

## TÜV Rheinland LGA Products – Information

02/2018

### **Draft Commission Regulation amending Annex XVII to Regulation (EC) No 1907/2006 (REACH) as regards certain substances classified as carcinogenic, mutagenic or toxic for reproduction (CMR) category 1A or 1B.**

Dear valued customer,

As discussed since the end of 2015 and communicated by us in various TÜV Rheinland LGA Products information, the EU Commission intends to restrict CMR substances of categories 1A and 1B in textile products, clothing and footwear.

The European Commission has recently published a draft Regulation amending Annex XVII to Regulation No 1907/2006 (REACH) with certain substances for clothing, related accessories, textiles in contact with human skin and footwear. The objective of this Regulation is to protect consumers from a long-term exposure to substances being classified as carcinogenic, mutagenic or toxic to reproduction (CMR), category 1A or 1B without considering the real potential exposure.

#### **What is the scope of the draft regulation?**

- Clothing or related accessories
- Textiles other clothing with human skin contact to an extent similar to clothing
- Footwear

#### **Proposed date of entry into force**

The Commission intends to publish the Regulation in the third quarter of 2018.

After the publication in the Official Journal of the European Union, a transitional period of two years is expected, which means that it will come into force by the end of 2020.

#### **Exceptions**

Paragraph 1 and the restrictions in Annex 12 shall not apply to:

- Clothing, related accessories, textiles or footwear within the scope of EU Regulation No 2016/425 on Personal Protective Equipment (PPE)
- Clothing, related accessories, textiles or footwear within the scope EU Regulation No 2017/745 on medical devices
- Clothing, related accessories or footwear, or parts of clothing, related accessories or footwear, made exclusively of **natural leather, fur or hide**
- **Non-textile fasteners and non-textile decorative attachments**
- Second-hand clothing, related accessories, textiles other than clothing or footwear.

Paragraph 1(b) shall not apply to:

- Disposable textiles (one time use)

## Restrictions of substances

Substance	CAS No	Proposed limit value	Comments	Critical materials
<b>Cadmium and its compounds</b>	-	1 mg/kg	expressed as Cd metal that can be extracted from the material	Polymers, coated textiles, dyed textiles, prints
<b>Chromium VI compounds</b>	-	1 mg/kg	expressed as Cr VI metal that can be extracted from the material	Polymers, coated textiles, dyed textiles, prints
<b>Arsenic compounds</b>	-	1 mg/kg	expressed as As metal that can be extracted from the material	Polymers, coated textiles, dyed textiles, prints
<b>Lead and its compounds</b>	-	1 mg/kg	expressed as Pb metal that can be extracted from the material	Polymers, coated textiles, dyed textiles, prints
<b>Benzene</b>	71-43-2	5 mg/kg	Solvent	Printing inks, Coatings, synthetic leather
<b>Benz[a]anthracene</b>	56-55-3	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>Benz[e]acephenanthrylene</b>	205-99-2	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>benzo[a]pyrene; benzo[def]chrysene</b>	50-32-8	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>Benzo[e]pyrene</b>	192-97-2	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>Benzo[j]fluoranthene</b>	205-82-3	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>Benzo[k]fluoranthene</b>	207-08-9	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>Chrysene</b>	218-01-9	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>Dibenz[a,h]anthracene</b>	53-70-3	1 mg/kg	PAH	Waxes, paraffins, pigments, polymers
<b>p-Chlorobenzotrichloride</b>	5216-25-1	1 mg/kg	Dye carrier, solvent	Synthetic fibers and fiber blends, polyester and blends
<b>Benzotrichloride</b>	98-07-7	1 mg/kg	Dye carrier, solvent	Synthetic fibers and fiber blends, polyester and blends
<b>Benzyl chloride</b>	100-44-7	1 mg/kg	Dye carrier, solvent	Synthetic fibers and fiber blends, polyester and blends
<b>Formaldehyde</b>	50-00-0	75 mg/kg	-	Resins, easy care finish, biocide etc.

