

### CONTROL BANDING FOR RISK ASSESSMENT

Hazard class How dangerous is the product?	Exposure class How high is the exposure to the product?				
	A low	B average	C high	D very high	E extreme
1 low	III	III	III	II	I
2 average	III	III	II	II	I
3 high	III	II	II	I	I
4 very high	II	I	I	I	I

**Risk priority** I, II → 1. or 2. priority, to improve the situation at this workplace.  
 III → Safe working conditions at this workplace.

### EXPOSURE MODEL

- **E: Emission potential**, dustiness or vapour pressure of the product
- **H: Handling score**, describing the occupational activity (depending on e.g. amount of product and velocity of operation)
- $\eta_{lc\_nf}$ : **Local control**, local exhaust ventilation, enclosure, wetting
- $\eta_{gv\_nf}$ : **General ventilation** and **room size**
- $\eta_{lc\_ff}, \eta_{gv\_ff}$ : Exposure through **co-workers**
- **A**: Background emission through **diffuse sources**
- $\eta_{imm}$ : **Segregation** of the worker from the emission source

$$C = ((E \cdot H \cdot \eta_{lc\_nf} \cdot \eta_{gv\_nf}) + (E \cdot H \cdot \eta_{lc\_ff} \cdot \eta_{gv\_ff}) + (E \cdot A)) \cdot \eta_{imm}$$

### HAZARDOUS SUBSTANCES

- **Hazard pictograms**



- **Labelling and safety data sheet (SDS)**

**Sicherheitsdatenblatt**  
gemäß Verordnung (EG) 1907/2006

Handelsname: Abbeol-Gel 170

**2. Mögliche Gefahren**

**Flamme (H228):** Ausströmen (H252)

**Schwermetalle (H373):** Gefahr für die Umwelt (H411)

**Gefahrenhinweise**  
H228 Flamigheit und Dampf entzündbar.  
H373 Gefahr für die Umwelt durch Freisetzung von Schwermetallen.

**Sodium Hypochlorite Solution**  
(10-15% Available Chlorine)

Corrosive  
Sodium Hypochlorite 10-30%  
Sodium Hydroxide <1%  
UN 1791 2X

**DANGER**  
Causes severe skin burns and eye damage  
Very toxic to aquatic life

Wear protective gloves/protective clothing/eye protection/face protection.  
Refer to the Safety Data Sheet before use.  
ABC Chemical Corporation, 123 Chemical Road, Chemical Town, State, Telephone: 1800 123 456

## Hazardous substances?

## Stoffenmanager!

## Dangerous workplaces?

### DANGEROUS WORKPLACES

- **Handling of product that can liberate dust**
  - Weighing of dusty products for recepies
  - Mixing of cement, flour, or fertilizer
  - Filling, storing and dumping of dust containing bags
  - Spraying of powders (powder coating)
- **Handling of products that can liberate vapours or gases**
  - Measuring of small quantities in laboratories
  - Painting or laminating of surfaces with a brush/roller
  - Mixing/diluting of liquids by stirring
  - Spray-painting or coating of objects with vanish
- **Shaping of wood or stone**
  - Sawing, drilling, filing or sanding of wood
  - Cutting, drilling or polishing of stone
  - Demolition or crushing of stone

