



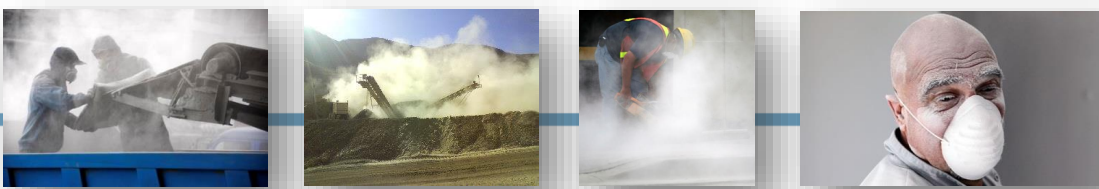
STAND VAN ZAKEN TECHNISCHE BEHEERSMAATREGELEN EN VEILIGE WERKWIJZEN

Workshop landelijke stoffendag

TNO innovation
for life

Wouter Fransman





PREVENTIE VAN BEROEPSZIEKTES CIJFERS EN FEITEN

- › 2.700 van de 4.100 jaarlijkse werkgerelateerde doden te wijten aan kanker.
- › Chronische longaandoeningen (longkanker, asthma, COPD)
- › Silica, asbest, lasrook, houtstof, organisch stof, endotoxinen, isocyanaten



DEFENSIE
Chroomverf ook in 2010 nog onveilig gebruikt

door onze verslaggever

DEN HAAG - Bij Defensie werd nog in 2010 niet overal veilig gewerkt met kankerverwekkende chroomverf.

ONDERZOEKEN
Nieuwe metingen POMS-sites

Bram v/d Heijden en Serge Sekhuis

DEN HAAG - Milieustrategie heeft ingezet op een advies van de Gezondheidsraad om samen met de POMS-sites te onderzoeken op de POMS-sites.

POMS RIVM werkt nu aan opzet onderzoek

341 meldingen van werkers met chroom6

Bram v/d Heijden en Serge Sekhuis

DEN HAAG - Sinds begin maart de coalitievergadering voor (oud)-medewerkers van defensie die hebben gewerkt met chroom-6- verf van kracht werd hebben zich er 341

Twee derde ziek van giftige verf Defensie

Enquête onder (oud-)personeel over gezondheidsklachten

Niels Bijker

Het merendeel van het Defensiepersoneel van de Nederlandse NAVO-bases waar met giftige verf is gewerkt, heeft gezondheidsklachten.

In een enquête onder ruim tweehonderd (oud-)medewerkers van deze defensiebases naar Amerikaanse materialen met giftige verf is kanker.

ingen zorgloket naar

ort person

s als getuig

verhaal van de verhalen van de claimants die ik in mijn onderzoek heb ontmoet, is dat ik hoop dat de verhalen over onrechtvaardig bewijs dat minister Hennis nog in het RIVM-onderzoek klaar is te zetten. Bij de verhalen in de Defensie ook de landbouwsector om vragen te stellen. Alleenlijk wilde Bedrijfs

Ambitie: Terugdringen van beroepsziekten in Nederland die worden veroorzaakt door een te hoge blootstelling aan gevaarlijke stoffen op de werkplek



Bron: RIVM.

