TÜV Rheinland LGA Products - Information 07/2021

Eight substances new on the candidate list, July 8, 2021

The substances proposed in March (see TÜV Rheinland LGA Products - Information 04/2021) have now officially been added to the candidate list. For these substances, too, there is now a duty to inform and an obligation to make an entry in the SCIP database if the content exceeds 0.1% in the respective article.

The following information on the "new" substances has already been provided in the above-mentioned customer information.

A need for action is required for medium-chain chlorinated paraffins (point 3.), as these are regularly contained in products.

The following assessments can be made on the proposed substances:

1. 1,4- dioxane (CAS No. 123-91-1)

Dioxane is a solvent and characterized by the fact that it is relatively inert and well miscible with most organic solvents and water. Therefore it is suitable for various applications in chemical production.

At present, the substance is particularly problematic because it can be detected in traces in river and drink water and is difficult to remove from drinking water.

Residual levels cannot be ruled out in mixtures such as adhesives, paints and varnishes, detergents and cleaning agents and other products containing surfactants.

Notice:

In regard to SVHC, contents of 1,4-dioxane are only to be expected in traces far below 0.1 %.

2. 4,4'-(1-Methylpropylidene)Bisphenol; (Bisphenol B) (CAS No 201-025-1)

Bisphenol B is a compound related to bisphenol A with comparable application profile and properties. As with other bisphenols, it is thought to have endocrine disrupting properties (endocrine disruptor, hormone-like substance).

Bisphenol B is a monomer/starting material for the production of polycarbonates, epoxy resins and corresponding paint systems. In terms of reaction technology, traces of free bisphenol B (monomer) are still present in these polymers in the finished material (well below 0.1 %) if these plastics have been manufactured/cured according to the state of the art.

There are individual applications where bisphenol A and also B is used in non-polymerized, free form, e.g. thermal transfer paper (sales slips).

Notice:

The commonly used polymers based on bisphenol B and A contain levels of free bisphenol well below 0.1 %. For this reason, no further testing for these bisphenols with regard to SVHC is required for such materials.

3. Medium chain chlorinated paraffins (MCCP, > 80 % linear chloroalkanes with a chain length of C14 - C17)

Medium chain chlorinated paraffins (MCCPs) have been increasingly used in recent years as an alternative plasticizer (replacement of phthalates) with flame retardant properties for PVC and in some cases also for elastomers (TPR). These additional flame retardant properties make the use in cables and electrical appliances in attractive. On several occasions the limit for short-chain chlorinated paraffins (SCCP, legal limit 0.15 %) being exceeded because MCCP, depending on the quality/purity, are contaminated with SCCP.

It can thus be assumed that wherever small amounts of SCCP are found in PVC, MCCP are present as plasticizers in the medium % range.

Notice:

Use available test reports to verify whether SCCPs are present in the products you sell, even below 0.15 % or 0.1 %. In these cases, consider re-testing for MCCP.

PVC, TPE materials and TPR foams should be consistently tested for MCCP. The measurement of MCCP and SCCP is carried out in one procedure with justifiable additional effort.

4. Glutaraldehyde, (CAS No. 203-856-5)

A very reactive and therefore toxicologically not uncritical aldehyde with an irritating, unpleasant odour typical for this substance group. The substance is used as disinfectant, preservative (approved biocide) and tanning agent.
Glutaraldehyde is used especially in the tanning of "chrome-free" leathers. Levels of free glutaraldehyde above 0.1% are not to be expected in technically correct tanning.
In cosmetic products, glutaraldehyde is approved as a preservative in concentrations up to 0.1 %.

Notice:

No levels of glutaraldehyde above 0.1 % are expected in articles relevant with regard to SVHC.

5. Orthoboric acid, sodium salt (CAS No. 13840-56-7)

This is one of the various boron compounds used, as disinfectants, preservatives, bleaching agents in detergents and cleaning agents, flame retardants and wood preservatives (fungicide, insecticide).

From an analytical point of view, it is difficult to distinguish between the different compounds/ compound groups (borates, perborates, acids, salts).

Notice:

In articles made of plastics, textiles, leather and metal, contents of these substances are only to be expected in traces below 0.1 %. In the case of wood, the use of wood preservatives containing boron cannot be ruled out and contents of more than 0.1 % are possible.

6. Alkylated phenols

Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP).

This group of substances, which is not very well defined, belongs to the group of long-chain alkylphenols, like the nonylphenol, which has been listed as SVHC for a long time. The side chain is not 9 carbons long, as is the case with nonylphenol, but in most cases contains 12 carbons in a linear or branched chain with portions of side chains that can also be 10 - 15 carbons long.

This is a UVCB substance, a substance with unknown or variable composition. (UVCB = Unknown or Variable composition, Complex reaction products or Biological materials).

Notice:

The analytics of this substance group is being built up. Experimental data on findings in articles are not yet available.

As the UVCB substance probably only occurs as an impurity in small quantities, we do not expect contents of more than 0.1 % in plastics (phenolic and formaldehyde resins), coatings or paints/lacquers/adhesives.

7. Bromopropanes:

2,2-bis(bromomethyl)propane1,3-diol (BMP),

2,2-dimethylpropan-1-ol,

tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA),

2,3-dibromo-1-propanol (2,3-DBPA)

These compounds are monomers, or intermediates in the production and use of flame retardants. It can be assumed that these precursors are converted and bound during the reaction in the final materials.

Notice:

In regard to SVHC, contents of these substances are only to be expected in traces below 0.1 %.

8. 2-(4-tert-butylbenzyl) propionaldehyde and stereoisomers (CAS No. 75166-31-3)

This synthetic aldehyde is a fragrance approved for use in cosmetics and smells like lily of the valley.

Use in cosmetics, detergents, cleaning products and room fragrances is given.

Notice:

In articles, levels of this substance exceeding 0.1 % are only to be expected if fragrances are added to products.

Further technical information can be obtained from:

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