionally added raw materials or (ii) as impurities above the limit specified in the MRSL of ZDHC Programm, current version:

- **MRSL V1.1 (published 9th December, 2015) ²⁾**
 ➤ **Chapter 1: MRSL for Textiles and Synthetic Leather Processing.**

To the best of our knowledge, none of these substances are intentionally generated during production. This confirmation is only valid for the above mentioned MRSL version and will expire when amended by **RUDOLF GmbH**.

The information given in this confirmation is based on our current knowledge on the date of issue of this document. It contains information which complements our Material Safety Data Sheets (MSDS) and Technical Data Sheets (TDS). However, as fields of application and/or conditions of use cannot be respected in this document, the users of our products should carefully check the information given in our MSDS and TDS and/or carry out tests for themselves in order to ensure the compliance with any legal requirements and/or specific requirements of any Restricted Substance List (RSL) of a Brand.

For any questions concerning the products listed below or any further product information needed, please contact:

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*This list contains only selected products from **RUDOLF GmbH**'s product range. Please do not hesitate to contact us in order to check the individual compliance status of any unlisted product of our product range.*

1) the current MRSL restricts only individual substances and not the whole substance group
 2) <http://www.roadmaptozero.com/programme-documents.php>

1. 前处理部分 / Pretreatment

1.1 渗透剂 / Wetting agents

RUCOWET	RDA
RUCOWET	RDX
RUCOWET	RFF
RUCOWET	RKB
RUCOWET	RMC
RUCOWET	RN
RUCOWET	RSS
RUCOWET	VH
RUCOWET	WS

1.2 精练/洗涤剂 / Washing agents

RUCOGEN	BFA 200
RUCOGEN	CD
RUCOGEN	DEC
RUCOGEN	DEJ 220
RUCOGEN	DFL
RUCOGEN	DFL 200
RUCOGEN	ESC
RUCOGEN	FBL
RUCOGEN	FWK
RUCOGEN	FWS
RUCOGEN	GRA
RUCOGEN	NED
RUCOGEN	REG
RUCOGEN	SFW
RUCOGEN	SFW-B
RUCOGEN	WBL
RUCOGEN	WBX
RUCOGEN	WKT
RUCOGEN	WKV
RUCOSAL	MD

1.3 酶 / Enzyme-containing products

RUCOLASE	CGO
RUCOLASE	CME
RUCOLASE	HCH
RUCOLASE	HCX
RUCOLASE	JEK
RUCOLASE	KAT
RUCOLASE	KGO
RUCOLASE	NTH
RUCOLASE	ZGO
RUCOLASE	ZLA
RUCOLASE	ZLI
RUCOLASE	ZLL
RUCOLASE	ZLN
RUCOLASE	ZSS

1.4 氧漂稳定剂 / Bleaching stabilisers

RUCO-FLOW	AIL
RUCO-FLOW	AIM
RUCO-FLOW	AIO
RUCO-STAB	CLS
RUCO-STAB	FWO
RUCO-STAB	LGE
RUCO-STAB	LGL
RUCO-STAB	OKE
RUCO-STAB	OKK
RUCO-STAB	OKM
RUCO-STAB	OKW

1.5 螯合分散剂 / Complexing agents, sequestering agents

VEROLAN	FEX
VEROLAN	NBA
VEROLAN	NBH 150
VEROLAN	NBO
VEROLAN	NBO 150
VEROLAN	NBX
VEROLAN	NEC
VEROLAN	NEW
VEROLAN	NFE

1.6 荧光增白剂 / Optical brighteners

RUCO-BLANC	ABH
RUCO-BLANC	ADA
RUCO-BLANC	ADE
RUCO-BLANC	ADS
RUCO-BLANC	AMA
RUCO-BLANC	AMR
RUCO-BLANC	ANF
RUCO-BLANC	OAB
RUCO-BLANC	OBI
RUCO-BLANC	OBL
RUCO-BLANC	OCL
RUCO-BLANC	OLF
RUCO-BLANC	OLT

1.7 还原剂 / Reducing agents

RUCORIT	RAL
RUCORIT	RAZ
RUCORIT	RGH
RUCORIT	RSL

2. 染色部分 / Dyeing

2.1 浴中防皱剂 / Running crease inhibitors

RUCOLIN	CS
RUCOLIN	JES
RUCOLIN	JET
RUCOLIN	MDA
RUCOLIN	MDX
RUCOLIN	MPE
RUCOLIN	MPN
RUCOLIN	PED
RUCOLIN	RCK
RUCOLIN	RCP
RUCOLIN	RSK
RUCOLIN	RSO
RUCOLIN	RUN

