

# Global Organic Textile Standard (GOTS)

*Version 5.0*



01 March 2017

Contact:

<http://www.global-standard.org/>

## Table of contents

1. Principles.....	4
1.1. Aim of the Standard .....	4
1.2. Scope and structure.....	4
1.3. Certificate of Compliance.....	4
1.4. Label grading and Labelling.....	5
1.5. Reference documents.....	5
2. Criteria.....	7
2.1. Requirements for organic fibre production.....	7
2.2. Requirements for fibre material composition .....	7
2.2.1. Products sold, labelled or represented as "organic" or "organic – in conversion".....	7
2.2.2. Products sold, labelled or represented as "made with x % organic materials" or "made with x % organic – in conversion materials" .....	7
2.3. General requirements for chemical inputs in all processing stages.....	8
2.3.1. Prohibited and restricted inputs .....	8
2.3.2. Requirements related to hazards and toxicity.....	10
2.3.3. Assessment of chemical inputs.....	12
2.4. Specific requirements and test parameters .....	13
2.4.1. Separation and Identification .....	13
2.4.2. Spinning .....	13
2.4.3. Sizing and weaving / knitting.....	13
2.4.4. Non-woven manufacture.....	14
2.4.5. Pre-treatment and other wet processing stages .....	14
2.4.6. Dyeing.....	15
2.4.7. Printing.....	15
2.4.8. Finishing.....	16
2.4.9. Requirements for additional fibre materials and accessories .....	16
2.4.9.1 Requirements for additional fibre materials .....	16
2.4.9.2 Requirements for Accessories.....	17
2.4.10. Environmental management.....	19
2.4.11. Wastewater treatment .....	19
2.4.12. Storage, packaging and transport.....	20
2.4.13. Record keeping & internal quality assurance.....	20
2.4.14. Technical quality parameters .....	21
2.4.15. Limit values for residues in GOTS Goods .....	22
2.4.16. Limit values for residues in additional fibre materials and accessories .....	25
3. Social criteria.....	28
3.1. Scope.....	28
3.2. Employment is freely chosen.....	29
3.3. Freedom of association and the right to collective bargaining are respected.....	29
3.4. Child labour must not be used .....	29
3.5. No discrimination is practised .....	30
3.6. Working conditions are safe and hygienic .....	30

3.7.	Fair remuneration .....	31
3.8.	Working hours are not excessive.....	31
3.9.	No precarious employment is provided .....	31
3.10.	Harsh or inhumane treatment is prohibited.....	32
3.11.	Social Compliance Management .....	32
3.12.	Ethical Business Behaviour .....	32
4.	Quality assurance system .....	33
4.1.	Auditing of processing, manufacturing and trading stages .....	33
4.2.	Testing of Technical Quality Parameters and Residues .....	34
<b>Annex</b> .....		<b>35</b>
A)	Specific requirements for textile personal care products .....	35
A1)	Scope.....	35
A2)	Specific criteria for materials and inputs (for Group I and Group II).....	35
A2.1)	Fibre material components .....	35
A2.3)	Super Absorbing Polymers (SAPs).....	36
A2.4)	Barrier films .....	36
A3)	Specific criteria for Inputs.....	36
A3.1)	Sizing .....	36
A3.2)	Colourants.....	36
A3.3)	Optical Brightening Agents .....	36
A3.4)	Fragrances and lubricants .....	36
B)	Definitions .....	37
C)	List of abbreviations.....	39

Preliminary remark: Terms in '*cursive letters*' are defined in annex B).

## **1. Principles**

### **1.1. Aim of the Standard**

The aim of this Standard is to define requirements to ensure organic status of textiles, from harvesting of the raw materials, through environmentally and socially responsible manufacturing up to labelling in order to provide a credible assurance to the end consumer.

### **1.2. Scope and structure**

This Standard covers the processing, manufacturing, packaging, labelling, trading and distribution of all textiles made from at least 70% certified organic natural fibres. The final products may include, but are not limited to fibre products, yarns, fabrics, garments, fashion textile accessories (carried or worn), textile toys, home textiles, mattresses and bedding products as well as textile personal care products.

The Standard focuses on compulsory criteria only except where an exception from this rule is expressly stated. Some of the criteria are compliance requirements for the entire facility where GOTS products are processed (2.4.10. Environmental management, 2.4.11. Waste water treatment, 3. Minimum social criteria and 4.1. Auditing of processing, manufacturing and trading stages), whereas the others are criteria relevant for the specific products subject to certification (all other criteria of chapter 2 and chapter 4.2. of this Standard).

As it is to date technically nearly impossible to produce any textiles in an industrial way without the use of chemical inputs, the approach is to define criteria for low impact and low residual natural and synthetic chemical inputs (such as dyestuffs, auxiliaries and finishes) accepted for textiles produced and labelled according to this Standard.

The Standard sets requirements on working and social conditions that are equivalent to those of leading social sustainability standards. Considering that the core function of this Standard is verifying and certifying processing of certified organic fibres, where a particularly high level of assurance of labour conditions is needed, applying a compatible specialised social standard or scheme is recommended.

As the Standard is also applied and monitored for entities in countries with developed and effectively applied social and labour legislation and collective agreements between employers and trade unions that conform with the universal standards of the International Labour Organisation (ILO), exceptions to monitoring, verification and audit requirements may be made. Conditions for making exceptions are defined in the Implementation Manual of this Standard.

### **1.3. Certificate of Compliance**

*Processors, manufacturers, traders and retailers that have demonstrated their ability to comply with the relevant GOTS criteria in the*

corresponding certification procedure to an *Approved Certifier* receive a GOTS Certificate of Compliance issued in accordance with the 'Policy and Template for issuing Certificates of Compliance (Scope Certificates, SCs)'. Accordingly, they are considered *Certified Entities*. Certificates of Compliance list the products/product categories that the *Certified Entities* can offer in compliance with the Standard as well as the processing, manufacturing and trading activities that are qualified under the scope of certification. *Subcontractors* and their relevant processing and manufacturing steps become listed on the Scope Certificate of the *Certified Entity* assigning the certification.

#### 1.4. Label grading and Labelling

The Standard provides for a subdivision into two label-grades. The only differentiation for subdivision is the minimum percentage of 'organic' / 'organic - *in conversion*' material in the certified product. Labelling of products as '*in conversion*' is only possible, if the Standard, on which the certification of the fibre production is based, permits such labelling for the fibre in question.

Only textile goods (finished or intermediate) produced in compliance with this Standard by a *Certified Entity* and certified by an *Approved Certifier* (= *GOTS Goods*) may be sold, labelled or represented as:

a) **"organic" or "organic - *in conversion*"**

or

b) **"made with (x %) organic materials" or "made with (x %) organic - *in conversion* materials"**

**and** the GOTS logo (or the immediate reference "Global Organic Textile Standard" or the short form "GOTS").

Labelling must be completed by a reference to the *Approved Certifier* who has certified the *GOTS Goods* (e.g. certifier's name and/or logo) and the licence number of the *Certified Entity* (as provided by the *Approved Certifier*).

In all cases the GOTS labelling can only be applied to the product/packaging by a *Certified Entity* and must have been approved by the *Certified Entity's Approved Certifier* in advance of its application.

Application of GOTS labelling must be in compliance with the 'Licensing and Labelling Guide'.

#### 1.5. Reference documents

Beside this Standard the International Working Group has released the following official reference documents that provide for binding provisions and requirements for *Approved Certifiers* and users of the GOTS:

- **Manual for the Implementation of the Global Organic Textile Standard:**

provides interpretations and clarifications for specific criteria of GOTS. Its purpose is to prevent any inconsistent, inappropriate or incorrect interpretation of the Standard. It further contains requirements and detailed specifications for the application of the GOTS and the implementation of the related quality assurance system for certifiers.

- **Licensing and Labelling Guide:**

specifies the licensing conditions for companies participating in the GOTS certification system and defines the corresponding licence fees. It further sets the requirements for the use of the registered trademark 'Global Organic Textile Standard' (GOTS logo) in order to ensure correct and consistent application on products as well as in advertisements, catalogues or other publications.

- **Labelling Release for GOTS Goods :**

provides a release form for labelling of GOTS Goods

- **Labelling Release for GOTS Additives :**

provides a release form for labelling of GOTS Additives

- **Policy and Template for issuing Certificates of Compliance (Scope Certificates, SCs):**

provides detailed instructions with regard to policies, layout, format and text for issuing Certificates of Compliance

- **Policy and Template for issuing Transaction Certificates (TCs):**

provides detailed instructions with regard to policies, layout, format and text for issuing Transaction Certificates

- **Policy and Template for issuing Letters of Approval:**

provides detailed instructions with regard to policies, layout, format and text for issuing Letters of Approval for colourants and textile auxiliaries which are approved as inputs for application in the processing of GOTS certified textile products

- **Approval Procedure and Requirements for Certification Bodies:**

specifies the approval and monitoring procedures and sets out the related requirements for Certification Bodies to implement the GOTS certification and quality assurance system

## 2. Criteria

### 2.1. Requirements for organic fibre production

Approved are natural fibres that are certified 'organic' or 'organic - in conversion' according to any standard approved in the IFOAM Family of Standards for the relevant scope of production (crop or animal production), such as Regulation (EC) 834/2007, USDA National Organic Program (NOP), APEDA's National Programme for Organic Production (NPOP), China Organic Standard GB/T19630. The certification body must have a valid and recognised accreditation for the standard it certifies against. Recognised accreditations are ISO 17065 accreditation, NOP accreditation, IFOAM accreditation and IFOAM Global Organic System accreditation.