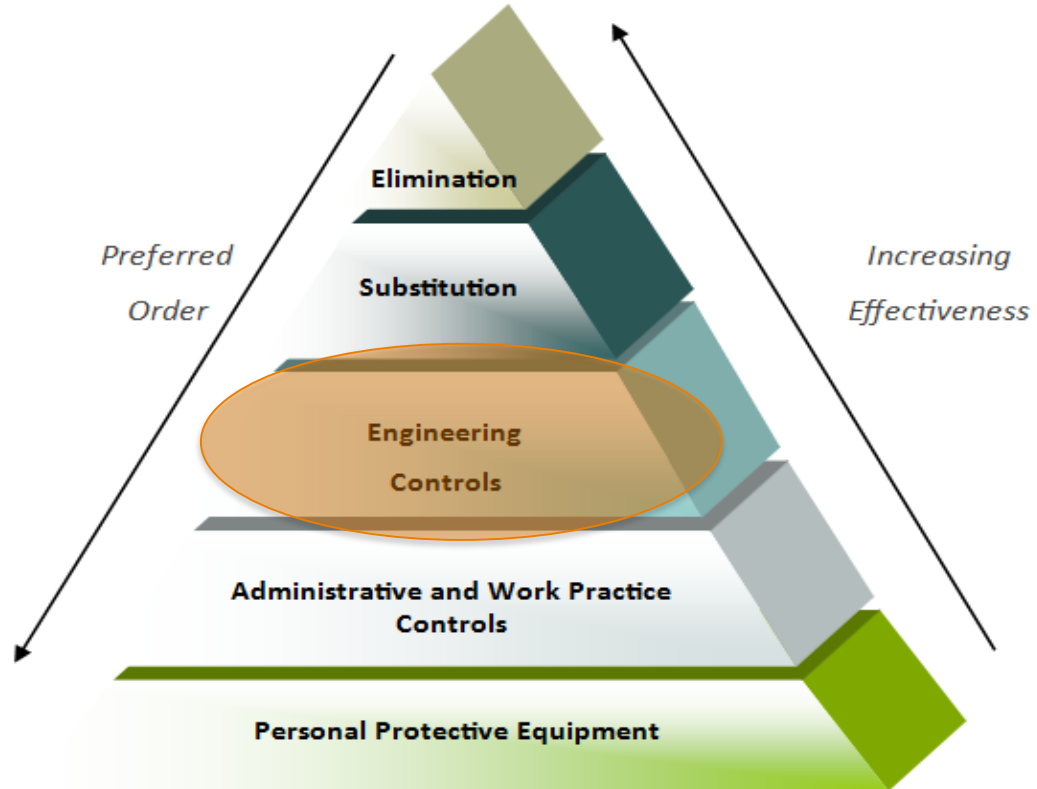
WHITE PAPER

WERKGERELATEERDE KANKER UITBANNEN

- › **Aanleiding:** Nog steeds overlijden veel mensen aan werkgerelateerde kanker als gevolg van blootstelling aan stoffen
- › **Doelstelling:** Aandacht vragen voor de aanpak van werkgerelateerde kanker. Preventie van beroepsziekten levert zowel werkenden, werkgevers als de samenleving veel op: beperking van verzuimkosten en arbeidsongeschiktheid, betere inzetbaarheid en participatie, tevreden werkenden en het behoud van een goede gezondheid.
- › **Focus:** Bouwsector (silica), Metaalsector (lasrook en chroom 6), Houtverwerkende industrie (hardhoutstof)
- › **Aanpak:** TNO is ervan overtuigd dat door een combinatie van technologische oplossingen, gedragsverandering bij werkgevers en werknemers, en effectieve handhaving van de regels, blootstelling aan kankerverwekkende stoffen is uit te bannen.
- › **Tijdslijn:** white paper verscheen 25 september 2017



HIERARCHY OF RISK MANAGEMENT MEASURES



www.stofvrijwerken.tno.nl

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STOFVRIJ WERKEN

WERKGERELATEERDE KANKER UITBANNEN: KLEINE INVESTERING, GROOT EFFECT

LEES DE WHITEPAPER

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TAAL:

ZOEKEN

HOOFD... MINISTERIE SZW INNOVATIE

DUST-FREE WORKING

MAKITA VACUUM CLEANER VC2512L AND DRILLS

IN COMBINATION WITH SEVERAL DRILLS

MAKITA VACUUM CLEANER VC2512L
with 3.5 liter @ 32 mm hose (or registered)

Booth dustfree system GDE 30

Several drills

aan met **ProActiv**
More information is available on www.makita.nl

Responsibility use: 2000 borstels per 8-hour working day in sand / fine blocks

CONTACT
For details on the use of this label and its interpretation refer to the TNO website below:

DUSTFREEWORKING.TNO.NL

TNO
Soestermeerstraat 97K
2628 WK, Delft
Postbus 48
2600 AA Delft
T 060 860 33 24
E w.vrij@tno.nl

8 hours
sandstone block

8 hours
concrete / brick

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...processen. Doelstelling is de blootstelling aan kankerverwekkende stoffen te minimaliseren.



