

# Control Banding: Bridging the Gap between Occupational Physicians and Occupational Hygienists for an Integrated Risk Management

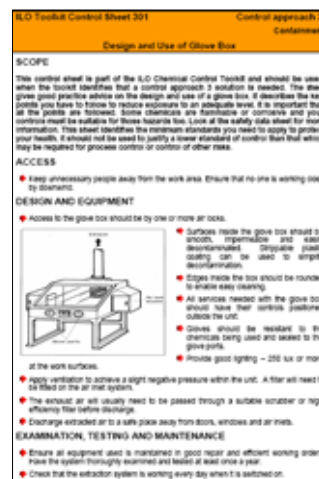
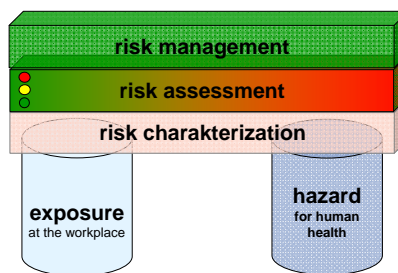
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## Risk communication ?

**physician:** There must be something wrong at the workplaces, where the employees have to coat metal frames with a paint brush.  
**hygienist:** It's all o.k., I see no problem. Last year we've installed local exhaust ventilation (LEV) at all work benches.  
**physician:** But the results of medical checkups and biomonitoring are worrying, the employees must be exposed to chemicals.  
**hygienist:** I've done several measurements, chemical exposure has always shown to be below the Occupational Exposure Limit (OEL).  
**physician:** And what's about dermal exposure?  
**hygienist:** The employees always wear rubber gloves for protection.  
**physician:** I don't understand ...

## A multi-professional approach with Control Banding

**physician:** What do we know about exposure?  
**hygienist:** The employees work with paint buckets of 20 kg. And the boiling range has a lower limit of 120 °C. In terms of Control Banding this means a **medium quantity** and a **medium volatility**.  
**physician:** And what are the results from measurements?  
**hygienist:** After installation of **LEV** workplace measurements have shown, that the OEL of one component of the paint mixture is met.  
**physician:** And what's about the other components?  
**hygienist:** They have no OEL.  
**physician:** What protection measures are used for the transfer of the painted frames to the shelves for drying?  
**hygienist:** There's **general ventilation** ...



**physician:** What do we know about health hazards?  
**hygienist:** Let's have a look into the Safety Data Sheet.  
**physician:** The paint may cause damage to organs through prolonged or repeated exposure (H 373). It's also a skin sensitizer (H 317).  
**hygienist:** In Control Banding this means **hazard group C (inhalation)** and **HC (dermal)**!  
**physician:** ... and see, the producer recommends nitrile gloves for dermal protection.  
**hygienist:** Oh! I've overseen this. May be, that rubber gloves are not adequate for protection ...  
**physician:** This can be translated into Control Banding with **long skin contact** and a **large effective area**.

## Risk from exposure by inhalation



## Risk from dermal exposure



**physician:** The Control Banding scheme clearly demonstrates the need of **containment** to prevent the employees from chemical risks. Now I understand the results from medical surveillance. We've to install glove boxes or similar containments at those workplaces. That will be expensive ....  
**hygienist:** **There's better way to move forward. Let's look for another paint, which is not classified as hazardous ....**

## Modern prevention of chemical risks

Occupational hazards are omnipresent at workplaces all over the world with a significant impact on workers' safety and health. ILO estimated that in 2005 nearly 2.3 million people have died as a result of occupational risks. Even in industrialized countries significant gaps in compliance with OSH regulations can be still observed, especially in small and medium enterprises (SME). The global development strategy 2010 - 2015 of the International Technical Group (ITG) "Control Banding" of WHO and ILO supports solutions, that will help to bridge the gap between occupational physicians and occupational hygienists, to integrate their occupational health roles and to strengthen prevention.

Control banding (CB) offers tools for risk assessment, which can be applied without specific expert knowledge. With easy available information an appropriate control strategy for a working situation or task can be selected. Two-page Control Guidance Sheets (CGS) describe adequate control measures. Starting with booklets and files for internet download 10 years ago, the second generation of CB tools offers practical gadgets, like the EMKG pocket disk, and mobile applications for direct use at workplaces. More and more Control Banding becomes part of training units and tertiary education for OSH professionals.

Gadgets and mobile applications can help to make risk assessment and management more transparent for all "players" in occupational safety and health. This also covers the necessary communication of occupational physicians and occupational hygienists to integrate generic and individual needs into well balanced and accepted solutions to prevent workers' safety and health.

Control Banding tools can help to strengthen a multidisciplinary approach in OSH practice. They offer crystallized expert knowledge on specific risk factors for being applied by non-experts. In future risk management toolboxes that cover relevant risk factors at work, will hopefully further reduce risks from work and strengthen prevention.

## Some Control Banding tools



EMKG - Einfaches Maßnahmenkonzept Gefahrstoffe  
Easy-to-use workplace control scheme for hazardous substances  
[www.baua.de/emkg](http://www.baua.de/emkg)



COSHH Essentials  
Easy steps to control chemicals  
[www.coshh-essentials.org.uk/](http://www.coshh-essentials.org.uk/)



Stoffenmanager  
Healthy and safely working with dangerous substances  
[www.stoffenmanager.nl](http://www.stoffenmanager.nl)  
<https://gestis-stoffenmanager.dguv.de/Default.aspx>



[www.gtz.de/de/dokumente/Guide\\_E\\_300708.pdf](http://www.gtz.de/de/dokumente/Guide_E_300708.pdf)



International Chemical Control Toolkit (ICCT)  
A scheme for protection against harmful and dangerous chemicals in the workplace  
[www.ilo.org/legacy/english/protection/safework/ctrl\\_banding/toolkit/icct/index.htm](http://www.ilo.org/legacy/english/protection/safework/ctrl_banding/toolkit/icct/index.htm)

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