

ECO GUARANTEE

Buying terms regarding chemical/compound content in Textile Products for
INDISKA MAGASINET AB

- In accordance with the buying policy of Indiska Magasinet AB as well as Swedish and European legislations, we
.....
....., (supplier's name) hereby guarantee not to exceed the limit specified for any of enclosed listed chemical/compound in textile orders for Indiska Magasinet AB.
- It is the responsibility of me as exporter to inform any subcontractor, dyeing mill, painter or other party involved in the production.
- I am aware that Indiska reserves the right to perform inspections and tests of ordered goods at any stage of production/delivery and that limits exceeded can cause cancellation or claim for compensation.
- We have taken part of enclosed Guide to Eco Guarantee for valuable and essential information to be able to fulfil this commitment.

Place:

.....

Date:

.....



Supplier's name:

Sign:

.....

CHEMICAL/COMPOUND	LIMIT	PROCESS
A. AROMATIC AMINES (arylamines) See below list of 20	0 as additive	Dying. Ingredient in dye stuff.
B. PENTACHLOROPHENOL (PCP)	0 as additive	Antimould. Preservative ingredient in sizing mix, print paste, etc.
C. CHLOROORGANIC COMPOUNDS	0 as additive	Solvents, stain removers, cleaning agent, scouring assistance, finishing agent
D. ORGANIC SOLVENTS	Max 5%(w/w) con-centration of chroma-tic hydrocarbon in the organic solvent	Solvent in dyeing/printing
E. FORMALDEHYDE Childrens innerwear, adults innerwear, outerwear/other textile	30 ppm 100 ppm 300 ppm	(Inner = skin contact) Dye fixing agent, preservation, pre- shrink, easy-care
F. SALTS OF HEAVY METALS Cadmium (Cd) Chromium VI (Cr+6) Chromium III (Cr+3) Mercury (?) Lead (?) Arsenic (?) Cobalt (?) Copper (?) Nickel (Ni) Nickel Accessories (Ni)	0 0 2 ppm 0,02 ppm 1 ppm 1 ppm 4 ppm 50 ppm 4 ppm 0,5 microgms/cm ² & week	Colour agent Dye fixing. Dying additive Dyes/after treatment Dyes Dyes Print paste Dyes Dyes/after treatment Dyes Zips/buttons
G. FREE PESTICIDES	0	Crop and harvest
H. PH	4,0 - 8,0 ph	Various (bleaching, caustic wash, etc)
I. PACKING MATERIAL Only POLYETHEN bags/material (re-cyclable)		

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Preferably RECYCLED PAPER in cartons etc.
 General ambition to REDUCE VASTE VOLYME, balance, packing
 material

List of 20 banned Aromatic Amines:

MAK-Class III A1	CAS No		
4-Aminodiphenyl	92-67-1	3,3'-Dimethoxybenzidine	119-90-4
Benzidine	92-87-5	3,3'-Dimethylbenzidine	119-93-7
4-Chloro-o-toluidine	95-69-2	3,3'-Dimethyl-4,4'-diamino-	
2-Naphtylamine	91-59-8	diphenylmethane	838-88-0
		p-Cresidine	120-71-8
MAK-Class III A2		4,4'-Methylene-bis(2-	
chloroaniline)	101-14-4		
o-Aminoazotoluene	97-56-3	4,4'-Oxydianiline	101-80-4
2-Amino-4-nitrotoluene		99-55-8	4,4'-
Thiodianiline	139-65-1		
4-Chloroaniline	106-47-8	o-Toluidine	95-53-4
2,4-Diaminoanisole	615-05-4	2,4-Diaminotoluene	95-80-7
4,4'-Diaminodiphenyl-		2,4,5-Trimethylaniline	137-17-7
methane	101-77-9		
3,3'-Dichlorobenzidine	91-94-1		

GUIDE

to the ECO GUARANTEE and Buying Terms
 for chemical content in TEXTILE
 PRODUCTS

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Enclosure 1 - List of 20 banned aromatic amines

Enclosure 2 - Indicative list of prohibited dye stuff

PREFACE

This GUIDE is designed to give associated producers and traders of Indiska essential and 'non expert' information on how to fulfill the ECO GUARANTEE and Buying Terms for chemical content in TEXTILE PRODUCTS.

The GUIDE is supposed to be distributed and read by responsible members of your staff as well as involved subcontractors, dying mills, printheuses, etc.

Further information is available from our consultant, Dr. W.B. Achwal, through our Mumbai Office, India, fax no. +91-22 836 50 81.

The GUIDE mentions, besides characteristics of the chemicals/compounds concerned, also the process involved, recommendations of alternatives, if any, legal background, test methods, etc.

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The testing methods and detection limits described are widely recognized and the terms were recently distributed to all members of the Swedish Textile Importers organization as a recommendation, partly initiated by Indiska Magasinet AB.

