

SGS INSTITUT FRESENIUS GmbH · Postfach 1261 · 65220 Taunusstein

XL-Tape International Sp z.o.o
Ul. Sciegienego 248

PL-25116 KIELCE
POLAND

Sample ID: 010/9259498
Commission No. 1403072
Customer ID: 10072116



Dr. Rainer Dargel / dg

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Chemical product testing

Taunusstein, 25/JUNE/2009

Analytical report: Chemical parameters

Test object : **Duct tape extreme**

General Information

Ordering date : 14/MAY/2009
Sample receipt : 18/MAY/2009
Testing period : 18/MAY/2009 – 19/JUNE/2009

Summary results

Parameter	Basis of assessment	Limits	Assessment
Cadmium	ChemVerbotsV	100 mg/kg	pass
PAH	ZEK 01.2-08	Cat. 1: <0,2 mg/kg BaP, <0,2 mg/kg Σ 16 EPA PAH Cat. 2: 1 mg/kg BaP, 10 mg/kg Σ 16 EPA PAH Cat. 3: 20 mg/kg BaP, 200 mg/kg Σ 16 EPA PAH	pass
Phthalate-Plasticizers	Directive 2005/84/EG, BedGgstV	1000 mg/kg (Sum DEHP, DBP und BBP)	pass
Nonylphenol	ChemVerbotsV	1000 mg/kg (Sum DINP, DIDP, DNOP)	pass
Polychlorinated biphenyles (PCB)	ChemVerbotsV	50 mg/kg	pass
Dimethylfumarate	2009/251/EG	0,1 mg/kg	pass
Benzene, Toluene	ChemVerbotsV	1000 mg/kg (Benzene)	pass

Overall assessment **pass**

For more information please refer to the next pages

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1. Photo documentation



Subsample	Sample designation
1	Silver tape

2. Applied analytical techniques

Sample preparation	Pulverization/Homogenization of the sample material
Cadmium	Inductively coupled plasma atomic emission spectrometry acc. EN ISO 11885 after microwave digestion with nitric acid/ hydrogen peroxide
Polycyclic aromatic hydrocarbons (PAH)	Testing according to ZEK 01.2-08
Polychlorinated biphenyles (PCB), Plasticizers, Nonylphenole, Dimethylfumarate	Gas chromatography with mass selective detector after extraction with toluene
Benzene, Toluene	Gas chromatography with mass selective detector, headspace technique

3. Analytical findings

3.1 Cadmium

Subsample		-1
Cadmium (Cd)	mg/kg	<1

The German Ordinance on the Prohibition of Chemicals (ChemVerbotsV) prohibits the marketing of substances and compositions containing more than 100 mg/kg of cadmium (Appendix 1 Paragraph 18).

3.2 Polycyclic aromatic hydrocarbons (PAH)

Subsample		-1
Category		2
Benzo(a)pyren	mg/kg	<0,2
Sum 16 PAH according to EPA	mg/kg	0,5

The Board for Technical Work Equipment and Consumer Products (AtAV) has decided that the consideration of PAH for the GS certification of products has to be mandatory. The limits for PAH that must be met for materials of consumer goods are stated as follows (ZEK 01.2-08):

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- Category 1: Materials which are meant to put in the mouth as well as toys for children <36 months
 Limits: Benzo [a] pyrene <0,2 mg/kg (n.n.), Sum 16 PAH (EPA): <0,2 mg/kg (n.d.)
- Category 2: Materials with foreseeable skin contact >30 s (prolonged skin contact) and toys not covered by category 1
 Limits: Benzo [a] pyrene 1 mg/kg, Summe 16 PAK (EPA): 10 mg/kg
- Category 3: Materials with foreseeable skin contact <30 s (short time skin contact) or without skin contact
 Limits: Benzo [a] pyrene: 20 mg/kg, Summe 16 PAK (EPA): 200 mg/kg

In the sum of all 16 PAH according to EPA (Environmental Protection Agency) only those with a result over the 0.2 mg/kg shall be taken into account.

Under the REACH regulation Anthracene is also part of the ECHA candidate list of Substances of Very High Concern (SVHC) of 28.10.2008. If Anthracene is present above 0.1% (w/w), further obligations may apply.

Further information to be found at http://echa.europa.eu/doc/candidate_list/candidate_list_obligations.pdf

3.3 Polychlorinated Biphenyles

Subsample	1
Sum 6 DIN-PCB	mg/kg <1

The German Ordinance on the Prohibition of Chemicals (ChemVerbotsV) prohibits the marketing of substances and compositions containing more than 50 mg/kg of polychlorinated biphenyles (Appendix 1 Paragraph 13).

3.4 Phthalate-Plasticizers

Subsample	-1
Diisononylphthalat (DINP)	mg/kg <250
Di-(2-ethylhexyl)phthalat (DEHP)	mg/kg <100
Di-n-butylphthalat (DBP)	mg/kg <100
Diisodecylphthalat (DIDP)	mg/kg <250
Di-n-octylphthalat (DNOP)	mg/kg <100
Benzylbutylphthalat (BBP)	mg/kg <100
Sum DEHP, DBP, BBP	mg/kg n.n.
Sum DINP, DIDP, DNOP	mg/kg n.n.

Legally binding limits for the phthalate plasticizers DINP, DEHP, DIDP, DNOP and BBP are found in directive 2005/84/EC and in the German Consumer Goods Ordinance (BedGgstV). A limit of 1000 mg/kg is given for the total amount of DEHP, DBP and BBP. Furthermore a limit of 1000 mg/kg is given for the total amount of DINP, DIDP and DNOP for toys and baby articles which can be taken into the mouth by children. Strictly speaking these regulations are only valid for toys and baby articles, thus the applicability for e.g. office articles is limited. To our knowledge there are no legally binding laws or directives existing for the use of plasticizers in the tested articles.

Under the REACH regulation DEHP, DBP, and BBP are also part of the ECHA candidate list of Substances of Very High Concern (SVHC) of 28.10.2008.

3.5 Nonylphenol

Subsample	-1
Nonylphenol	mg/kg <100

Acc. to ChemVerbotsV (Appendix 1 Part 27) nonylphenol is banned in compositions with a concentration of more than 0.1 %. The prohibitions listed under letters a) – i) however do not include the usage in plastic material. To our knowledge there are no legislated limits or regulations valid for the usage of nonylphenol within plastic material.

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3.6 Dimethylfumarate

Subsample		-1
Dimethylfumarate	mg/kg	<0,1

Acc. to decision 2009/251/EC the production and marketing for products containing Dimethylfumarate in a concentration of more than 0,1 mg/kg in the article or parts of the article is prohibited.

3.7 Benzene, Toluene

Subsample		-1
Benzene	mg/kg	<0,05
Toluene	mg/kg	2,9

The German Ordinance on the Prohibition of Chemicals (ChemVerbotsV) prohibits the marketing of substances and compositions containing more than 1000 mg/kg of Benzene or Toluene (Appendix 6 Paragraph 1).

4. Assessment

The contents of the parameters tested are below their respective limits.

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