Certifying of products as 'organic - in conversion' is only possible, if the standard on which the certification of the fibre production is based, permits such a certification for the fibre in question. Conversion status of fibres must be stated as specified in chapter 1.4. of this Standard.

### 2.2. Requirements for fibre material composition

#### 2.2.1. Products sold, labelled or represented as "organic" or "organic – in conversion"

No less than 95% of the fibre content of the products - excluding *accessories* - must be of certified organic origin or from '*in conversion*' period (identified and labelled as specified in chapters 1.4 and 2.1 of this Standard). Up to 5% of the fibre content of the products may be made of non-organic fibres that are listed under 'additional fibre materials' in chapter 2.4.9. The percentage figures refer to the weight of the fibre content of the products at normal conditions. No fibres must be used which originate from production projects with regard to which there is evidence of a persistent pattern of gross violations of the ILO core labour norms (as far as these are relevant for agriculture) and/or of animal welfare principles or irrefutable evidence of a persistent pattern of land grabbing methods.

#### 2.2.2. Products sold, labelled or represented as "made with x % organic materials" or "made with x % organic – in conversion materials"

No less than 70% of the fibre content of the products - excluding *accessories* - must be of certified organic origin or from '*in conversion*' period (identified and labelled as specified in chapters 1.4 and 2.1 of this Standard). Up to 30% of the fibre content of the products may be made of non-organic fibres that are listed under 'additional fibre materials' in chapter 2.4.9. The percentage figures refer to the weight of the fibre content of the products at normal conditions. No fibres must be used which originate from production projects with regard to which there is evidence of a persistent pattern of gross violations of the ILO core labour norms (as far as these are relevant for agriculture) and/or of animal welfare principles or irrefutable evidence of a persistent pattern of land grabbing methods.

## 2.3. General requirements for chemical inputs in all processing stages

### 2.3.1. Prohibited and restricted inputs

The following table lists chemical *inputs* that may (potentially) be used in conventional textile processing but that are explicitly banned or restricted for environmental and/or toxicological reasons in all processing stages of *GOTS Goods*. It is not to be seen as a comprehensive and inclusive list of all chemical *inputs* that are prohibited or restricted under GOTS. Prohibition or restriction of substance groups or individual *substances* that are not explicitly listed in this chapter may further result from chapter 2.3.2 'Requirements related to hazards and toxicity' or from other criteria of this Standard.

Substance group	Criteria
<b>Aromatic and/or halogenated solvents</b>	Prohibited
<b>Flame retardants (Chlorinated and Brominated)</b>	Prohibited
<b>Chlorinated benzenes</b>	Prohibited
<b>Chlorophenols (including their salts and esters)</b>	Prohibited (such as mono, di, tri, tetra and penta- chlorophenols)
<b>Complexing agents and surfactants</b>	Prohibited are: - all APs and APEOs (i.e. NP, OP, NPEO, OPEO, APEOs terminated with functional groups, APEO-polymers) - EDTA, DTPA, NTA - LAS, $\alpha$ -MES
<b>Endocrine disruptors</b>	Prohibited
<b>Formaldehyde and other short-chain aldehydes</b>	Prohibited are <i>inputs</i> that contain or generate formaldehyde or other short-chain aldehydes during designated application
<b>Genetically modified organisms (GMO)</b>	Prohibited are all inputs that: <ul style="list-style-type: none"> <li>• contain GMO</li> <li>• contain enzymes derived from GMO</li> <li>• are made from GMO raw materials (e.g. starch, surfactants or oils from GM plants)</li> </ul>
<b>Heavy metals</b>	Prohibited, <i>inputs</i> must be ' <i>heavy metal free</i> '. Impurities must not exceed the limit values as defined in annex B.



Substance group	Criteria
	Exceptions valid for dyes and pigments are set in chapter 2.4.6. and 2.4.7.
<b>Inputs (e.g. azo dyes and pigments) releasing carcinogenic arylamine compounds (MAK III, category 1,2,3,4)</b>	Prohibited
<b>Inputs containing functional nano-particles (= particles with a size &lt; 100 nm)</b>	Prohibited
<b>Inputs with halogen containing compounds</b>	Prohibited are <i>inputs</i> that contain > 1% <i>permanent AOX</i> . Exceptions valid for pigments are set in chapter 2.4.7.
<b>Organotin compounds</b>	Prohibited (such as DBT, MBT, TBT, DOT, TPhT, MMT, MOT, DMT, DPhT, MPhT, TCyHT, TMT, TOT, DPT, TPT, TeBT, TeET)
<b>Plasticizers</b>	Prohibited are: PAH, phthalates, Bisphenol A and all other plasticizers with endocrine disrupting potential
<b>Per- and Polyfluorinated compounds (PFC)</b>	Prohibited. (such as PFCA (incl. PFOA), PFSA (incl. PFOS) FTOH, PFNA, PFHpA, PFDA)
<b>Quaternary ammonium compounds</b>	Prohibited are: DTDMAC, DSDMAC and DHTDMAC
<b>Short-chain chlorinated paraffins (SCCPs, C<sub>10-13</sub>)</b>	Prohibited
<b>Substances and preparations that are prohibited for application in textiles with a recognised internationally or a nationally valid legal character</b>	Prohibited
<b>Substances and preparations having restrictions in usage for application in textiles with a recognised internationally or nationally legal character</b>	The same restrictions apply, provided the <i>substances</i> and <i>preparations</i> are not already prohibited or have stricter restrictions criteria according to this Standard. <i>Substances</i> listed in regulation EC 552/2009 (amending regulation EC 1907/2006 (REACH), annex XVII), and the 'candidate list of substances of very high concern for authorisation' of the European Chemicals Agency (ECHA) are prohibited.

### 2.3.2. Requirements related to hazards and toxicity

Substance group	Criteria
<p><b><i>Inputs</i> which are classified with specific hazard statements (risk phrases) related to health hazards</b></p>	<p>Prohibited are:</p> <ul style="list-style-type: none"> <li>- <i>substances</i> which are classified with any of the following hazard statements, if applied as direct input</li> <li>- <i>preparations</i> which are classified with any of the following hazard statements</li> <li>- <i>preparations</i> which contain at least one substance which is classified with any of the following hazard statements               <ul style="list-style-type: none"> <li>in accordance with the codification system of the Global Harmonized System (GHS) as published by the United Nations, annex 3:</li> <li>H300 Fatal if swallowed</li> <li>H310 Fatal in contact with skin</li> <li>H330 Fatal if inhaled</li> <li>H340 May cause genetic defects</li> <li>H341 Suspected of causing genetic defects</li> <li>H350 May cause cancer</li> <li>H351 Suspected of causing cancer</li> <li>H360 May damage fertility or the unborn child</li> <li>H361 Suspected of damaging fertility or the unborn child</li> <li>H370 Causes damage to organs</li> <li>H371 May cause damage to organs</li> <li>H372 Causes damage to organs through prolonged or repeated exposure</li> </ul> </li> </ul> <p>For <i>inputs</i> assessed on basis of GHS, where the implementation system does not provide for the codified H-statements, the corresponding hazard classes and categories of GHS, annex 3 apply. For <i>inputs</i> assessed according to the 'risk phrase' classification (Directive 67/548EEC amended and repealed by Regulation EC 1272/2008) the equivalent risk phrases apply.</p>

<p><b>Inputs which are classified with specific hazard statements / risk phrases related to environmental hazards</b></p>	<p>Prohibited are:</p> <ul style="list-style-type: none"> <li>- <i>substances</i> which are classified with any of the following hazard statements / risk phrases, if applied as direct input</li> <li>- <i>preparations</i> which are classified with any of the following hazard statements / risk phrases <ul style="list-style-type: none"> <li>a) in accordance with the codification system of the Global Harmonized System (GHS) as published by the United Nations, annex 3: <ul style="list-style-type: none"> <li>H400: Very toxic to aquatic life</li> <li>H410: Very toxic to aquatic life with long lasting effects</li> <li>H411: Toxic to aquatic life with long lasting effects</li> </ul> <p>For <i>inputs</i> assessed on basis of GHS, where the implementation system does not provide for the codified H-statements, the corresponding hazard classes and categories of GHS, annex 3 apply. For <i>inputs</i> assessed according to the 'risk phrase' classification (Directive 67/548EEC amended and repealed by Regulation EC 1272/2008) the equivalent risk phrases apply.</p> </li> </ul> </li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>b) in accordance with the codification system of the EU-GHS (Regulation EC 1272/2008): <ul style="list-style-type: none"> <li>EUH059: Hazardous to the ozone layer</li> </ul> </li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>c) in accordance with the 'risk phrase' classification: <ul style="list-style-type: none"> <li>R54: Toxic to flora</li> <li>R55: Toxic to fauna</li> <li>R56: Toxic to soil organisms</li> <li>R58: May cause long-term adverse effects in the environment</li> </ul> </li> </ul>
<p><b>Inputs which are bio-accumulative and not rapidly degradable</b></p>	<p>Prohibited are substances, if applied as direct input, and <i>preparations</i> classified with H413: 'May cause long-lasting effects to aquatic life' (respective R53) that are both, 'bio-accumulative'<sup>1)</sup> and not rapidly degradable<sup>2), 3)</sup></p>