2.2 匀染剂 / Levelling agents

RUCOGAL	ACD
RUCOGAL	ENE
RUCOGAL	ERB
RUCOGAL	ERL
RUCOGAL	ERQ
RUCOGAL	ERT
RUCOGAL	IPN
RUCOGAL	PA
RUCOGAL	PAA
RUCOGAL	PAB 300
RUCOGAL	PAP
RUCOGAL	PAT
RUCOGAL	PAU

RUCOGAL	PDI
RUCOGAL	POS
RUCOGAL	PVI
RUCOGAL	RF LIQUID
RUCOGAL	RLC
RUCOGAL	SUR

2.3 分散剂 / Dispersing agents

RUCO-TEX	AKN
RUCO-TEX	KDI
RUCO-TEX	KST 150
RUCO-TEX	NKS 150
RUCO-TEX	OGS
RUCO-TEX	OGX

2.4 中和酸, 释酸剂 / Acid buffers, acid donors

RUCO-ACID	ABS
RUCO-ACID	ABS 200
RUCO-ACID	BSA
RUCO-ACID	BSF
RUCO-ACID	CSS
RUCO-ACID	GBS
RUCO-ACID	NYL

2.5 中和碱, 释碱剂 / Alkali buffers / alkali donors

RUCO-FLOW	ALX
RUCO-FLOW	CPB

2.6 消泡剂 / Deaerating agents, defoamers

RUSTOL	ACA
RUSTOL	ARC
RUSTOL	ARO
RUSTOL	ASA
RUSTOL	ASN
RUSTOL	DEA
RUSTOL	ESD
RUSTOL	ESF
RUSTOL	ESS
RUSTOL	NDC
RUSTOL	NIE
RUCOLAN	IVS
RUCOLAN	NOD
RUCOLAN	NOP
RUCOLAN	PTC
RUCOLAN	VGA
RUCOLAN	VGI
RUCOLAN	VGI-PLUS
RUCOLAN	WSH

2.7 还原剂和氧化剂 / Reducing, oxidising agents

RUCORIT	GOX
RUCORIT	RAL
RUCORIT	RAZ
RUCORIT	RGH
RUCORIT	RSL
RUCORIT	VBW

2.8 皂洗剂 / Aftersoaping agents

RUCOGEN	NZA
RUCOGEN	SOC
RUCOGEN	SOP

RUCOGEN SOP 200

2.9 固色剂 / Aftertreating agents

HYDROCOL	APK
HYDROCOL	APR
HYDROCOL	KAE
HYDROCOL	KAN
HYDROCOL	KNI
HYDROCOL	ONE
HYDROCOL	SCL
HYDROCOL	SID
HYDROCOL	SIX
HYDROCOL	SUN
HYDROCOL	SUN 200
HYDROCOL	SVN

2.10 相转化催化剂/清缸剂 / Phase transfer catalysts

RUCO-TEX	MU
RUCO-TEX	MUS
RUCO-TEX	MUS-S

2.11 多功能整理剂 / Miscellaneous

HYDROCOL	RPW
HYDROCOL	RVD
HYDROCOL	WRF
RUCO-CLEANER	MS
RUCOLIN	NOM
RUCO-TEX	WRP

3. 数码印花部分 / Digital printing

3.1 喷墨印花前处理 / Ink-jet, print pretreatment

RUCO-PRINT	DDE
RUCO-PRINT	DOS
RUCO-PRINT	PHS
RUCO-PRINT	PMI
RUCO-PRINT	PMT
RUCO-PRINT	PMP
RUCO-PRINT	PMW
RUCO-PRINT	PRP
RUCO-PRINT	PRV
RUCO-PRINT	PWG

4. 后整理部分 / Finishing

4.1 纱线/缝纫线润滑剂 / Yarn or sewing thread lubricants

RUCO-FIL	ASG
RUCO-FIL	ASP
RUCO-FIL	AWG
RUCO-FIL	AWI
RUCO-FIL	AWM
RUCO-FIL	AWU
RUCO-FIL	CPW
RUCO-FIL	CPW-E
RUCO-FIL	NPH
RUCO-FIL	SAT
RUCO-FIL	SAW
RUCO-FIL	SCA
RUCO-FIL	SCE
RUCO-FIL	SCI
RUCO-FIL	SCW

RUCO-FIL	SDF6
RUCO-FIL	SHC
RUCO-FIL	SHP
RUCO-FIL	SHQ
RUCO-FIL	SLE
RUCO-FIL	SLV
RUCO-FIL	SNA
RUCO-FIL	SNL
RUCO-FIL	SNV
RUCO-FIL	WAX