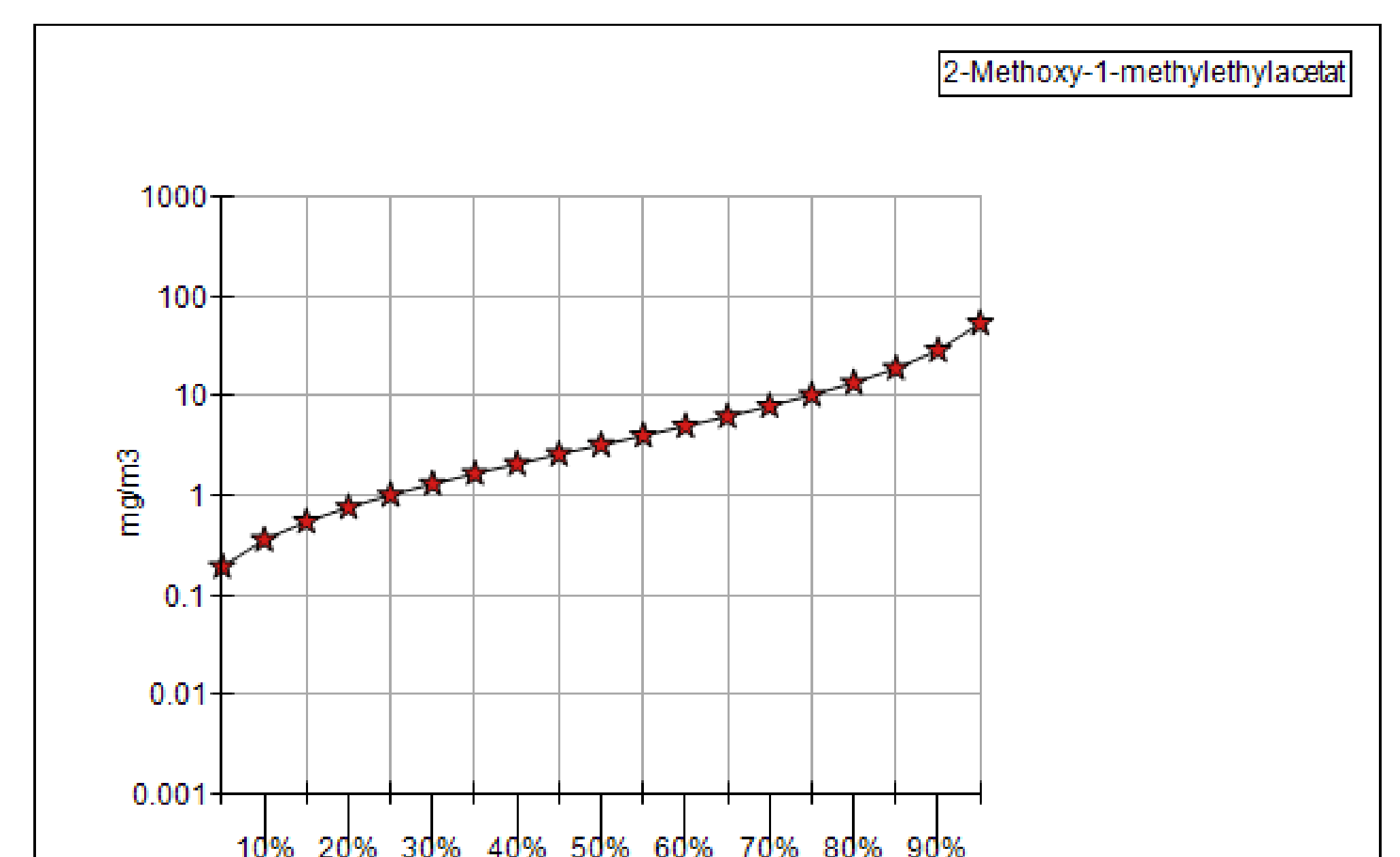
### DOCUMENTATION OF THE ACTION PLAN

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Name	Product	Location/Department	variant	Component	Concentration before and after applying measures	
					mg/m <sup>3</sup>	mg/m <sup>3</sup>
<input checked="" type="checkbox"/> AP Filling of bags, no LEV	Mortar	Warehouse	Change from powder to pellets - Change of a products physical appearance: Coarse dust	Inhalable dust	23.99	10.45
<input checked="" type="checkbox"/> AP Painting with brush	Paint Orange RAL 2008	Warehouse	Paint, LEV - Local exhaust ventilation	Aceton	474.87	266.68
				Butan-1-ol	29.42	16.52
				Xylol	37.18	20.88

### EXPOSURE ESTIMATION

2-Methoxy-1-methylethylacetat	mg/m <sup>3</sup>
50 percentile	: 3.22
75 percentile	: 10.27
90 percentile	: 29.05
95 percentile	: 54.41



### SUMMARY: Stoffenmanager offers

- a **control banding module** to assess the risk through inhalation and skin exposure,
- a second module, that calculates worker **inhalation exposure levels**,
- the possibility to select **control measures** within both modules,
- an overview of the risk assessment with selected control measures depicted in an **action plan**,
- CLP (EU-GHS) compatibility,
- worker educational material, like short PIMEX-movies and instruction cards,
- multiple **language versions** (English, German, Dutch, Finnish) through [www.stoffenmanager.nl](http://www.stoffenmanager.nl)
- and is also available as **GESTIS-Stoffmanager** ([www.dguv.de/ifa/gestis-stoffmanager](http://www.dguv.de/ifa/gestis-stoffmanager)) in German

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