1) A *substance* or *preparation* is considered as (potentially) bio-accumulative, if BCF (= bio-concentration factor)  $\geq 500$  or, if absent,  $\log K_{ow}$  (= logarithm of the n-octanol-water partition coefficient)  $\geq 4$

- 2) Testing requirement: >70% OECD 301A [28d] or equivalent testing method according to footnote 4 of the table below, except test methods related to eliminability (OECD 302). In those cases where only BOD and COD data are available the input is considered 'rapidly degradable' when the ratio of BOD5/COD is  $\geq 0,5$ .
- 3) This criterion is not applicable to preparations whose very low solubility in water prevents their bioaccumulation (e.g. pigment preparations)

All *preparations* applied must further comply with the following requirements:

Parameter	Criteria
Oral Toxicity <sup>1)</sup>	LD <sub>50</sub> > 2000 mg/kg <sup>2)</sup>
Aquatic Toxicity <sup>3)</sup>	LC <sub>50</sub> , EC <sub>50</sub> , IC <sub>50</sub> > 1 mg/l
Relation of biodegradability / eliminability <sup>4)</sup> to aquatic toxicity <sup>3)</sup>	Only allowed, if: < 70% and > 100 mg/l > 70% and > 10 mg/l > 95% and > 1 mg/l

- 1) Performing new animal tests to determine unknown LD<sub>50</sub> values in the course of the GOTS assessment procedure for inputs (refer to chapter 2.3.3) is prohibited. Instead, alternative methods (e.g. Acute Toxicity Estimates (ATE); conclusions on analogy from similar products; validated structure-activity relationships; calculation from available data of substances contained; expert judgment; in vitro tests) must be used to determine unknown values.
- 2) *Substances and preparations*, such as alkalis and acids that fail to meet this requirement because of their pH value only, are exempt from this requirement.
- 3) Performing new fish and daphnia tests to determine unknown LC<sub>50</sub> / EC<sub>50</sub> values in the course of the GOTS assessment procedure for inputs is prohibited. Instead, alternative methods such as Acute Toxicity Estimates (ATE); validated structure-activity relationships; conclusion on analogy from similar products; calculation from available data of substances contained; fish egg test (embryo toxicity test (FET)); in vitro test; IC50 algae; OECD 201 [72hr] must be used to determine unknown values.
- 4) Accepted test methods: OECD 301A, OECD 301E, ISO 7827, OECD 302A, ISO 9887, OECD 302B, ISO 9888 or OECD 303A; alternatively, to meet the 70% level a *preparation* tested with one of the methods OECD 303A or ISO 11733 a percentage degradation of at least 80% must be shown - or if tested with one of the methods OECD 301B, ISO 9439, OECD 301C, OECD 302C, OECD 301D, ISO 10707, OECD 301F, ISO 9408, ISO 10708 or ISO 14593, a percentage degradation of at least 60% must be shown. To meet the 95% level, if tested with any of the mentioned methods, a percentage degradation of 95% must be shown. Testing duration with each method is 28 days.

### 2.3.3. Assessment of chemical inputs

All chemical *inputs* intended to be used to process *GOTS Goods* are subject to approval by a *GOTS Approved Certifier* prior to their usage. *Preparations* must have been evaluated and their trade names registered on approved lists prior to their usage by a *GOTS Approved Certifier* who is authorised by the Global Standard gGmbH for the specific accreditation scope:

- Approval of textile auxiliary agents (chemical inputs) on positive lists

Approval must be applied by the applicable chemical producer or supplier of the *preparations* who receive conformity documents (Letters of Approval) issued by the authorised certifiers and containing the trade names of applied *preparations* that have been found

to be compliant with the criteria of this Standard.

For all chemical *inputs* (*substances* and *preparations*) a Material Safety Data Sheet (MSDS), prepared according to an applicable recognised norm or directive must be available. The *Approved Certifiers* are requested, where appropriate and felt necessary, to include further sources of information (such as additional toxicological and environmental data on specific components of the auxiliary agents, test reports, independent lab analysis and traceability checks of ingredients) in the assessment.

Certified Entities must have copies of valid Letters of Approval on hand listing all *preparations* they are using in processing and manufacturing GOTS Goods as verification proof that all colourants and textile auxiliaries used for GOTS Goods are actually approved.

## **2.4. Specific requirements and test parameters**

### **2.4.1. Separation and Identification**

All stages through the supply chain must be established so as to ensure that organic and conventional fibres are not commingled and that organic fibres and *GOTS Goods* are not contaminated by contact with prohibited substances.

All organic raw materials must be clearly labelled and identified as such at all stages of the supply chain.

### **2.4.2. Spinning**

Allowed are additives which meet the basic requirements as set in chapter 2.3.1. and 2.3.2. only. Any paraffin products used must be fully refined with a limited value for residual oil of 0,5%.

### **2.4.3. Sizing and weaving / knitting**

Allowed sizing agents include starch, starch derivatives, other natural *substances* and CMC (carboxymethylcellulose).

Synthetic sizes which meet the basic requirements as set in chapter 2.3.1. and 2.3.2. may be used for no more than 25% of the total sizing in combination with natural *substances* only, calculated for the chemical without water. In case such synthetic sizes are recycled/recovered in the wastewater from desizing process with a ratio >80% they may be used without limitation in the total sizing but must still meet the requirements as set in chapter 2.3.1 and 2.3.2.

Knitting / weaving oils must not contain heavy metals. Other *inputs* must be derived from *natural materials* only.

#### 2.4.4. Non-woven manufacture

Allowed non-woven manufacturing processing includes only mechanical compaction, webbing and entangling such as hydro entanglement.

#### 2.4.5. Pre-treatment and other wet processing stages

Treatment / process	Criteria
<b>Ammonia treatment</b>	Prohibited - Exception: allowed for after-treatment of wool, if performed in closed system.
<b>Bleaches</b>	On basis of oxygen only (peroxides, ozone, etc.). <i>Approved Certifiers</i> may grant exceptions for non-cotton fibre products where oxygen bleaches are not sufficiently functional, provided they meet the basic requirements as set in chapter 2.3.1. and 2.3.2.
<b>Boiling, kiering, washing</b>	Allowed are auxiliaries that meet the basic requirements as set in chapter 2.3.1. and 2.3.2. only. Washing detergents must not contain phosphates.
<b>Chlorination of wools</b>	Prohibited
<b>Desizing</b>	Allowed are GMO free enzymatic desizing and other auxiliaries that meet the basic requirements as set in chapter 2.3.1. and 2.3.2. only
<b>Mechanical/thermal treatments</b>	Allowed
<b>Mercerization / Alkaline treatment</b>	Allowed with auxiliaries that meet the basic requirements as set in chapter 2.3.1. and 2.3.2. only. Alkali must be recycled.
<b>Optical brightening</b>	Allowed are optical brightening agents (OBAs) that meet all criteria for the selection of dyes and auxiliaries as set in chapter 2.4.6. Dyeing only.
<b>Other, not explicitly listed pre-treatment methods</b>	Allowed are mechanical / thermal pre-treatment methods and such with the use of <i>substances</i> on basis of <i>natural materials</i> .

## 2.4.6. Dyeing

Parameter	Criteria
<b>Selection of dyes and auxiliaries</b>	<p>Allowed are natural dyes, synthetic dyes, pigments and auxiliaries that meet the requirements as set in chapter 2.3.1 and 2.3.2. only.</p> <p>Prohibited are (disperse) dyes classified as sensitizing / allergenic.</p> <p>Prohibited are dyes containing heavy metals as an integral part of the dye molecule (e.g. heavy metal dyes, certain reactive dyes) under consideration of the following exceptions:</p> <ul style="list-style-type: none"> <li>- General exception for Iron</li> <li>- Specific exception for copper: permitted up to 5% per weight in blue, green and turquoise dyestuffs.</li> </ul> <p>The use of natural dyes and auxiliaries that are derived from a threatened species listed on the Red List of the IUCN is prohibited.</p>

## 2.4.7. Printing

Parameter	Criteria
<b>Selection of dyes, pigments and auxiliaries</b>	<p>Allowed are dyes, pigments and auxiliaries that meet the requirements as set in chapter 2.3.1 and 2.3.2 only.</p> <p>Prohibited are (disperse) dyes classified as sensitizing / allergenic.</p> <p>Flock printing is allowed with non-GMO natural and regenerated fibres if the fibres used meet the limit values for residues as listed in chapter 2.4.16.</p> <p>Ammonia is allowed as required buffer in pigment printing pastes.</p> <p>Prohibited are dyes and pigments containing heavy metals as an integral part of the dye molecule (e.g. heavy metal dyes, certain reactive dyes) under consideration of the following exceptions:</p> <ul style="list-style-type: none"> <li>- General exception for Iron</li> <li>- Specific exception for copper: permitted up to 5% per weight in blue, green and turquoise</li> </ul>

	<p>dyestuffs and pigments only.</p> <p>While in general <i>inputs</i> that contain &gt; 1% <i>permanent AOX</i> are prohibited, exceptionally for yellow, green and violet pigments the limit is 5%.</p> <p>Prohibited are printing methods using aromatic solvents, phthalates or chlorinated plastics (e.g. PVC).</p> <p>The use of natural dyes and auxiliaries that are derived from a threatened species listed on the Red List of the IUCN is prohibited.</p>
--	---