4.2 柔软剂 (软片) / Softening agents

PERRUSTOL	AST
PERRUSTOL	CCA
PERRUSTOL	CCA 500
PERRUSTOL	CCF
PERRUSTOL	DE
PERRUSTOL	HIS
PERRUSTOL	IPS 500 NEW
PERRUSTOL	IPS NEW
PERRUSTOL	MMU NEW
PERRUSTOL	RPP
PERRUSTOL	TIC 500
PERRUSTOL	TIP NEW
PERRUSTOL	TIP 500 NEW
PERRUSTOL	TOP NEW
PERRUSTOL	TOP 500 NEW
PERRUSTOL	ULN
PERRUSTOL	VNO 500 NEW
PERRUSTOL	VNO NEW
PERRUSTOL	WDD NEW
PERRUSTOL	HNS NEW

4.3 硅油柔软剂 / Silicone softeners

RUCOFIN	AVO NEW
RUCOFIN	GAA
RUCOFIN	GAA CONC
RUCOFIN	GES
RUCOFIN	GES-D NEW
RUCOFIN	GN
RUCOFIN	GNH
RUCOFIN	GSA NEW
RUCOFIN	GSP
RUCOFIN	GSP 200
RUCOFIN	GSQ
RUCOFIN	GSQ 200
RUCOFIN	GTS
RUCOFIN	GWA
RUCOFIN	GWB
RUCOFIN	GWB 200
RUCOFIN	GWE
RUCOFIN	GWG
RUCOFIN	GWM
RUCOFIN	GWN
RUCOFIN	GWS
RUCOFIN	GWT
RUCOFIN	HHM
RUCOFIN	HHS
RUCOFIN	HHS 200
RUCOFIN	HSF
RUCOFIN	HSV NEW
RUCOFIN	LAN NEW
RUCOFIN	MAX
RUCOFIN	MAX 200
RUCOFIN	MIN
RUCOFIN	MIQ

RUCOFIN	MIQ 50
RUCOFIN	MWS
RUCOFIN	PSE
RUCOFIN	PSO
RUCOFIN	RCD
RUCOFIN	RMW
RUCOFIN	SIQ
RUCOFIN	SIQ 230
RUCOFIN	SQS
RUCOFIN	SWE
RUCOFIN	SWS
RUCOFIN	SWT
RUCOFIN	WSE NEW

4.4 缝纫性提高剂 / Sewability-improving agents

RUCO-LUB	KKS
RUCO-LUB	KMA 400
RUCO-LUB	KMK 400
RUCO-LUB	KMN 400
RUCO-LUB	KMN 600
RUCO-LUB	KPM
RUCO-LUB	KPM 400
RUCO-LUB	KMN 600
RUCO-LUB	KSA
RUCO-LUB	KSV
RUCO-LUB	KSW
RUCO-LUB	RSP

4.5 特殊整理剂 / Special products

FERAN	GU
RUCO-PUR	DAF
RUCO-PUR	FNH
RUCO-PUR	FNS
RUCO-PUR	FPU
RUCO-PUR	SEC
RUCO-PUR	SLK
RUCO-PUR	SLR
RUCO-PUR	SLY
RUCO-PUR	SPH
RUCO-SHIELD	RAY

4.6 硬挺剂 / Filling and stiffening agents

RUCO-PLAST	BO
RUCO-PLAST	HH
RUCO-PLAST	HLS
RUCO-PLAST	HPL
RUCO-PLAST	KLH
RUCO-PLAST	PCA
RUCO-PLAST	PNT
RUCO-PLAST	PSM
RUCO-PLAST	PS-NET
RUCO-PLAST	PSP
RUCO-PLAST	PVR

4.7 树脂整理剂 / Resin finishing agents, catalysts

RUCON	FAN
RUCON	FAS
RUCON	FND
RUCON	FNF
RUCO-CAT	MCC

4.8 防滑移剂 / Anti-slip agents

FERAN	SSF CONC
FERAN	SSG CONC

4.9 防水剂 / Water-repellent agents

RUCO-DRY	DFE
RUCO-DRY	DFY
RUCO-DRY	DHE
RUCO-DRY	DHY
RUCO-DRY	ECO
RUCO-DRY	ECO PLUS
RUCO-PHOB	PZN CONC

4.10 三防整理剂 / FC water, oil and soil repellents

RUCO-GUARD	AFB6 CONC
RUCO-GUARD	AFC6
RUCO-GUARD	AFH6
RUCO-GUARD	AFR6
RUCO-GUARD	AFS6
RUCO-GUARD	AFT6
RUCO-GUARD	AFU6
RUCO-GUARD	AFW6 CONC
RUCO-GUARD	AIR6
RUCO-GUARD	CAN6
RUCO-GUARD	UCS6
RUCOSTAR	DDD6
RUCOSTAR	EEE6
RUCOSTAR	EEN6
RUCOSTAR	EEW6