AROMATIC AMINES

(Akrylamines)

20 listed in Enclosure 1*Limit:*

Not allowed as additive (o)

Characteristics:

Carcinogenic. Arylamines can be part of the molecular structure of a dye.
Certain AZO dyes might split and thereby create an arylamine.
Any AZO dye that can split (release) under test conditions and form one of the 20 listed amines is banned.

Process:

Dyeing. Ingredient in dyestuff, mostly direct or acid dyes.

Remarks:

Dyes potentially releasing any of the 20 aromatic amines shall be excluded. See Enclosure 2 for an indicative list of the dyes to be excluded. All well-recognized dyestuff manufacturers have relevant up-to-date information available on prohibited dyestuffs. Regulation does not cover pigment.

Legal background:

Banned in Germany by §35 of the Foodstuff and Commodities Act (LMBG).

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It is expected that the German law will be transformed into a EU directive (EU legislation) in due course.

Test method: 'Vorläufige Methode zum Nachweis der Verwendung verbotener Azofarbstoffe auf gefärbten Textilien Gegenständen'.

Test equipment I: Gaschromatography-Mass selective detector (GC-MS).

Test performance, level I: Below detection limit. Detection limit = 30 ppm.

Test method II: Thin-layer chromatography.

Test performance, level II: Qualitative indication only = no presence.

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PENTACHLORPHENOL (PCP)

<i>Limit:</i>	Not allowed as additive (o).
<i>Characteristics:</i>	Organic compound. Toxic and hazardous to the environment. The combustion of PCP release dioxins which are extremely poisonous also for human beings.
<i>Process:</i>	Antimould treatment for storing and transporting goods, etc. Preservative ingredient in sizing mixes. Ingredient in print-paste gum (thickener).
<i>Remarks:</i>	Alternative products are available or in the course of development for all types of applications. Alternatives: for example 4-tert-amylphenol, o-fenylphenol, 4-nitrofenol. For example the following chemicals are not appropriate alternatives: Sodium silicofluoride, tetrachlorphenol, trichlorphenol.
<i>Legal background:</i>	Banned in Sweden and several other countries.
<i>Test equipment:</i>	Gaschromatography-Mass selective detector (GC-MS).
<i>Test performance level:</i>	Below detection limit. Detection limit 5 ppm.

CHLORORGANIC COMPOUNDS

<i>Limit:</i>	Not allowed as additive (0).
<i>Characteristics:</i>	Liquid or gas. Affects the nervous system. Irritating effects on skin and mucous membranes.
<i>Process:</i>	Solvents för fats and oils, e.g. in stain removers. Also used as cleaning agent/detergent. Solvents

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in lubricating oils, e.g. for
scouring assistance. Solvents in
dyeing and printing for synthetic
fibres. Finishing agent. Flame
retardent. Plasticiser.

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<i>Remarks:</i>	Alternative products are available or under development for all types of applications. Alternative: for example carbonic acid-ester mixtures or aromatic hydrocarbons.
<i>Recommendation concerning flame retardents:</i>	Replace chloroorganic and bromoorganic flame retardents with phosphorous and/or nitrogen organic flame retardents.
<i>Legal background:</i>	General legal restrictions stipulating producer (supplier) responsibility for the products. Banned in several EU-countries.
<i>Test equipment:</i>	Gaschromatography-Mass selective detector (GC-MS).
<i>Test performance level:</i>	Below detection limit. No international detection limit yet determined.

ORGANIC SOLVENTS

<i>Limit:</i>	Maximum 5% (w/w) concentration of aromatic hydrocarbon in the organic solvent.
<i>Characteristics:</i>	Liquid or gas. Inhalation can affect the nervous system and cause headaches, fatigue and nausea. Irritating effects on skin, eyes and mucous membranes. Kerosene or diesel odour in finished products, especially during wash.
<i>Process:</i>	Solvent in dyeing and printing processes.
<i>Remarks:</i>	These solvents are often known as kerosene or white spirit. Use better quality solvents with less aromatic hydrocarbon, or synthetic thickeners based on polycarboxylic acids. Replace simple aromatic hydrocarbons with low molecule weight aliphatic hydrocarbons.

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Recommendations concerning organic solvents: To avoid problems with organic solvents a shift to water-based dyeing and printing process is recommended

Legal background: Legal hygienic limits for workers in many countries.

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Test method: Panel odour test. (Test only between stages of production).

Test performance level: Below detection limit. No odour.

FORMALDEHYDE

Limits: 30 ppm for textile articles and textile toys for children under 2 years of age.

100 ppm for all textile articles which in normal use are in direct contact with the skin and textile toys for children under 2 years or older.

300 ppm for all other textile articles.

Characteristics: Volatile colourless gas. In small volumes naturally present in atmosphere and nature. Formaldehyde can cause skin irritation and allergy.