## 2.4.8. Finishing

Parameter	Criteria
<b>Selection of finishing methods and auxiliaries</b>	<p>Allowed are mechanical, thermal and other physical finishing methods.</p> <p>Allowed are natural and synthetic <i>inputs</i> that meet the basic requirements as set in chapter 2.3.1 and 2.3.2 only.</p> <p>Prohibited in general is the use of synthetic <i>inputs</i> for anti-microbial finishing (including biocides), coating, filling and stiffening, lustring and matting as well as weighting.</p> <p>Prohibited are garment finishing methods that are considered to be harmful to the workers (such as sand blasting of denim).</p>

## 2.4.9. Requirements for additional fibre materials and accessories

### 2.4.9.1 Requirements for additional fibre materials

Additional Fibre Materials	Criteria
<b>Fibre materials accepted for the remaining non-organic balance of</b>	<p>Allowed are:</p> <ul style="list-style-type: none"> <li>a) conventional natural fibres: all non-GMO vegetable fibres - except conventional cotton - and all animal fibres except conventional angora hair</li> </ul>



Additional Fibre Materials	Criteria
<p><b>the product's material composition</b> (max. 5% according to chapter 2.2.1. and max. 30% according to chapter 2.2.2.)</p>	<ul style="list-style-type: none"> <li>b) regenerated fibres from certified organic raw materials which are non-GMO, from <i>pre-</i> or <i>post-consumer waste</i> or from raw materials certified according to a program that verifies compliance with sustainable forestry management principles: only lyocell and protein based fibres upto a maximum of 30%.</li> <li>c) regenerated fibres like viscose or modal : raw materials used must be non-GMO; <u>the use is limited to a maximum of 10% (resp. 25% for socks, leggings and sportswear)</u></li> <li>d) recycled synthetic (polymer) fibres from <i>pre-</i> or <i>post-consumer waste</i>: only polyester, polyamide, polypropylene and polyurethane (elastane)</li> <li>e) virgin synthetic (polymer) fibres: only polyamide, polypropylene and polyurethane (elastane); <u>the use is limited to a maximum of 10% resp. 25% for socks, leggings and sportswear</u></li> <li>f) stainless steel fibres and mineral fibres, with exception of asbestos, carbon and silver fibres: <u>the use is limited to a maximum of 10%</u></li> </ul> <p>The additional fibre materials may be mixed with the organic fibres to the fabric or used in certain details of the product. Blending organic and conventional fibres of the same type in the same product is not permitted.</p> <p>Products may contain a maximum of 10% of regenerated or synthetic fibres (25% for socks, leggings and sportswear). Exceptions are lyocell and recycled synthetic fibres which can be used to a maximum of 30%.</p> <p>All additional materials must meet the limit values for residues as listed in chapter 2.4.16.</p>

### 2.4.9.2 Requirements for Accessories

Accessories	Criteria
<p><b>Material in general</b> (valid for appliqué, borders, buckles, buttons and press-studs, cords, edgings, elastic bands and yarns,</p>	<p>Allowed are:</p> <ul style="list-style-type: none"> <li>- <i>natural materials</i> including biotic material (such as (organic or conventional) natural fibre, wood, leather, horn, bone, shell) and non-biotic material (such as minerals, metals, stone)</li> <li>- regenerated and synthetic materials</li> </ul>

<b>Accessories</b>	<b>Criteria</b>
embroidery yarns, fasteners and closing systems, hatbands, laces, linings, inlays, interface, labels, interlinings, pockets, seam bindings, sewing threads, shoulder pads, trims, zippers and any other, not below explicitly listed <i>accessories</i> )	<p>Prohibited is the use of:</p> <ul style="list-style-type: none"> <li>- asbestos</li> <li>- carbon fibres</li> <li>- silver (filament, treated) fibres</li> <li>- chromium (e.g. as component of a metal or in leather tanning, except that stainless steel is permitted)</li> <li>- nickel (e.g. as component of a metal, except that stainless steel is permitted)</li> <li>- material from threatened animals, plant and timber</li> <li>- Chlorinated plastics (e.g. PVC)</li> </ul> <p>All materials used for <i>accessories</i> must meet the applicable limit values for residues as listed in chapter 2.4.16.</p>
<b>Fillings, stuffing</b>	<ul style="list-style-type: none"> <li>• If textile fibres are used the material requirements of chapter 2.2.1 respective 2.2.2 apply (since fillings with fibres are not considered <i>accessories</i>).</li> <li>• If non-textile material is used only <i>natural materials</i> are permitted. <i>Natural materials</i> must be from certified organic (in conversion) production in case such certification is applicable for the kind of material used (e.g. for plant-based materials such as grain spelt or animal based-materials such as feathers). Latex foam used as filling or stuffing may be made from certified organic (in conversion) latex or from latex certified according to a program that verifies compliance with sustainable forestry management principles.</li> </ul>
<b>Supports and frames</b>	<p>The requirements as specified in the row 'material in general' apply.</p> <p>Latex foam used in mattresses must be made from certified organic (in conversion) latex or from latex certified according to a program that verifies compliance with sustainable forestry management principles. Polyurethane foams are not permitted in mattresses.</p>
<b>Non-Slip Floor Covering</b>	<p>Backing materials used must be of certified natural origin and satisfy requirements of Section 2.3 of the GOTS Standard. Inorganic materials (such as dolomite) may be used in conjunction with this backing material, if they are of natural origin and satisfy section 2.3 of the GOTS Standard.</p>

#### 2.4.10. Environmental management

All companies must assure compliance with the applicable national and local legal environmental requirements applicable to their processing/manufacturing stages performed (including those referring to emissions to air, wastewater discharge as well as disposal of waste and sludge).

They must have a written environmental policy and procedures in place to allow monitoring and improving relevant environmental performances in their facilities. Depending on the processing/manufacturing stages performed, the available data and procedures need to include:

- person responsible
- data on energy and water resources and their consumption per kg of textile output
- target goals and procedures to reduce energy and water consumption per kg of textile output
- monitoring of waste and discharges
- procedures to minimise waste and discharges
- procedures to follow in case of waste and pollution incidents
- documentation of staff training in the conservation of water and energy, the proper and minimal use of chemicals and their correct disposal
- programme for improvement

Wet processing units must keep full records of the use of chemicals, energy, water consumption and waste water treatment, including the disposal of sludge. In particular, they must continuously measure and monitor waste water temperature, waste water pH and sediment quantities. No on-site waste burning or uncontrolled waste land-filling should be undertaken.

#### 2.4.11. Wastewater treatment

Wastewater from all wet processing units must be treated in an internal or external functional wastewater treatment plant before discharged to environment. The applicable national and local legal requirements for waste water treatment - including limit values with regard to pH, temperature, TOC, BOD, COD, colour removal, residues of (chemical) pollutants and discharge routes - must be fulfilled.

Wastewater discharges to the environment must not exceed 20 g COD/kg of processed textile (output). For scouring greasy wool an exceptional limit of 45 g COD/kg applies.

Treatment of wastewater from water retting of bast fibres must achieve a reduction of COD (or TOC) of at least 95% for hemp fibres and 75% for all other bast fibres.

Wastewater discharges to surface waters further must have a pH between 6 and 9 (unless the pH of the receiving water is outside this range) and a temperature of less than 35C° (unless the temperature of the receiving water is above this value).

Wastewater analyses must be performed and documented periodically at normal operating capacity.

#### **2.4.12. Storage, packaging and transport**

Organic textile products must be stored and transported in such a manner as to prevent contamination by prohibited *substances* and commingling with conventional products or substitution of the contents.

Packaging material must not contain chlorinated plastics (e.g. PVC). Any paper or cardboard used in packaging material for the retail trade of *GOTS Goods* (incl. labelling items such as hang tags or swing tags) must be recycled from *pre- or post-consumer waste* or certified according to a program that verifies compliance with sustainable forestry management principles.

Transport means and routes must be documented.

In cases where pesticides/biocides are mandated for use due to national rules or law, they may be used in Storerooms / Transport but they must comply with the applicable international or national organic production standard. Wooden pallets used in storage and transport activities are exempt from this requirement.

#### **2.4.13. Record keeping & internal quality assurance**

All operational procedures and practices must be supported by effective documented control systems and records that enable to trace:

- the origin, nature and quantities of organic and additional (raw) materials, *accessories* as well as *inputs* which have been delivered to the unit
- the flow of goods within the unit (processing/manufacturing steps performed, recipes used and stock quantities)
- the composition of manufactured products
- the nature, quantities and consignees of *GOTS Goods* which have left the unit
- any other information that may be required for the purposes of proper inspection of the operation

Records relevant to the inspection must be kept for at least five years.

*Certified Entities* purchasing organic fibres must receive and maintain transaction certificates (=TCs, certificates of inspection), issued by a recognised certifier and certified in accordance with the criteria of chapter 2.1 for the whole quantity purchased.

*Certified Entities* purchasing *GOTS Goods* must receive and maintain GOTS transaction certificates, issued by an *Approved Certifier* for the whole quantity of *GOTS Goods* purchased. Shipments of *GOTS Goods* purchased by certified retailers and labelled with licence number of the manufacturer/supplier are exempt from this requirement. In accordance with the corresponding policy issuing TCs that cover multiple shipments is possible under certain conditions. The maximum time period that a single TC can cover is 3 months.

