

Update 2018-01

This update has the most up-to-date overview of occupational limit values (including the German health-based MAK-values of DFG and the statutory OEL's in Germany (TRGS900)). The latest health-based recommended values from the Health Council have also been added.

The numbers in DOHSBase Compare have also increased with this update:

- 22.100 unique substances in NL-Xtend
- 14.6000 substances with a unique EC number NL Xtend;
- 26.000 substances with an EC number but without a CAS number;
- 1.500 substances without an EC and CAS number (like welding fumes, wood dust, endotoxins);
- 400 substances with an EC number that are linked to two or more substances;
- More than 50.000 links between substances and OEL's, public REACH registrations and/or public classifications for CMR and allergy by the Dutch Health Council, IARC, NIOSH and AC-GIH;
- More than 3.500 links between substances and DOHSBase kick-off values;
- More than 70.000 substances with a harmonised classification in Europe (CLP-CLH), a classification evaluated by DOHSBase ("self-classification"), an indication that the substance meets the criteria for a classification according to REACH Annex III, or an Australian classification;
- Nearly 10.000 substances with a classification that can be used in the Compare mode (= replace a substance with a less harmful one) and 2.500 substances with a vapour pressure and an OEL for which the potential exposure risk (RAS) can be compared;
- Group measurement methods (lead, cadmium, etc.) are linked to individual (lead and cadmium) compounds) so that in total more than 90.000 substances and measurement methods are linked to each other
- 4.949 standardized measurement methods.

Changes in Sampling methods

The sampling methods of the German BIA have been adjusted. The BIA (has been merged years ago into IFA (in English: Institute for Occupational Safety and Health), part of DGUV (German Social Accident Insurance). The designation in DOHSBase Compare 'BIA #####' (with ##### as the number of the measurement method) has been changed to 'IFA-AM #####'. The (paid) versions of the measurement methods can be downloaded from the website <https://www.ifa-arbeits-mappedigital.de/> (in German).

In the 1980s and 1990s, the Dutch standardization organisation NEN developed standards for measuring methods for exposure to hazardous substances in the workplace atmosphere. These standards are published as Dutch Pre-standard (NVN) and are included in DOHSBase Compare (Tab Sampling Methods). Almost all NVN standards have been withdrawn. In 2018 we will replace the withdrawn NVN measuring standards with current ones, such as Dutch Practice Guidelines (NPR).

ECHA RAC documents included

The ECHA Risk Assessment Committee (RAC), at the request of the Executive Director of ECHA, issues an opinion on risks to human health and the environment with regard to other aspects

relating to the safety of substances on their own or in preparations or articles. Recently, the first RAC opinions on OELs have been published. Although the status of these recommendations is unclear in relation to the advice of SCOEL and national organizations (such as the Dutch Health Council), we have decided to include these RAC advisory values in DOHSBase Compare. Currently, two recommendations have been published: Arsenic acid and inorganic arsenic salts and 4,4'-methylene-bis- [2-chloroaniline] (MOCA). The RAC has not been able to draw up a health-based recommended exposure value for both substances.

There are RAC opinions in the making for Benzene, Acrylonitrile and Nickel and compounds. These will be published at the end of March 2018 and will be included in update 2018-02.

Dutch list of CMR-substances

In this update, the most recent legal Dutch list of carcinogenic, mutagenic or reproducible toxic substances and processes (SZW-list of CMR substances) of 2 January 2018 (Staatscourant the Netherlands, No. 21) is also included.

In the past period, we have also reviewed the substances that are adapted to the SZW list of CMR substances. For the carcinogenic substances, a distinction is made between List A (List of carcinogenic processes) and List B (List of carcinogenic substances).

In the case of groups (for example 'X and connections') we also show the CMR classification for as many of these compounds as possible. In the SZW-list this is not done.

Finally, the complex petroleum and coal derivatives in the SZW list are only provided with a group of EC numbers (EC numbers starting with 232, 263, 265-275, 277,), without further specification. There are many substances that fall into these groups of EC numbers, even substances that are not petroleum or coal derivatives. For the time being, we opted for the solution that for all substances that fall into one of the EC numbers of the petroleum / coal derivatives, we have added the following sentence in the Comments field: "*EG # starts with ###, SZW B- list 1st line related to (complex) petroleum or coal derivatives Check if possible the identity and origin, the classification via the <ECHA C & L> button in tab Properties or the health information on this tab Limits*". This remark is also made for non-petroleum or coal derivatives.

We are examining the possibilities to distinguish the group of (complex) oil or coal derivatives in a better way from the substances with the same EC numbers, which are not on the SZW list.

Hierarchy OEL's at conference NVvA 2018

During the upcoming conference of the Dutch Society for Occupational Hygiene (NVvA; on 11 and 12 April 2018) a session will be organized with the working title 'To align the Hierarchy of Occupational Exposure Limits'. The initiative for this session was taken by DOHSBase. The reason for this session is that users of DOHSBase Compare point to the lack of clarity of the position of the DNEL in the hierarchy of OELs (f.i. the Dutch SER Guideline Hazardous Substances (2007); Training OELs of the NVvA (2014); the hierarchy in DOHSBase Compare (since 1992). There are also international developments (Deveau 2015 fig. 1, prEN 689 2017).

The internationally lower position for DNEL's stems from what has been known since 2008 about the lesser scientific approach (default factors, prescriptive process based), lack of clarity about the reference period, ignoring of human and epidemiological data, OEL's for dust well above 10 mg/m³ and unrealistic high values for allergens (based on oral LD₅₀ values) (see e.g. BOHS-Exposure 2014¹).

In the session the necessity and the desired hierarchy will be presented from different perspectives. In a discussion with statements, it will be tested whether an accepted NVvA standard for hierarchy of OELs can be reached.

¹ Document available from: <http://www.tsac.nl/publicaties/2014-06-BOHS-Exposure-Vergelijking-OEL-DNEL.pdf>