

Restricted Substances Guidance



Apparel and Footwear International R&L Management Group

The AFIRM RSL Guidance List

The AFIRM Guidance List - Content, Structure and Meaning

by

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History

- **Development time: nearly 6 years**
- **Concepts reviewed: 6**
- **Final Approach: Most condensed, easiest accessible, usable in real bulk production locations**

To get best benefit out of it, the simultaneous study of the AFIRM Supplier Tool Kit is highly recommended

<http://www.afirm-group.com/AFIRMSupplierToolkitFinalJune6.pdf>

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The Meaning & What it is

One Harmonized Set of Information along the Supply Chain

Policy Statement

This AFIRM RSL Guidance creates a compilation of commonly defined pairs of "lowest limit" plus corresponding "most suitable test method" as internally set by each individual AFIRM member brand. This Guidance should leverage AFIRM's mission

"To reduce the use and impact of harmful substances in the apparel and footwear supply chain"

by providing one single set of information for a maximum and in-depth implementation within the supply chain.

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Apparel and Footwear International RSL Management Group

Legal Statement



The Apparel and Footwear International RSL Management (AFIRM) Group has created the following Restricted Substance Guidance to assist and guide supply-chain participants seeking to increase product quality and safety, or reduce their environmental impact, by limiting the use of certain substances ("AFIRM RSL Guidance"). The AFIRM RSL Guidance constitutes information from AFIRM only, and does not represent any individual AFIRM member.

The AFIRM RSL Guidance is a review of all AFIRM brand RSLs, in place on March 1, 2012, which reflects:

1. The most stringent substance limit.
2. The corresponding test method.

Some examples of uses for the AFIRM RSL Guidance, depending on the objectives of the user, include:

1. Providing a tool for vendors to establish chemical management knowledge and processes.
2. Building base compliance with AFIRM member chemical restrictions.
3. Providing a common base for testing products, which may be accepted by multiple AFIRM brands. AFIRM member companies determine and communicate to their vendors their testing requirements and acceptance of test reports.

Note: This AFIRM RSL Guidance is not intended and does not establish any industry standard of care. The AFIRM RSL Guidance may not always provide the most appropriate approach for any individual company's chemical management program. Many brands have implementation guidelines, and suppliers must follow those guidelines, where required.

The AFIRM RSL Guidance does not constitute legal advice and is not a substitute for legal advice. There is no warranty, express or implied, as to the completeness or utility of the information contained in the AFIRM RSL Guidance, including, without limitation, that the information is current and error-free. AFIRM disclaims liability or any kind whatsoever resulting from any use of or reliance on the AFIRM RSL Guidance.

The AFIRM RSL Guidance List

Limitations & What it is not

Concerns: Anti-competition and Anti-trust Laws

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Chances and Opportunities

Possible Multi-Brand Usage of Test Reports

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Parameters



Colour Coding
Historically widely used / High Occurrence level and/or regulated by Law
Historic known usages / Mid Occurrence Level
Unlikely to be found, (and/or) not intentionally used / Low Occurrence Level