The consignee of any organic fibres and *GOTS Goods* must check the integrity of the packaging or container and verify the origin and nature of the certified products from the information contained in the product marking and corresponding documentation (e.g. invoice, bill of lading, transaction certificate) upon receipt of the certified products.

A product whose GOTS compliant status is in doubt may only be put into processing or packaging after elimination of that doubt.

Organic fibres and *GOTS Goods* must clearly be identified as such on all corresponding invoices.

*Certified Entities* must have invoices, delivery notes as well as copies of valid Letters of Approval at hand listing all *preparations* they are using in processing and manufacturing *GOTS Goods* as verification proof that all colourants and textile auxiliaries used for *GOTS Goods* are actually approved.

The *Certified Entity* must have concluded a contract with each *subcontractor* stipulating the conditions of the relevant job work assigned and remains finally responsible for compliance with all criteria of this Standard.

#### 2.4.14. Technical quality parameters

Any final product labelled according to this Standard should comply with the following technical quality parameters. Information about any (potential) non-compliance(s) must be indicated by the licensee of the final product in the product declaration.

Parameter	Criteria	Test method
Rubbing fastness, dry for fibre blends	3-4 3	ISO 105 X12
Rubbing fastness, wet	2	ISO 105 X12
Perspiration fastness, alkaline and acid	3-4	ISO 105 E04

Parameter	Criteria	Test method
for fibre blends	3	
Light fastness	3-4	ISO 105 B02
Dimensional changes after washing at 40°C resp. at 30°C for animal fibre material and blends thereof. This criterion is only valid for the garment sector. Knitted/hosiery: Woven:	max. 8% max. 3%	ISO 6330
Saliva fastness	5	LMBG B 82.10-1 DIN 53160-1
washing fastness when washed at 60°C	3-4	ISO 105 C06 C1M
Washing fastness of animal fibre material and blends thereof when washed at 30°C	3-4	ISO 105 C06 A1S without use of steel balls

#### 2.4.15. Limit values for residues in GOTS Goods

Even if produced in compliance with this Standard, textiles may carry traces of residues (e.g. due to unavoidable contamination). The following table lists the corresponding limit values for *GOTS Goods*:

Parameter	Criteria	Test method
<b>Alkylphenol</b> (ethoxylates) NP, OP, NPEO, OPEO sum parameter NP, OP Sum parameter	< 20 mg/kg < 10 mg/kg	For NP, OP: Extraction, derivatisation, GC/MS or HPLC/MS For NPEO, OPEO: Extraction in methanol, derivatisation, HPLC/MS : EN ISO 18254-1 or NPLC : EN ISO 18254-2 (test range for NPEO and OPEO: 3-15 moles)
<b>AOX</b>	< 5 mg/kg	Extraction with boiling water, adsorption on charcoal; AOX analyser based on ISO 9562
<b>Arylamines</b> with carcinogenic properties (amine-releasing azo dyes MAK III, category 1,2,3) Aniline (MAK III category 4)	< 20 mg/kg <100 mg/kg	EN 14362-1 and -3; (HPLC/GCMS)

Parameter	Criteria	Test method
<b>Disperse dyes</b> (classified as allergenic or carcinogenic)	< 30 mg/kg	DIN 54231; (LC/MS)
<b>Formaldehyde</b>	< 16 mg/kg	Japanese Law 112; or based on ISO 14184-1
<b>Glyoxal</b> and other short-chain aldehydes (mono- and dialdehydes up to C6)	<20 mg/kg	Extraction (acc. to ISO 14184-1), ISO 17226-1 (HPLC)
<b>pH</b> value	4.5–9.0 (no skin contact) 4.5-7.5 (all other)	ISO 3071
<b>Chlorophenols</b>		LFGB 82-02-08; (GC/MS)
PCP	< 0.01 mg/kg	
TeCP	< 0.01 mg/kg	
TrCP	< 0.2 mg/kg	
DCP	< 0.5 mg/kg	
MCP	< 0.5 mg/kg	
<b>O-Phenyl phenol (OPP)</b>	< 1.0 mg/kg	
<b>Pesticides</b> , sum parameter		§ 64 LFGB L 00.00-34 (GC/MS); § 64 LFGB L 00.00-114 (LC/MS/MS)
All natural fibres (except shorn wool)	<0.1 mg/kg	
Shorn wool	<0.5 mg/kg	
<b>Extractable Heavy metals</b>	In eluate. Figures in mg/kg refer to textile	Elution DIN EN ISO 105-E04, ISO 17294-2 (ICP/MS), EN 16711-2
Antimony (Sb)	< 0.2 mg/kg	
Arsenic (As)	<0.2 mg/kg	
Cadmium (Cd)	< 0.1 mg/kg	
Chromium (Cr)	< 1.0 mg/kg	
Cobalt (Co)	< 1.0 mg/kg	
Copper (Cu)	< 25.0 mg/kg	
Lead (Pb)	< 0.2 mg/kg	
Nickel (Ni)	< 1.0 mg/kg	
Mercury (Hg)	< 0.02 mg/kg	
Selenium (Se)	< 0.2 mg/kg	

Parameter	Criteria	Test method
Tin (Sn)	< 2.0 mg/kg	
Chromium VI (Cr-VI)	< 0.5 mg/kg	Elution DIN EN ISO 105-E04, ISO 11083
<b>Total Heavy metals (in digested sample)</b>		
Cadmium (Cd)	< 45 mg/kg	EPA 3050 B, ICP/MS, EPA 3051 or EN 16711-1
Lead (Pb)	< 50 mg/kg	EPA 3050 B, ICP/MS, EPA 3051 or EN 16711-1
<b>Organotin compounds</b>		Extraction in solvent, ISO 17353 (GC/MS) or ISO/TS 16179
TBT	< 0.05 mg/kg	
TphT	< 0.05 mg/kg	
DBT	< 0.05 mg/kg	
DOT	< 0.05 mg/kg	
MBT	< 0.1 mg/kg	
DMT, DPT, MoT, MMT, MPhT, TeBT, TCyHT, TMT, TOT, TPT, DphT, TeET	< 0.1 mg/kg	
<b>Per- and Polyfluorinated compounds (PFC) individually:</b> <b>PFOA, PFOS</b> <b>FTOH</b>	absent < 0.001 mg/kg < 0.01 mg/kg	Extraction in solvent, LC/MS Extraction in solvent, GC/MS
<b>Phthalates</b> (such as DINP, DMEP, DNOP, DEHP, DIDP, BBP, DBP, DIBP, DEP, DIHP, DHNUP, DCHP, DHxP, DIHxP, DPrP, DHP, DNP, DPP)		DIN EN 15777: 2009-12 (GC/MS) or ISO 14389
sum parameter	< 100 mg/kg	
<b>Polycyclic Aromatic Hydrocarbons (PAH):</b>		ISO 18287 or ZEK 1.2-08; (GC/MS) or AfPS GS 2014:01
sum parameter	< 10.0 mg/kg	
Chrysene	< 0.5 mg/kg	
Benzo[a]anthracene	< 0.5 mg/kg	
Benzo[b]fluoranthene	< 0.5 mg/kg	



Parameter	Criteria	Test method
Benzo(j)fluoranthene	< 0.5 mg/kg	
Benzo(k)fluoranthene	< 0.5 mg/kg	
Benzo[a]pyrene	< 0.5 mg/kg	
Benzo(e)pyrene	< 0.5 mg/kg	
Dibenzo[a,h]anthracene	< 0.5 mg/kg	
Naphthalene	< 1.0 mg/kg	
Acenaphthylene	< 1.0 mg/kg	
Acenaphthene	< 1.0 mg/kg	
Fluorene	< 1.0 mg/kg	
Phenanthrene	< 1.0 mg/kg	
Anthracene	< 1.0 mg/kg	
Fluoranthene	< 1.0 mg/kg	
Pyrene	< 1.0 mg/kg	
Indeno[1,2,3-cd]pyrene	< 1.0 mg/kg	
Benzo[g,h,i]perylene	< 1.0 mg/kg	

#### 2.4.16. Limit values for residues in additional fibre materials and accessories

Additional materials and *accessories* (in accordance with the criteria of chapter 2.4.9.) used for *GOTS Goods* need to comply with the following limit values for residues:

Criteria	Limit Values		Test Method
	For use in textiles for babies and textile personal care products	For use in all other GOTS Goods	
<b>Arylamines</b> with carcinogenic properties (amine-releasing azo dyes MAK III, category 1,2,3)	< 20 mg/kg	< 20 mg/kg	EN 14362-1 and -3; (HPLC/GCMS)
<b>Disperse</b> dyes (classified as allergenic or carcinogenic)	< 30 mg/kg	< 30 mg/kg	DIN 54231; (LC/MS)
<b>Formaldehyde</b>	< 16 mg/kg	< 75 mg/kg (Skin Contact)	Japanese Law 112; or based on ISO 14184-1

