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SOFTLINES

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NEW STANDARD METHOD FOR AZO DYES IN LEATHER

The first European Standard for determination of azo colorants content in leather materials, ISO 17234-1, has been published by the European Committee for Standardization (CEN).

Some Azo dyes used for coloring a variety of consumer goods such as leather, clothes, and toys, can, under certain conditions, be reduced to form proven or suspected carcinogenic aromatic amines. As a consequence, entry 43 of the Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/61/EC)¹ has been enacted to restriction the marketing and use of certain dangerous substances and preparations (azo colorants). The aim is to control potentially harmful azo dyes that are used in specific textile and leather products that may come into direct and prolonged contact with human skin or oral cavities. The azo dyes concerned by this legislation are those which after reduction may form one or more of the 22 aromatic amines listed in the Regulation, in detected concentrations > 30 mg/kg for each.

The current legislation within Europe which bans the use of dyestuffs based on certain carcinogenic amine compounds for leather material cites the use of the industry test method ISO/TS 17234:2003. This method has not been validated for detecting 2-methoxyaniline and is unsuitable for analysis of 4-aminoazobenzene.

Thus, a need was existing to develop a suitable standardized test method in order to overcome this deficit. The new developed edition of ISO 17234-1:2010 supersedes ISO/TS 17234:2003. ISO 17234 has been technically revised and has recently been approved by the European Committee for Standardisation (CEN).

ISO 17234 consists of two parts, under the general title "Leather – Chemical tests for the determination of certain azo colorants in dyed leathers":

• Part 1: Determination of certain aromatic amines derived from azo colorants (ISO 17234-1:2010)



Part 2: Determination of 4aminoazobenzene (ISO/DIS 17234-2)²

The main difference between ISO 17234-1:2010 and ISO/TS 17234:2003 is that the number of azo dyes covered by the standard has been expanded from 18 to 22.



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Four regulated amines are newly added.

- o-aminoazotoluene (97-56-3)³
- 5-nitro-o-toluidine (99-55-8)³
- o-anisidine (90-04-0)
- 4-aminoazobenzene (60-09-3)

The ISO 17234-1:2010 methods may result in cleavage of 4-aminoazobenzene to the non-forbidden amines aniline and 1,4-phenylenediamine. Therefore, the presence of 4-aminoazobenzene will need to be further verified with the test method ISO/DIS 17234-2.

This newly published test method is explicitly relevant to leather manufacture and leather usage and provides help and protection for the leather tanning industry worldwide.

In view of the market trends and based on our continued method development, SGS is capable of offering a wide range of testing for various products. We are ready to provide you with further information. Please do not hesitate to contact us.



- ¹ Directive 2002/61/EC restriction on the marketing and use of certain dangerous substances and preparations (azocolourants)
- ² ISO/DIS 17234-2 is a draft version and is therefore subject to change and may not be referred to as an International Standard until published.
- ^{3.} o-aminoazotoluene (97-56-3) and 2-amino-4nitrotoluene (99-55-8), are further reduced to the 2-toluidine and/or 2,4-diaminotoluene.

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