Substance / Material	Lowest Limit	Suitable Method Sample Prep.	Suitable Method Measuring	Colour Coding
Antimony (Sb) extractable (CAS.No.: 7440-58-0)				
Textile	2 ppm	EN ISO 105-04 (2006)	EN ISO 17294-2	●●
Leather	n.d.	EN ISO 105-04 (2006)	EN ISO 17294-2	●●
Titan parts, metal parts, jewelry	2 ppm			●●
Antimony (Sb) total (CAS.No.: 7440-58-0)				
Textile	150 ppm for 100 % Polyester, 130 ppm for 50 % PEU 30 mg/kg (natural textile)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 11035 (2006)	●●
Arsenic (As) extractable (CAS.No.: 7440-39-2)				
Textile	1 mg/kg (skin) 0.3 ppm (all)	EN ISO 105-04 (2006)	EN ISO 17294-2	●●
Arsenic (As) total (CAS.No.: 7440-39-2)				
Textile	1 ppm (all)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Leather	1 ppm (all)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Asbestos (CAS.No.: multiple)				
(TLV) based on	1 mg/kg (skin)	U.S. EPA/600/R-60/116	U.S. EPA/600/R-60/116	●●
Cadmium (Cd) extractable (CAS.No.: 7440-43-8)				
Textile	0.1 ppm	EN ISO 105-04 (2006)	EN ISO 17294-2	●●
Cadmium (Cd) total (CAS.No.: 7440-43-8)				
Textile	1 ppm (all)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Leather	1 ppm (all)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Titan parts	40 ppm	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Barium (Ba) extractable (CAS.No.: 7440-39-3)				
Textile	1000	EN 71-3	EN ISO 17294-2	●●
Leather	1000	EN 71-3	EN ISO 17294-2	●●
Titan parts	1000	EN 71-3	EN ISO 17294-2	●●
Chromium (Cr) extractable (CAS.No.: 7440-47-3)				
Textile	1 mg/kg textile and artificial leather total, inorganic chromium 3s and Cr(VI)	EN ISO 105-04 (2006)	EN ISO 17294-2	●●
Leather	100 mg/kg	EN ISO 105-04 (2006)	EN ISO 17294-2	●●
Chromium (Cr) total (CAS.No.: 7440-47-3)				
Textile	100 mg/kg for Polyesters and washed wool extractable limit in leather	Micro-wave digestion with HNO ₃ /H ₂ O ₂	EN ISO 17294-2	●●
Chromium VI (CAS.No.: 1346-58-4)				
Leather	3 ppm	Leather aging: Draft CEN/TC 309 WG 2N 40: 2007-10	EN ISO 17294-2 EN ISO 17294-2	●●

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The AFIRM RSL Guidance List

Structure and Features

Colour Coding indicating Relevance

Colour Coding
Historically widely used / High Occurrence level and/or regulated by Law
Historic known usages / Mid Occurrence Level
Unlikely to be found, (and/or) not intentionally used / Low Occurrence Level

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Substance/Material	Lowest Limit	Suitable Method Sample Prep.	Suitable Method Measuring	Colour Code
Antimony (Sb) extractable (CAS.No.: 7440-36-0)				
Textile	2 ppm	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Leather	n.d.	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Trim parts, metal parts, jewelry	2 ppm			●●
Antimony (Sb) total (CAS.No.: 7440-36-0)				
Textile	150 ppm for 100 % Polyester, 130 ppm for 50 % PEU, 30 mg/kg (natural textile)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 11035 (2006)	●●
Arsenic (As) extractable (CAS.No.: 7440-39-2)				
Textile	Large ban n.d. (ppm) n.d.	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Arsenic (As) total (CAS.No.: 7440-39-2)				
Textile	1 ppm (n.d.)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Leather	1 ppm (n.d.)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Asbestos (CAS.No.: multiple)				
TLV/based on	Large ban	U.S. EPA/8008-60116	U.S. EPA/8008-60116	●●
Cadmium (Cd) extractable (CAS.No.: 7440-43-8)				
Textile	0.1 ppm	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Cadmium (Cd) total (CAS.No.: 7440-43-8)				
Textile	1 ppm (n.d.)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Leather	1 ppm (n.d.)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Trim parts	40 ppm	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Barium (Ba) extractable (CAS.No.: 7440-39-3)				
Textile	1000	EN 71-3	EN ISO 17294-2	●●
Leather	1000	EN 71-3	EN ISO 17294-2	●●
Trim parts	1000	EN 71-3	EN ISO 17294-2	●●
Chromium (Cr) extractable (CAS.No.: 7440-47-3)				
Textile	1 mg/kg textile and artificial leather trim, inorganic chromium 3+ and Cr6+	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Leather	100 mg/kg	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Chromium (Cr) total (CAS.No.: 7440-47-3)				
Textile	100 mg/kg for Polyesters and acetate wool extractable limit applies	Micro-wave digestion with HNO ₃ /H ₂ O ₂	EN ISO 17294-2	●●
Chromium VI (CAS.No.: 3546-58-4)				
Leather	3 ppm	Leather aging: Draft CEN/TC 309 WG 29 40: 2007-10	§ 64 LFGB 82: 02-11 (2006)	●●

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Structure and Features

- Substance/Material (+ CAS Nr. if available)
- Lowest Limit
- Suitable Method Sample Preparation
- Suitable Method Measuring