Criteria	Limit Values		Test Method
	For use in textiles for babies and textile personal care products	For use in all other GOTS Goods	
		<300 mg/kg (no Skin Contact)	
<b>Glyoxal</b> and other short-chain aldehydes (mono- and dialdehydes up to C6)	<20 mg/kg	<75 mg/kg (Skin Contact)	Extraction (acc. to ISO 14184-1), ISO 17226-1 (HPLC)
		<300 mg/kg (no Skin Contact)	
<b>pH value</b>	4.0-7.5	4.0-7.5	ISO 3071
<b>Chlorophenols</b>			LFGB 82-02-08; (GC/MS)
PCP	<0.05 mg/kg	<0.5 mg/kg	
TeCP	<0.05 mg/kg	<0.5 mg/kg	
TrCP	<0.2 mg/kg	<2.0 mg/kg	
DCP	<0.5 mg/kg	<3.0 mg/kg	
MCP	<0.5 mg/kg	<3.0 mg/kg	
<b>Pesticides, sum parameter</b>			§ 64 LFGB L 00.00-34 (GC/MS); § 64 LFGB L 00.00-114 (LC/MS/MS)
All natural fibres (except shorn wool)	<0.5 mg/kg	<1 mg/kg	
Shorn wool	<1.0 mg/kg	<1 mg/kg	
<b>Extractable Heavy metals</b>			Elution DIN EN ISO 105-E04, ISO 17294-2 (ICP/MS)
Arsenic (As)	<0.2 mg/kg	<1.0 mg/kg	
Cadmium (Cd)	<0.1 mg/kg	<0.1 mg/kg	
Chromium (Cr)	<1.0 mg/kg	<2.0 mg/kg	
Cobalt (Co)	<1.0 mg/kg	<4.0 mg/kg	
Copper (Cu)	<25.0 mg/kg <sup>1</sup>	<50.0 mg/kg <sup>1</sup>	
Lead (Pb)	<0.2 mg/kg	<1.0 mg/kg (not for Glass)	
Nickel (Ni)	<1.0 mg/kg	<4.0 mg/kg	
Mercury (Hg)	<0.02 mg/kg	<0.02 mg/kg	
Chromium VI (Cr-VI)	<0.5 mg/kg	<0.5 mg/kg	Elution DIN EN ISO 105-E04, ISO 11083

Criteria	Limit Values		Test Method
	For use in textiles for babies and textile personal care products	For use in all other GOTS Goods	
<b>Total Heavy metals (in digested sample)</b>			EPA 3050 B, ICP/MS
Cadmium (Cd)	<40 mg/kg	<40 mg/kg	EPA 3050 B, ICP/MS, EN16711-1
Lead (Pb)	<90 mg/kg	<90 mg/kg	EPA 3050 B, ICP/MS, EN16711-1
<b>Nickel release</b>	< 0.28 µg/cm <sup>2</sup> /week	< 0.28 µg/cm <sup>2</sup> /week	EN 12472, EN 1811
<b>Organotin compounds</b>			Extraction in solvent, ISO 17353 (GC/MS) or ISO/TS 16179
TBT	<0.5 mg/kg	<1.0 mg/kg	
TphT	<0.5 mg/kg	<1.0 mg/kg	
DBT	<1.0 mg/kg	<2.0 mg/kg	
DOT	<1.0 mg/kg	<2.0 mg/kg	
MBT	<1.0 mg/kg	<2.0 mg/kg	
DMT, DPT, MoT, MMT, MPhT, TeBT, TCyHT, TMT, TOT, TPT, DphT, TeET	<1.0 mg/kg	<2.0 mg/kg	
<b>Phthalates</b> (such as DINP, DMEP, DNOP, DEHP, DIDP, BBP, DBP, DIBP, DEP, DIHP, DHNUP, DCHP, DHxP, DIHxP, DPrP, DHP, DNP, DPP)			ISO 14389
sum parameter	<0.1%	<0.1%	
<b>Polycyclic Aromatic Hydrocarbons (PAH):</b>			ISO 18287 or ZEK 1.2-08; (GC/MS) or AFPS GS 2014:01
<b>sum parameter</b>	<b>&lt;5.0 mg/kg</b>	<b>&lt;10.0 mg/kg</b>	
Chrysene	<0.5 mg/kg	<1.0 mg/kg	
Benzo[a]anthracen	<0.5 mg/kg	<1.0 mg/kg	
Ben-zo[b]fluoranthene	<0.5 mg/kg	<1.0 mg/kg	
Benzo(j)fluoranthene	<0.5 mg/kg	<1.0 mg/kg	
Ben-zo[k]fluoranthene	<0.5 mg/kg	<1.0 mg/kg	
Benzo[a]pyrene	<0.5 mg/kg	<1.0 mg/kg	
Ben-zo(e)pyrene	<0.5 mg/kg	<1.0 mg/kg	
Dibenzo[a,h]anthracene	<0.5 mg/kg	<1.0 mg/kg	
Naphthalene	<0.5 mg/kg	<1.0 mg/kg	

Criteria	Limit Values		Test Method
	For use in textiles for babies and textile personal care products	For use in all other GOTS Goods	
Acenaphthylene	<0.5 mg/kg	<1.0 mg/kg	
Acenaphthene	<0.5 mg/kg	<1.0 mg/kg	
Fluorene	<0.5 mg/kg	<1.0 mg/kg	
Phenanthrene	<0.5 mg/kg	<1.0 mg/kg	
Anthracene	<0.5 mg/kg	<1.0 mg/kg	
Fluoranthene	<0.5 mg/kg	<1.0 mg/kg	
Pyrene	<0.5 mg/kg	<1.0 mg/kg	
Indeno[1,2,3-cd]pyrene	<0.5 mg/kg	<1.0 mg/kg	
Ben-zo[g,h,i]perylene	<0.5 mg/kg	<1.0 mg/kg	

1) Criterion not applicable to inorganic / non-biological materials (such as metals)

Further parameters relevant for specific materials used in accessories	Criteria	Test method
<b>Polyester fibres:</b> <b>Antimony (Sb)</b>	< 30 mg/kg	Elution DIN EN ISO 105-E04, ISO 17294-2 (ICP/MS)
<b>Natural latex foam:</b> <b>Butadiene</b> <b>Chlorophenols (incl. salts and esters)</b> <b>Carbon disulphide</b> <b>Nitrosamines</b>	< 1.0 mg/kg < 1.0 mg/kg < 0.02 mg/m <sup>3</sup> < 0.001 mg/m <sup>3</sup>	Gas chromatography, flame-ionisation detector LFGB 82-02-08 (GC/MS) Chamber test, DIN ISO 16000-6 Chamber test; ZH 1/120-23 or BGI 505-23 for air sampling and analysis

### 3. Social criteria

#### 3.1. Scope

The following social criteria apply to all textile processing, manufacturing and trading stages which are employing workers. The same

principles and requirements apply also to the farm level, taking account of its specific nature and recognizing the limited direct monitoring and assurance possibilities with this Standard.

For adequate implementation and assessment of the following specific criteria adherence to the corresponding International Labour Conventions of the International Labour Organisation (ILO) must be assured.

### **3.2. *Employment is freely chosen***

- There is no servitude, forced, bonded or indentured labour.
- Workers are not required to lodge "deposits" or their identity papers with their employer and are free to leave their employer after reasonable notice.

### **3.3. *Freedom of association and the right to collective bargaining are respected***

- Workers, without distinction, have the right to join or form trade unions of their own choosing and to bargain collectively.
- The employer adopts an open attitude towards the activities of trade unions and their organisational activities.
- Workers representatives are not discriminated against and have access to carry out their representative functions in the workplace.
- Where the right to freedom of association and collective bargaining is restricted under law, the employer facilitates, and does not hinder, the development of parallel means for independent and free association and bargaining and allows their workers to freely elect their own representatives with whom the company can enter into dialogue about related issues.

### **3.4. *Child labour must not be used***

- There must be no new recruitment of child labour.
- Companies must develop or participate in and contribute to policies and programmes which provide for the transition of any child found to be performing child labour to enable her or him to attend and remain in quality education until no longer a child.
- Children and young persons under 18 must not be employed at night or in hazardous conditions.
- These policies and procedures including the interpretation of the terms "child" and "child labour" must conform to the provisions of the relevant ILO conventions C138 and C182.

### **3.5. No discrimination is practised**

- There is no kind of discrimination e.g. in hiring, compensation, access to training, promotion, termination or retirement based on race, caste, ethnic or national origin, nationality, religion, age, disability, gender, marital status, sexual orientation, union membership, political affiliation, social background or any other condition that could give rise to discrimination. In particular, workers shall not be harassed or disciplined on any of the grounds listed above.

### **3.6. Working conditions are safe and hygienic**

- A safe and hygienic working environment must be provided, bearing in mind the prevailing knowledge of the industry and of any specific hazards. Vulnerable individuals such as - but not limited to - young workers, new and expecting mothers and persons with disabilities, shall receive special protection. Appropriate personal protective equipment must be provided to the workers and it must be assured that these are being used whenever necessary. Adequate steps must be taken to prevent accidents and injury to health arising from, associated with, or occurring in the course of work, by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.
- Companies must ensure adequate occupational medical assistance and related facilities.
- Systems must be in place to detect, assess, avoid and respond to potential threats to the health and safety of workers. Effective measures must be taken to prevent workers from having accidents, injuries or illnesses, arising from, associated with, or occurring during work.
- For all chemical substances and preparations used the corresponding Material Safety Data Sheet (MSDS) must be maintained and it must be assured that the applicable health and safety measures for handling and storing these chemicals are implemented.
- Companies must take all appropriate measures within their sphere of influence, to see to the stability and safety of the equipment and buildings they use, including accommodation to workers, where provided, as well as to protect against any foreseeable emergency. Workers must be able to exit the premises in case of imminent danger without seeking permission.
- Workers must receive regular and recorded health and safety training incl. fire prevention training and evacuation drills, and such training must be repeated for new or reassigned workers.
- Access to clean toilet facilities and to potable water, and, if appropriate, to rest areas, food consuming areas and sanitary facilities for food storage must be provided.
- Accommodation, where provided, must be clean, safe, and meet the basic needs of the workers.
- The company observing the code must assign responsibility for health and safety to a senior management representative.