<b>Formaldehyde in jackets, coats and upholstery</b>	50-00-0	300 mg/kg (75 mg/kg after 6 months of entry into force)	-	Resins, easy care finish, biocide etc.
<b>1,2-Benzenedicarboxylic acid; di-C 6-8-branched alkyl esters, C 7-rich</b>	71888-89-6	1000 mg/kg (individually or in combination with other phthalates)	Phthalate plasticizer	Polymers, Resins
<b>Bis(2-methoxyethyl) phthalate (DEHP)</b>	117-82-8	1000 mg/kg (individually or in combination with other phthalates)	Phthalate plasticizer	Polymers, Resins
<b>Diisopentylphthalate (DIPP)</b>	605-50-5	1000 mg/kg (individually or in combination with other phthalates)	Phthalate plasticizer	Polymers, Resins
<b>Di-n-pentyl phthalate (DPP)</b>	131-18-0	1000 mg/kg (individually or in combination with other phthalates)	Phthalate plasticiser	Polymers, Resins
<b>Di-n-hexyl phthalate (DnHP)</b>	84-75-3	1000 mg/kg (individually or in combination with other phthalates)	Phthalate plasticiser	Polymers, Resins
<b>N-methyl-2-pyrrolidone (NMP)</b>	872-50-4	3000 mg/kg	Solvent	Polyurethane
<b>N,N-dimethylacetamide (DMAC)</b>	127-19-5	3000 mg/kg	Solvent	Elastane, Aramid fibers,
<b>N,N-dimethylformamide (DMF)</b>	68-12-2	3000 mg/kg	Solvent PU	Polyurethane
<b>C.I. Disperse Blue 1</b>	2475-45-8	50 mg/kg	Dye stuff	Colored textiles
<b>C.I. Basic Red 9</b>	569-61-9	50 mg/kg	Dyestuff	Colored textiles
<b>C.I. Basic Violet 3 with <math>\geq 0,1</math> % of Michler's ketone</b>	548-62-9	50 mg/kg	Dye stuff	Colored textiles
<b>4-chloro-o-toluidinium chloride</b>	3165-93-3	30 mg/kg	Arylamine salts	Colored textiles
<b>2-Naphthylammoniumacetate</b>	553-00-4	30 mg/kg	Arylamine salts	Colored textiles
<b>2,4-diaminoanisole sulphate</b>	39156-41-7	30 mg/kg	Arylamine salts	Colored textiles
<b>2,4,5-trimethylaniline hydrochloride</b>	21436-97-5	30 mg/kg	Arylamine salts	Colored textiles
<b>Quinoline</b>	91-22-5	50 mg/kg	Dye intermediate	Yellow synthetic and natural fibers

### **Comments on the substances prohibited**

Various substances proposed for restriction already monitored in a regulatory or voluntary form. For SVHC substances the importer or distributor has an information duty or as voluntary requirements obligation based on the Retailer RSLs.

Inclusion in Annex XVII REACH gives this amendment a distinctly different impulse because the substance ban becomes legally binding and a foreseeable sanction in Germany according to the Chemical Sanction Ordinance.

For the different substances/groups of substances in detail:

#### **Heavy metals**

The amendment would regulate the extractable heavy metals content of cadmium, arsenic and lead. All heavy metal found in various application within the production of textiles. Chromium VI is unlikely to be found in textiles. However, there are rarely used processes for dyeing of wool in which the use of chromium VI is technologically possible and would need to be tested.

#### **Benzene**

When using solvents, i.e. in the form of printing inks, coatings or thermal transfer prints, the occurrence of benzene found rarely according to the results of the investigation. Other solvents such as toluene or various esters found on a more common basis.

#### **Various PAHs**

EU regulates within the Annex XVII REACH selected PAH in plastic or rubber materials. The restriction applies to materials in direct and prolonged contact with human skin. For the selected PAH a level above 1 ppm in plain textiles is uncommon but possible for coated materials.

#### **Benzoyl chlorines**

For particular applications in the dyeing process, benzoyl chlorines is taken as carriers. As technical impurities, from the production of dyes benzoyl chlorides, as well as other organochlorine compounds found in the finished coloured textile materials.

#### **Formaldehyde**

A limit of 75 ppm of formaldehyde in textiles with prolonged skin contact is possible to maintain in most cases. For shoes which not exclusively made of leather, the number of different materials contained (e.g., non-woven) will not make this requirement practicable. The implementation of the Regulation makes the voluntary requirement compulsory.

Also, the initial threshold of 300 ppm for materials with no skin contact after 6 months decreased to 75 ppm as well.

#### **Phthalates**

Even today, for the selected phthalates, are subject to the obligation to information within the meaning of Articles 33 (1) and (2) as well as Article 7(1) of REACH. The restriction will significantly tighten the regulatory burden. Conventional textiles predictably contain none of these plasticisers. Whereas levels above the limit found in coatings and prints, i.e. thermal transfer prints.

#### **NMP, DMAC, DMFA**

These are solvents used in the manufacture of fibres and coating systems. The limit values are comparatively high and should be verified in the case of a significant technical input.

### **Dyes**

The use of the dyes in textiles is relatively rare and requires additional testing.

### **Arylamines**

Primary aromatic amines mentioned are regulated as part of the banned azo dyes and are being tested accordingly. The investigation of the species described here: chlorides, acetates and sulfates are not possible with existing state-of-the-art testing methods.

The usual investigation on banned azo dyes seems sufficient since it also ensures that the specific substances mentioned here are not contained in the product.

### **Quinoline**

The substance is closely related to the PAHs, has a naphthalene-like structure and is also found in coal tar and thus possibly in materials in which also increased PAH occur. The substance can be determined together with the remaining PAHs. Resilient examinations are not yet sufficient.

**The experts at TÜV Rheinland have experience in the testing of clothing, textiles and footwear. We are your contact persons in test questions.  
Please do not hesitate to contact us if you have any questions.**

**For further technical information, please contact:**

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