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Structure and Features – Example Lead

Parameters



Colour Coding				
Historically widely used / High Occurrence Level and/or regulated by Law				
Historic known usages / Mid Occurrence Level				
Unlikely to be found, (and/or) not intentionally used / Low Occurrence Level				
Substance/Material	Lowest Limit	Suitable Method Sample Prep	Suitable Method Measuring	Colour Coding
Lead (Pb) extractable (CAS-No.: 7439-92-1)				
Textile	Usage ban n.d. (0.2 ppm)	EN ISO 105-E04 (2009)	EN ISO 17294-2	●
Leather	Usage ban n.d. (0.2 ppm)	EN ISO 105-E04 (2009)	EN ISO 17294-2	●
Lead (Pb) total (CAS-No.:7439-92-1)				
Textile	40 ppm (all)	microwave digestion with H ₂ O ₂ /HNO ₃ lead in paint and surface coating: CPSIA Section 101 16 CFR 1303	EN ISO 17294-2	●
Leather	40 ppm (all)	microwave digestion with H ₂ O ₂ /HNO ₃ lead in paint and surface coating: CPSIA Section 101 16 CFR 1303	EN ISO 17294-2	●
Trim parts	40 ppm (all)	microwave digestion with H ₂ O ₂ /HNO ₃ lead in paint and surface coating: CPSIA Section 101 16 CFR 1303	EN ISO 17294-2	●

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Where to get it

In general, the regular visit of the AFIRM website <http://www.afirm-group.com> is recommended for being a valuable source of additional information, FAQ's etc.

The AFIRM RSL Guidance is available for free download at

<http://www.afirm-group.com/PDF/AFIRMGuidance27June2012.pdf>

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Substance/Material	Lowest Limit	Suitable Method Example Prep.	Suitable Method Measuring	Colour Cofixal
Antimony (Sb) extractable (CAS-No.: 7440-50-9)				
Textile	2 ppm	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Leather	n.d.	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Titan parts, metal parts, jewelry	2 ppm			●●
Antimony (Sb) total (CAS-No.: 7440-50-9)				
Textile	150 ppm for 100 % Polyester, 130 ppm for 50 % PEU 30 mg/kg (natural textile)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 11037 (2006)	●●
Arsenic (As) extractable (CAS-No.: 7440-39-2)				
Textile	1 mg/kg (skin)	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Arsenic (As) total (CAS-No.: 7440-39-2)				
Textile	1 ppm (sk)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Leather	1 ppm (sk)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Asbestos (CAS-No.: multiple)				
(LV) based on	1 mg/kg (skin)	U.S. EPA 8005-G0116	U.S. EPA 8005-G0116	●●
Cadmium (Cd) extractable (CAS-No.: 7440-43-8)				
Textile	0.1 ppm	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Cadmium (Cd) total (CAS-No.: 7440-43-8)				
Textile	1 ppm (sk)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Leather	1 ppm (sk)	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Titan parts	40 ppm	Micro-wave digestion with H ₂ O ₂ /HNO ₃	EN ISO 17294-2	●●
Barium (Ba) extractable (CAS-No.: 7440-39-3)				
Textile	1000	EN 71-3	EN ISO 17294-2	●●
Leather	1000	EN 71-3	EN ISO 17294-2	●●
Titan parts	1000	EN 71-3	EN ISO 17294-2	●●
Chromium (Cr) extractable (CAS-No.: 7440-47-3)				
Textile	1 mg/kg textile and artificial leather test, inactivated chromium 3s and Cr(VI)	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Leather	100 mg/kg	EN ISO 105-24 (2006)	EN ISO 17294-2	●●
Chromium (Cr) total (CAS-No.: 7440-47-3)				
Textile	100 mg/kg for PABA and oxidized wool extractable limit method	Micro-wave digestion with HNO ₃ /H ₂ O ₂	EN ISO 17294-2	●●
Chromium VI (CAS-No.: 3546-88-9)				
Leather	3 ppm	Leather aging: Draft CEN/TC 309 WG 29 40 2007-10	EN ISO 17294-2	●●

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Meaning in the Future ?

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Thank you for your kind Interest