### **3.7. Fair remuneration**

- Wages and benefits paid for a standard working week meet, at a minimum, national legal standards or industry benchmark standards, whichever is higher. In any event wages should always be enough to meet basic needs and to provide some discretionary income.
- All workers must be provided with written and understandable information about their employment conditions compliant with national legal requirements and including wages and social benefits legally granted before they enter employment and about the particulars of their wages for the pay period concerned each time that they are paid.
- Deductions from wages as a disciplinary measure are not permitted. Other deductions are permitted only under the conditions and to the extent prescribed by law or fixed by collective agreement.

### **3.8. Working hours are not excessive**

- Working hours must comply with national laws and benchmark industry standards, whichever affords greater protection.
- In any event, workers must not be required to work in excess of 48 hours per week on a regular basis, must have the right to have rest breaks in every working day and must be provided with at least one day off for every 7-day period on average. Overtime must be voluntary, must not exceed 12 hours per week, must not be demanded on a regular basis, must not represent a significantly higher likelihood of occupational hazards and must always be compensated at a premium rate of not less than one and one-quarter times the regular rate or with leisure time.

### **3.9. No precarious employment is provided**

- To every extent possible work performed must be on the basis of recognised employment relationship established through national law and practice.
- Obligations to employees under labour or social security laws and regulations arising from the regular employment relationship must not be avoided through the use of labour-only contracting, subcontracting, or home-working arrangements, or through apprenticeship schemes where there is no real intent to impart skills or provide regular employment, nor must any such obligations be avoided through the excessive use of fixed-term contracts of employment.

### **3.10. Harsh or inhumane treatment is prohibited**

- Physical abuse or discipline, the threat of physical abuse, sexual or other harassment and verbal abuse or other forms of intimidation must be prohibited.
- All disciplinary measures must be recorded.

### **3.11. Social Compliance Management**

Companies must have a policy for social accountability to ensure that the social criteria can be met. They must support the implementation and monitoring of the social criteria by:

- nominating a person responsible for social accountability
- monitoring compliance with the social criteria and implementing necessary improvements at its facilities
- informing its workers about the content of the minimum social criteria and any other related information provided by GOTS in the applicable local language(s)
- maintaining records of the name, age, working hours and the wages paid for each worker
- allowing the workers to nominate a representative for social accountability that is able to provide feedback to the management regarding implementation status of and compliance with social criteria
- recording and investigating complaints from workers or third parties related to the adherence to the social criteria and maintaining records about any necessary corrective measures arising from them
- refraining from disciplinary measures, dismissals or other forms of discrimination against workers for providing information concerning observance of the social criteria

### **3.12. Ethical Business Behaviour**

- Companies are not involved in any act of corruption, extortion or embezzlement, nor in any form of bribery - including but not limited to - the promising, offering, giving or accepting of any improper monetary or other incentive.
- Companies keep accurate information regarding their activities, structure and performance, and disclose these in accordance with applicable regulations and industry benchmark practices.
- Companies must neither participate in falsifying such information, nor in any act of misrepresentation in the supply chain.



- They are expected to collect, use and otherwise process any personal information (including that from workers, business partners, customers and consumers in their sphere of influence) with reasonable care. The collection, use and other processing of personal information must comply with privacy and information security laws and regulatory requirements.

#### **4. Quality assurance system**

##### **4.1. Auditing of processing, manufacturing and trading stages**

*Processors, manufacturers and traders of GOTS Goods* must participate in the GOTS certification procedure which is based on an on-site annual inspection cycle (including possible additional unannounced inspections based on a risk assessment of the operations). They must hold a valid certificate of compliance listing the certified products/product categories and the processing, manufacturing and trading activities that are qualified under the scope of certification (including names of *subcontractors* assigned and their relevant processing and manufacturing steps).

The responsible certifier may decide to perform remote-inspections instead of on-site inspections for *traders* which do not have or subcontract any *processing* or *manufacturing* activities. On-site inspection must however be performed at least for the first year and every 3<sup>rd</sup> year of granted certification. *Traders* having an annual turnover with *GOTS Goods* less than 5000 € and retailers only selling to end consumers are exempt from the certification obligation; provide they do not (re-)package or (re-)label *GOTS Goods*. *Traders* with less than 5000€ annual turnover with *GOTS Goods* must register with an *Approved Certifier* and must inform the same immediately after their annual turnover exceeds 5000€.

The responsible *Approved Certifier* may further decide on exceptions from the annual inspection cycle for small-scale *subcontractors* with a low risk potential regarding environmental and social criteria. On-site inspection must however be performed to such units at least for the first year and every 3<sup>rd</sup> year of granted certification.

The entity under whose name or brand the labelled *GOTS Goods* are sold to the end consumer is responsible for exercising due care in ensuring compliance of the products with this Standard, the Licensing and Labelling Guide and further provisions as released by the Global Standard gGmbH.

Certifiers must be authorised by the Global Standard gGmbH for the specific scope(s) in which they offer certification services:

- 1) Certification of mechanical textile processing and manufacturing operations and their products
- 2) Certification of wet processing and finishing operations and their products
- 3) Certification of trading operations and related products

Basis for authorisation by the Global Standard gGmbH is an accreditation of the certifier in accordance with the document 'Approval

Procedure and Requirements for Certification Bodies' by the main co-operation partner of the Global Standard gGmbH for this process, IOAS, or another recognised accreditation body.

#### **4.2. Testing of Technical Quality Parameters and Residues**

*Certified Entities* are expected to undertake testing in accordance with a risk assessment in order to assure compliance with this Standard and in specific with the criteria of chapter 2.4.14 (Technical Quality Parameters) as well as 2.4.15 and 2.4.16 (Limit Values for Residues in *GOTS Goods*, additional materials and *accessories*). All *GOTS Goods*, the components of these products and the *inputs* used are to be included in this risk assessment and therefore potentially subject to testing. The testing frequency, the type and number of samples are to be established according to this risk assessment.

Samples for residue testing may also be taken by the inspector during the required on-site inspection, either as back-up to the inspection process or in case of suspicion of contamination or non-compliance. Additional samples of goods may be taken from the supply chain at any time without advance notice.

Laboratories that are accredited according to ISO/IEC 17025 or qualified to GLP and that have appropriate experience in residue testing for textiles respective chemical *inputs* are approved to perform residue testing for those tests that are under the scope of their accreditation.

## Annex

### A) Specific requirements for textile personal care products

This chapter lists criteria for Textile Personal Care Products that deviate from or are set in addition to the general criteria of this Standard. Where no deviating requirements are set in this chapter, the applicable general GOTS criteria apply.

Important note: Any entity selling personal care products must be aware of and meet the specific legal (hygienic) requirements applicable for its products and in the country / region where they are sold. It may well be that some of these legal requirements for specific personal care products conflict with environmental criteria set by GOTS. Accordingly, except where specified below, these products cannot be certified and labelled to GOTS.

#### A1) Scope

For the purpose of this Standard, Textile Personal Care Products are grouped as following:

- Group I: *Topical products* – such as cotton wool, sanitary towels, bandages, nappies, gauze cotton tissue (Gamgee), island dressings, wound strips, sticking plasters and gauze dressings.
- Group II: *Physically invasive products* – such as tampons and dental rolls, and  
*Clinically invasive products* – such as surgical swabs and gauze swabs.

#### A2) Specific criteria for materials and inputs (for Group I and Group II)

##### A2.1) Fibre material components

All fibres used must be Totally Chlorine Free (TCF).

Non-woven and absorbent materials must be composed of 100% certified organic fibres.

Synthetic fibre components are not permitted for group II products unless the use of other fibre materials is required to meet legal medical regulations and does not exceed 5% of the content (if labelled as organic) or 30% (if labelled as 'made with x% organic materials').

### **A2.3) Super Absorbing Polymers (SAPs)**

SAPs must be made from non-GMO renewable raw materials (ADM-type).

SAP may as a maximum contain 5% by weight of water-soluble extracts.

### **A2.4) Barrier films**

Except for wound contact layers, barrier films must be composed of biodegradable polymers. All raw materials used must be non-GMO.

## **A3) Specific criteria for Inputs**

### **A3.1) Sizing**

No sizing must be used for group II products.

### **A3.2) Colourants**

The use of colourants is only allowed if their use is required to meet a mandatory legal regulation. All used colourants must be GOTS approved. *Approved Certifiers* may further grant exceptions where a clear functional purpose exists (e.g. to identify wound dressing orientation).

### **A3.3) Optical Brightening Agents**

Optical brightening agents (OBAs) must not be used.

### **A3.4) Fragrances and lubricants**

Any fragrances and lubricants used must comply – beside the input criteria of GOTS – also with the input criteria of the COSMOS-Standard (Cosmetics Organic and Natural Standard).