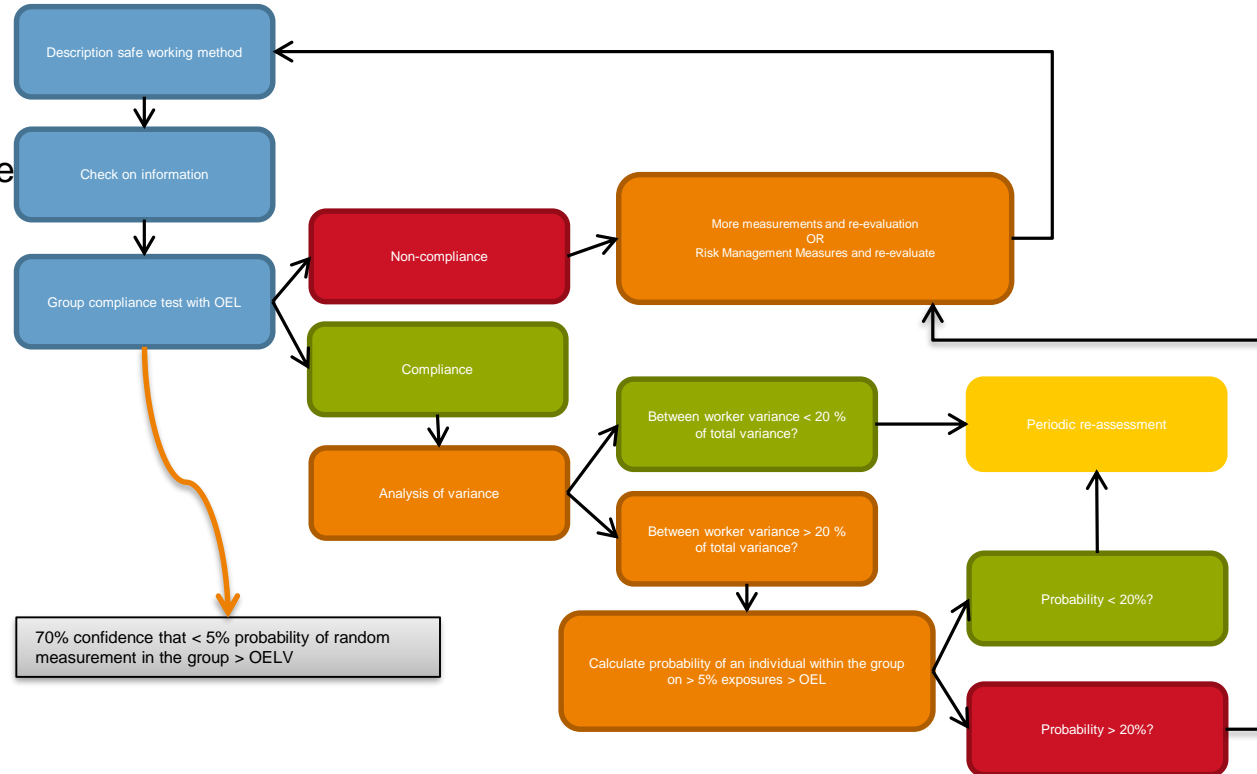
VALIDATIE VEILIGE WERKWIJZE MET MEETGEGEVENS

Validiteitsaspecten

- › Beschikbaarheid van contextuele informatie
- › Variabiliteit en precisie
- › Validiteit, zowel intern als extern

Referentie

- › Internationale consensus in het wetenschappelijke veld van de blootstellingswetenschap