Process: Pre-shrinkage. Easy-care finishing. Dye-fixing agent. Preservation compound.

Remarks: Use products which are free from formaldehyde or products with low formaldehyde content. Due to volatility, formaldehyde is 'contagious'. If one garment with formaldehyde is placed on top of a garment which does not contain formaldehyde, the latter garment will become 'infected'. Fabric samples for testing must be packed separately in plastic bags (PE, polyethylene or PP, polypropylene).

Legal background: The regulation is based on Japanese and Finnish legislations. Limits are based on the text of the Finnish Act.
EU legislation expected.

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Test method: Harmful Substance Containing Household Products Control Las No. 112 (Japan).

Reagent: Acetylaceton

Test performance level: See limits above.

SALTS OF HEAVY METALS

CADMIUM (Cd)

Limit: Not allowed as additive (0).

Characteristics: Heavy metal in small volumes naturally present in nature. Toxic. Non biodegradable. Can cause kidney damage and pulmonary emphysema.

Process: Surface treatment of non-textiles. In dyes as colouring agent. Often used as stabilizer in plastics (zippers and buttons).

Remarks: Alternative are available. Order cadmium-free process/property.

Legal background: Banned by law in Sweden. EU legislation expected.

Test method: Atomic Absorbtion Spectrophotometry (AAS).

CHROME VI (Cr+6)

Limit: Not allowed as additive (0).

Characteristics: Heavy metal. Non biodegradable. Carcinogenic. Highly allergic. Poisonous.

Process: Dyeing additives. Dye-fixing agent. Used for after-treatment of direct dyes to improve washing fastness. Potassium dichromate is used for

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oxidation of vat/sulphur dyes.
Chromium salts are used for
pre/after treatment of acid dyes on
silk and wool, etc.

Remarks: Alternatives are available. Use
faster direct dyes or no/low
formaldehyde dye-fixing agents to
avoid use of chromium salts. Use
hydrogen peroxide and other
persalts to avoid use of potassium
dichromate. Use fast acid dyes to
avoid chromium salts for pre/after
treatment of acid dyes on silk and
wool. As mordant for natural dyes
replace chromium salt with
aluminium salts.

Legal background: Banned by law in Sweden. EU
legislation expected.

Test method: UV-VIS-Spectrophotometry. (Method
based on ISO/DIS 11083).

Test performance level: 10 ppm.

**MERCURY, LEAD, ARSENIC,
COBALT, COPPER, NICKEL**

Limits: See list

Characteristics: Heavy metals. Non biodegradable.
Generally hazardous to health of
man and nature in various degree
and nature of damage.

Process: All part of dyestuff. Few used in
dye fixing or other after
treatment.

Remarks: Alternatives are available with
non/low content of metal.

Legal background: General legal restriction under
responsibility for
producers/retailers.

Test method: Atomic Absorption Spectrophotometry
(AAS).

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NICKEL (Ni), in accessories

- Limit:* A product may emit a maximum of 0.5 microgram per square cm per week.
- Characteristics:* Nickel is one of the most common causes of contact dermatitis. Highly allergic.
- Process:* Nickel is a metal often used to improve the hardness in alloys, which are used in accessories such as zippers, buttons and rivets.
- Legal background:* EU directive 94/27/EEC (OJ Nr L 188, 22.7.1994). The Swedish National Chemicals Inspectorate's regulation (KIFS 1992:7), Sweden.
- Test method I:* Atomic Absorbtion Spectrophotometry (AAS).
- Test performance level I:* See limit.
- Test method II:* Screening Test for Nickel Release. The National Corporation of Swedish Pharmasists markets a test kit with three containers of ammonia, dimethylglyoxime and artificial sweat solution.
- Test performance level I:* Qualitative indication only = no presence.

FREE PESTICIDES

- Limit:* 0 (not detectable in finished product).
- Characteristics:* In various degree hazardous to health of man and nature. Toxic, Carcinogenic, etc.
- Process:* Pesticides used in crop and harvest. Ex. DDT, DDD, DDE, Lindan Aldrin, Dieldrin, Toxaphen,

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Heptachlor, -epoxid, etc.

Remarks: Although development of more friendly alternatives seems slow, future mutual ambition in industry and trade has to be a change. At this stage the limit concerns 'free' (present remains from raw-stage) content in finished product.

PH

Limit: 4.0 - 8.0.

Characteristics: A pH greater than 8 can cause skin irritation. A high pH, greater than 9, can cause burns.

Process: Various.

Remarks: An incorrect pH can easily be altered by means of a wash process.

Legal background: None.

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Test equipment: pH meter and calibration equipment.

Test performance level: See limit.

Explanatory note

ppm = parts per million =
milligram
per kilo
5 w/w = percent of weight

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