4.11 交联剂 / Boosters

RUCO-LINK	WEB
RUCO-LINK	XCR
RUCO-LINK	NET
RUCO-LINK	TIE
RUCO-LINK	BEW
RUCO-LINK	EPV 3184
RUCO-LINK	RCX

4.12 易去污整理剂 / Soil release products

FERAN	ASR
RUCO-GUARD	USR6

4.13 吸湿快干整理剂 / Hydrophilic finishing agents

FERAN	ASR
FERAN	ICA
FERAN	ICE
FERAN	ICP
FERAN	ICS
RUCO-PUR	SEC
RUCO-PUR	SLY
RUCO-PUR	SPH

4.14 阻燃剂 / Flame retardants

RUCO-FLAM	NAF
RUCO-FLAM	NMP
RUCO-FLAM	NMT
RUCO-FLAM	NPK

RUCO-FLAM	NSC
RUCO-FLAM	NUV
RUCO-FLAM	PCE
RUCO-FLAM	PCE-E
RUCO-FLAM	PSY-E
RUCO-FLAM	SCO

4.15 抗菌防霉剂 / Bacteriocides, Fungicides

RUCO-BAC	AGL
RUCO-BAC	AGP
RUCO-BAC	EPA
RUCO-BAC	EPA CONC
RUCO-BAC	HSA CONC
RUCO-BAC	ZPY

4.16 抗静电剂 / Antistatic agents

RUCO-STAT	ADM
RUCO-STAT	APF
RUCO-STAT	APT
RUCO-STAT	APW
RUCO-STAT	ASY
RUCO-STAT	AVF
RUCO-STAT	AWR
RUCO-STAT	FDA

4.17 渗透剂 / Wetting agents

RUCOWET	FIN CONC
RUCOWET	FN
RUCOWET	FRW

4.18 多功能整理剂 / Miscellaneous

FERAN	JCW
RUCO-TEX	NKS 150

5. 涂层部分 / Coating

5.1 聚氨酯 / Polyurethanes

RUCO-COAT	EC 2811
RUCO-COAT	EC 4811
RUCO-COAT	PU 1110
RUCO-COAT	PU 1330
RUCO-COAT	PU 3511
RUCO-COAT	PU 3710
RUCO-COAT	PU 8511
RUCO-COAT	PU 8551
RUCO-COAT	PU 8610

5.2 聚丙烯酸等 / Acrylates and other Polymerdispersions

RUCO-COAT	AC 1010
RUCO-COAT	AC 2510
RUCO-COAT	AC 8120
RUCO-COAT	AS 8310
RUCO-COAT	SI 2621
RUCO-COAT	VA 3210

5.3 防水剂 / Repellent agents

RUCO-COAT	BC 6040
RUCO-COAT	BC 6041
RUCO-COAT	BC 7060
RUCO-COAT	BC 7061
RUCO-COAT	FC 6000
RUCO-COAT	FC 6005
RUCO-COAT	FC 6020

RUCO-COAT	FC 6025
RUCO-COAT	FC 6035
RUCO-COAT	FC 6105

5.4 交联剂 / Crosslinking agents

RUCO-COAT	FX 8011
RUCO-COAT	FX 8021
RUCO-COAT	FX 8031
RUCO-COAT	FX 8041

5.5 辅助添加剂 / Additives

RUCO-COAT	AD 7005
RUCO-COAT	AD 7021
RUCO-COAT	AD 7030
RUCO-COAT	AD 7050
RUCO-COAT	AD 7070
RUCO-COAT	AD 7080
RUCO-COAT	AD 7090
RUCO-COAT	AD 7100

5.6 增稠剂 / Thickeners

RUCO-COAT	TH 5000
RUCO-COAT	TH 5005
RUCO-COAT	TH 5010
RUCO-COAT	TH 5020

5.7 发泡剂/稳泡剂 / Foaming agents / foam stabilisers

RUCO-COAT	FO 2000
RUCO-COAT	FO 4000
RUCO-COAT	FO 4010

5.8 消泡剂 / Defoamers

RUCO-COAT	DA 3500
RUCO-COAT	DA 3600

5.9 阻燃剂 / Flame retardants

RUCO-COAT	FR 2200
RUCO-COAT	FR 2250

5.10 其它 / Compounds

RUCO-COAT	DOT
RUCO-COAT	BOS
RUCO-COAT	FAT
RUCO-COAT	ROC NEW
RUCO-COAT	TCC