VALIDATIE VEILIGE WERKWIJZE MET MODELLEN

Validatie studies

Use of the MEGA Exposure Database for the Validation of the Stoffenmanager Model

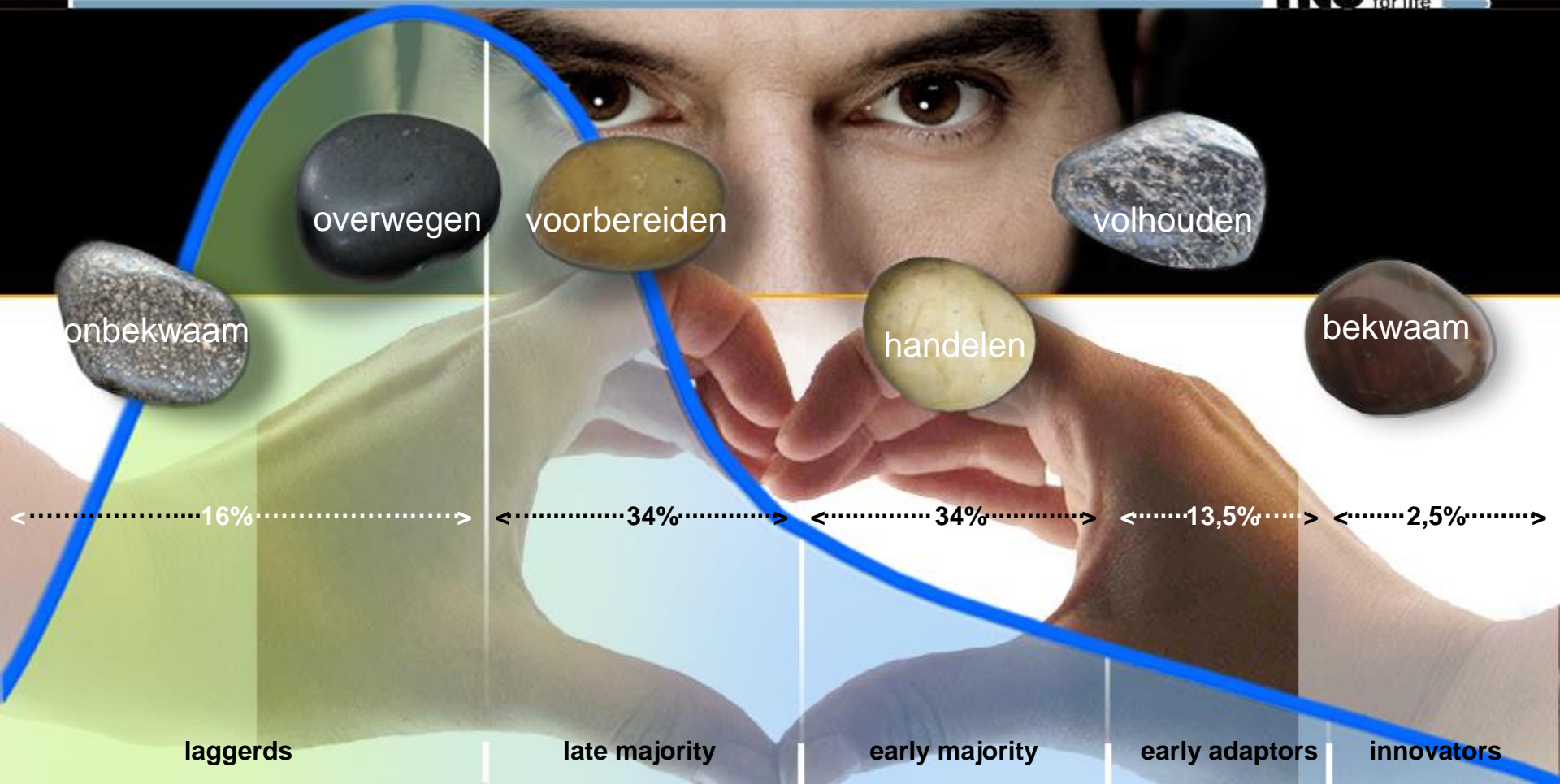
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Received 13 January 2011; in final form 4 October 2011; published online 7 November 2011