## B) Definitions

For the purpose of this Standard, the following terms are defined :

Term	Definition for the purpose of this Standard
<i>Accessories</i>	Items that are added to supplement <i>GOTS Goods</i> for required functional or for fashionable reasons. Most commonly used <i>accessories</i> are listed in chapter 2.4.9. The processing of those accessories is not under direct scope of the GOTS on-site certification system. The GOTS criteria applicable to accessories are listed in chapter 2.4.9 and 2.4.16.
<i>Approved Certifier</i>	Certification body which is approved by the Global Standard gGmbH to perform inspections and certifications according to GOTS in the relevant scope. An updated list of Approved Certifiers and their scopes is available at: <a href="http://www.global-standard.org/certification/approved-certification-bodies.html">http://www.global-standard.org/certification/approved-certification-bodies.html</a>
<i>Certified Entity</i>	<i>Processor, manufacturer, trader</i> or retailer of <i>GOTS Goods</i> certified by an <i>Approved Certifier</i> .
<i>Endocrine disruptor</i>	An exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub)populations
<i>GOTS Goods</i>	Textile goods (finished or intermediate) produced in compliance with GOTS by a <i>Certified Entity</i> and certified by an <i>Approved Certifier</i> .
'Heavy Metal Free'	An <i>input</i> is considered as 'heavy metal free' if it does not contain heavy metals as a functional constituent and any impurities contained do not exceed the following limit values (as set by ETAD for dyes): Antimony: 50 mg/kg, Arsenic: 50 mg/kg, Barium: 100 mg/kg, Cadmium: 20 mg/kg, Cobalt: 500 mg/kg, Copper: 250 mg/kg, Chromium: 100 mg/kg, Iron: 2500 mg/kg, Lead: 100 mg/kg, Manganese: 1000 mg/kg, Nickel: 200 mg/kg, Mercury: 4 mg/kg, Selenium: 20 mg/kg, Silver: 100 mg/kg, Zinc: 1500 mg/kg, Tin: 250 mg/kg  Special Limits for Pigments : Cadmium : 50 mg/kg; Mercury : 25 mg/kg.
'In conversion'	A product from an operation or portion thereof, which has completed at least 12 months under organic management and is under the supervision of a certification body.
<i>Input</i>	General term for all <i>substances</i> and <i>preparations</i> directly applied as textile auxiliary agents, dyes or pigments.
<i>Invasive products</i>	<i>Clinically invasive products</i> : Any device that penetrates the body through the skin, with the aid of or in the context of a surgical operation.  <i>Physically invasive products</i> : Any device that, in whole or part, penetrates inside the body through a natural or artificial orifice.
<i>Manufacturer</i>	Entity in the manufacturing chain (sewing industry or so called CMT (cutting, making, trimming) industry up to labelling and final packing) of <i>GOTS Goods</i> .

<i>Natural materials</i>	A <i>natural material</i> is any product or physical matter that comes from plants, animals, or the ground. Minerals and the metals that can be extracted from them are also considered to belong into this category. <i>Natural materials</i> include biotic materials (materials that originates from living organisms such as (organic) natural fibre, wood, leather, horn, bone, shell, seed and plant oils etc.) and non-biotic material (such as minerals, metals, stone).
'Permanent AOX'	AOX is permanent, if the halogen is permanently bound to the molecule (e.g. in the chromophore of a dyestuff or pigment) and cannot get hydrolysed or released during fibre processing.
<i>Preparations</i>	Mixtures or solutions composed of two or more <i>substances</i> .
<i>Pre-consumer waste</i>	Material diverted from the waste stream during the manufacturing process. Excluded is the reutilization of materials such as rework, regrind or scrap generated in a process and capable to being reclaimed within the same process.
<i>Post-consumer waste</i>	Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product that can no longer be used for its intended purpose. This includes returns of materials from the distribution chain.
<i>Processor</i>	Entity in the processing chain (post-harvest handling up to finishing) of <i>GOTS Goods</i> .
<i>Subcontractor</i>	Entity in the supply chain of <i>GOTS Goods</i> performing job work (in the field of processing or manufacturing) for a <i>Certified Entity</i> without becoming proprietor of the <i>GOTS Goods</i> and not assigning an own (independent) GOTS certification.
<i>Substances</i>	Chemical elements and their compounds as they occur in the natural state or as produced by industry.
<i>Sportswear</i>	<i>Sportswear</i> includes any garment that is functional or technical active wear, which requires it to perform properly with regard to stretch, sun block, insect repellent, moisture repellent, wrinkle repellent and breathability. Such a garment is intended to be suitable for activities such as walking, hiking, running, exercise, dance, and athletic pursuits, not including leisure or casual wear.
<i>Textiles for babies</i>	Textiles products used for babies and small children up to the age of 36 months
<i>Topical Products</i>	Any device that does not penetrate inside the body, either through a body orifice or through the skin
<i>Trader</i>	Entity trading with (=buying and selling) <i>GOTS Goods</i> in the supply chain between the producer of the fibre and the retail merchant of the final product regardless whether the goods are physically received or not (e.g. an import, export or wholesale trading entity). Agents that do not become proprietor of the goods and retailers only selling to the end consumer are not considered as traders.
<i>Worker</i>	Any individual engaged in work who is not a senior manager or owner.

## C) List of abbreviations

### Organisations / Standards:

APEDA	Agricultural & Processed Food Products Export Development Authority, India
GOTS	Global Organic Textile Standard
IVN	International Association Natural Textile Industry, Germany
JOCA	Japan Organic Cotton Association, Japan
OTA	Organic Trade Association, USA
SA	Soil Association, UK
EC	European Commission
ECHA	European Chemicals Agency
ETAD	Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers
GHS	Global Harmonized System
GLP	Good Laboratory Practice
IFOAM	International Federation of Organic Agriculture Movements
ILO	International Labour Organisation
IOAS	International Organic Accreditation Service
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
OECD	Organisation of Economic Cooperation and Development
REACH	EC Regulation regarding Registration, Evaluation, Authorisation and Restriction of Chemicals
USDA	United States Department of Agriculture

### Others:

EC50	Effect concentration (50%)	IC50	Inhibition concentration (50% inhibition)
LC50	Lethal concentration (50% mortality)	$\alpha$ -MES	$\alpha$ -methyl ester sulphonate (C16/18)
AOX	Absorbable halogenated hydrocarbons and <i>substances</i> that can cause their formation.		
APEO	Alkylphenoethoxylates	BBP	Benzylbutyl phthalate
BOD	Biological Oxygen Demand	COD	Chemical Oxygen Demand
DBT	Dibutyltin	DBP	Dibutyl phthalate
DEHP	Diethylhexyl phthalate	DPP	Diethylphthalate
DIBP	Di-isobutyl phthalate	DIDP	Diisodecyl phthalate
DINP	Diisononyl phthalate	DMEP	Bis(2-methoxyethyl) phthalate
DNOP	Di-n-octyl phthalate	DEP	Diethyl phthalate
DIHP	Di-C <sub>6-8</sub> branched alkylphthalates	DHNUP	Di-C <sub>7-11</sub> branched and linear alkylphthalates
DCHP	Di cyclohexylphthalate	DHxP	Di hexyl phthalates
DIHxP	Di-iso hexylphthalate	DPrP	Di-n-propyl phthalate

DHP	Di-n-hexylphthalate	DNP	Di-n-nonylphthalate
DTDMAC	Ditallowdimethylammonium chloride	DSDMAC	Distearyldimethylammonium chloride
DHTDMAC	Dihydrogenated tallow dimethylammonium chloride	DTPA	Diethylenetriamine penta-acetate
EDTA	Ethylendiamine tetra-acetate	MBT	Monobutyltin
FTOH	Fluorotelomer alcohol	GMO	Genetically modified organisms
MAK	Maximum Allowable Concentration (of a <i>substance</i> at the working place) The parameter refers to findings and categorisation of a German research commission		
NP	Nonylphenol	NPEO	Nonylphenol ethoxylates
NTA	Nitrilotriacetic acid	OP	Octylphenol
OPEO	Octylphenol ethoxylates	LAS	Linear alkyl benzene sulphonate
PAH	Polycyclic aromatic hydrocarbons	PCB	Polychlorinated Biphenyls
PCP	Pentachlorophenol	PFCA	Perfluorinated carboxylic acids
PFOA	Perfluorooctanoic acid	PFOS	Perfluorooctane sulfonate
PFSA	Perfluorosulfonic acids	PVC	Polyvinyl chloride
TBT	Tributyltin	TeCP	Tetrachlorophenol
TOC	Total Organic Carbon	TPhT	Triphenyltin
DPhT	Diphenyltin	DPT	Dipropyltin
MMT	Monomethyltin	MPhT	Monophenyltin
MOT	Monooctyltin	TeBT	Tetrabutyltin
TeET	Tetraethyltin	TCyHT	Tricyclohexyltin
TMT	Trimethyltin	TOT	Trioctyltin
TPT	Tripropyltin		

» » » » » » » »

Availability of documents:

This Standard, the reference documents and any further relevant public information as released by Global Standard gGmbH are introduced and available for download on the website [www.global-standard.org](http://www.global-standard.org)

» » » » » » » »

**Copyright**  
**Global Standard gGmbH (Global Standard non profit GmbH)**