Ann. Occup. Hyg., Vol. 56, No. 4, pp. 426–439, 2012
© The Author 2011. Published by Oxford University Press
on behalf of the British Occupational Hygiene Society
doi:10.1093/annhy/mer007





THE FACTS FORMALDEHYDE

Formaldehyde is a sensitizing agent that can cause an immune system response upon initial exposure. Acute exposure is highly irritating to the eyes, nose, and throat and can make anyone exposed cough and wheeze. Subsequent exposure may cause severe allergic reactions of the skin, eyes and respiratory tract and can cause asthma-like respiratory problems and skin irritation such as dermatitis and itching. Formaldehyde is classified as Group 1 carcinogen by the IARC, meaning it is carcinogenic to humans (nose-cancer).

THE FACTS FORMALDEHYDE

Formaldehyde is a so-called sensitizer. Acute exposure may cause irritation and can cause an allergic reaction. Subsequent exposure may cause severe allergic reactions of the skin, eyes and respiratory tract and can cause asthma-like respiratory problems and skin irritation such as dermatitis and itching. Formaldehyde is classified as Group 1 carcinogen by the IARC, meaning it is carcinogenic to humans (nose-cancer).

Where the risks occur

Formaldehyde is used in a wide range of products, including formalin, which is used in laboratories and in the production of various goods. It is also used in the production of various goods, including formalin, which is used in laboratories and in the production of various goods.

More about the substance

Formaldehyde is a colorless, strong-smelling gas often found in aqueous (water-based) solutions, commonly used as a preservative in medical laboratories and museums. Formaldehyde is also found in many products such as chemicals, particle board, household products, glues, permanent press fabrics, paper product coatings, fiberboard, and plywood. It is also widely used as an antimicrobial, fungicide, germicide and disinfectant.

THE FACTS FORMALDEHYDE

About 900,000 workers in 28 European countries are employed by companies that produce or use formaldehyde.

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Where the risks occur

Exposure to formaldehyde occurs in health care, funeral, textile and paper industry. Workers can inhale formaldehyde as a gas or vapor or absorb it through the skin as a liquid. They can be exposed during the treatment of textiles and the production of resins. In addition, to healthcare professionals and medical lab technicians, groups at potentially high risk include mortuary workers as well as teachers and students who handle biological specimens preserved with formaldehyde or formalin.

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How symptoms develop into disease

Breathing in formaldehyde a lot can lead to symptoms like a sore throat, coughing, stinging eyes and nose/tears. Some people are more sensitive than others, so an exposure that causes no problems for some people can make other people sick or uncomfortable.

Formaldehyde is known to cause cancer. The higher the level and the longer the exposure, the greater the chance of getting cancer (cancer of the nose and throat). Exposure to formaldehyde might increase the chance of getting cancer even at levels too low to cause symptoms.

Latency period between exposure and formaldehyde-related nose-cancer varies strongly from 2 years for some acute types of cancer to up to 75 years.

What you can do

Perform proper exposure measurements, so it is known when actions should be taken. Inform workers about the risks and preventive measures.

Use a risk assessment to control exposure through design and engineering modifications, such as installing local exhaust ventilation. To prevent product release into the workplace, it may be necessary to use stringent control measures such as process enclosure. Label all mixtures or solutions composed of high percent formaldehyde. Personal protective equipment, such as respirators, is a short-term solution for reducing exposure and should only be used as last resort.



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THE FACTS A DUST

Over 10 million workers in the European Union are exposed to dust. The majority of these people are either employed in the sector of making products used in construction such as bricks, tiles, or in the sector of making products used in agriculture such as fertilizers.

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SOLUTIONS AND GOOD PRACTICES? WWW.ROADMAPONCARCINOGENS.EU FORMALDEHYDE

References: NIOSH, 1998a; gva; CDC; CCOHS



› **BEDANKT VOOR UW AANDACHT**

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Voor meer inspiratie:
[TIME.TNO.NL](https://www.time.tno.nl)

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