

Allocation of Risk Mitigation Measures - From the Perspective of Germany

Beate Lichtenberg

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Overview

- Operators
 - Possibilities for risk mitigation
 - Reasons for allocating PPE

- Workers
 - Reasons for allocating risk mitigation measures / PPE

- Bystanders and Residents
 - Reasons for allocating risk mitigation measures

Allocation of Risk Mitigation Measures - Operators

Possibilities for risk mitigation

- Personal protective equipment (PPE)
(Guidelines for Requirements Concerning Personal Protective Equipment in Plant Protection, BVL-Directive (Federal Office of Consumer Protection and Food Safety), 2006)

and / or

- Special technical equipment
 - Difficulties concerning standardised exposure reduction

Allocation of PPE - Operators

Two different reasons for allocating PPE

- based on the identified hazard of the plant protection product as reflected by the classification and labelling of the product

and / or

- based on estimated systemic operator exposure according to the German model exceeding the AOEL for the active substance(s) without PPE

Allocation of PPE – Operators

- based on C&L of the plant protection product

C+L (Dir. 67/548 EEG)				C+L (Reg. (EU) 1272/2008)			Operators (without non-professionals) (BBA-Dir. Part I, 3-3 (Federal Biological Agency), 1993)					Ready-to-use dilution					
Sym- bol	Signal word	R- Phrase	Exposure route/ Category	Signal word	H-state- ment	Exposure route/ Category	Concentrate					High crops	Field crops and high crops outdoor and indoor				
							All products		Powder/ Dust	Liquid	Outdoor and indoor	Independent of vapour pressure of active substance		Vapour pressure a.s. < 10 ⁻² Pa ≥ 10 ⁻² Pa			
Xn	Harmful	20	inhalative	Warning	332	Acute Tox. 4 inh.											
Xn	Harmful	21	dermal	Warning	312	Acute Tox. 4 dermal	gloves m/l	suit + safety footwear m/l			head prot. appl	gloves appl	suit + safety footwear appl				
T	Toxic	23	inhalative	Danger	331	Acute Tox. 3 inh.	gloves m/l	suit + safety footwear m/l	particle-filtering half mask m/l	rubber apron m/l**	head prot. appl	gloves appl ^{##}	suit + safety footwear appl ^{##}	particle- filtering half mask appl ^{##}	gas-tight respiratory protection appl ^{##}		
T	Toxic	24	dermal	Danger	311	Acute Tox. 3 dermal	gloves m/l	suit + safety footwear m/l	face prot. m/l**	rubber apron m/l**	head prot. appl	gloves appl	suit + safety footwear appl	face prot.			
Xi	Irritant	38	dermal	Warning	315	Skin Irrit. 2	gloves m/l	suit + safety footwear m/l			head prot. appl	gloves appl	suit + safety footwear appl	face prot.			
Xn	Harmful	40	Carc. Cat. 3	Warning	351	Carc. 2	gloves m/l	suit + safety footwear m/l	particle-filtering half mask m/l	rubber apron m/l**							
Xi	Irritant	41	eye	Danger	318	Eye Dam. 1			goggles m/l**				goggles appl	particle- filtering half mask appl	gas-tight respiratory protection appl		
Contains XXX. May produce...		42 or 43	inhalative/ dermal	None	EUH208		gloves m/l	suit + safety footwear m/l	face prot. m/l**	particle-filtering half mask m/l [§]	rubber apron m/l**						
Xi	Irritant	43	dermal	Warning	317	Skin Sens. 1, 1A, 1B	gloves m/l	suit + safety footwear m/l	face prot. m/l**	particle-filtering half mask m/l [§]	rubber apron m/l**	head prot. appl	gloves appl	suit + safety footwear appl	face prot. appl	particle- filtering half mask appl	gas-tight respiratory protection appl
Xn	Harmful	63	Repr. Cat. 3	Warning	361d	Repr. 2	gloves m/l	suit + safety footwear m/l	particle-filtering half mask m/l	rubber apron m/l**							

* PPE: personal protective equipment fulfilling the requirements laid down in BVL-Dir. (2006)

E: exposure route

XXX: serves as a placeholder for substance name and CAS no

m/l: mixing/loading, appl: application

** not obligatory for WG formulations or water-soluble foil bags

§ in these cases goggles have to be worn instead of face protection

** if exposure is to be expected during application

Allocation of PPE – Operators

- based on C&L of the plant protection product ff.

C+L (Dir. 67/548 EEG)		C+L (Reg. (EU) 1272/2008)		Operators (without non-professionals) (BBA-Dir. Part I, 3-3 (Federal Biological Agency), 1993)				
Sym- bol	R- Phrase	Signal word	H-state- ment	Concentrate				
				All products		Powder/ Dust	Liquid	
Xi	38	Warning	315	gloves m/l	suit + safety footwear m/l			
Xi	41	Danger	318			goggles m/l**		

C+L (Dir. 67/548 EEG)		C+L (Reg. (EU) 1272/2008)		Ready-to-use dilution					
Sym- bol	R- Phrase	Signal word	H-state- ment	High crops	Field crops and high crops outdoor and indoor				
				Outdoor and indoor	Independent of vapour pressure of active substance		Vapour pressure a.s. < 10 ⁻² Pa ≥ 10 ⁻² Pa		
Xi	38	Warning	315	head prot. appl	gloves appl	suit + safety footwear appl	face prot. appl		
Xi	41	Danger	318				goggles appl	particle- filtering half mask appl	gas-tight respiratory protection appl

* PPE: personal protective equipment fulfilling the requirements laid down in BVL-Dir. (2006)

m/l: mixing/loading, appl: application

** not obligatory for WG formulations or water-soluble foil bags

Allocation of Risk Mitigation Measures / PPE - Workers

In any case

- as a minimum requirement for re-entry after spray applications (precautionary principle and starting condition for risk assessment)
“Treated areas / crops may not be entered until the spray coating has dried.”

or

- if the estimated systemic worker exposure exceeds the AOEL for the active substance(s) without PPE
Assigning of PPE, e.g. “Successive work on / in treated areas / crops may fundamentally not be carried out until 24 hours after applying the product. Within the first 48 hours, protective suits against pesticides and standard protective gloves (plant protection) are to be worn.”

For indoor applications (additionally)

- based on classification and labelling of the plant protection product with respect to risks via inhalation
“Ventilate greenhouses thoroughly before re-entry.”

Allocation of Risk Mitigation Measures – Bystanders and Residents (Adults and Children)

Two different reasons for allocating risk mitigation measures

- based on classification and labelling of the plant protection product in the case the ready-to-use dilution still provokes **local or other** health effects (e.g. corrosion, irritation or sensitisation) which are not covered by the **systemic** AOEL

or

- based on estimated systemic bystander and resident exposure exceeding the AOEL for the active substance(s) without reduction of exposure

Allocation of Risk Mitigation Measures – Bystanders and Residents (Adults and Children) ff.

Exposure reduction in both cases realised by

either

- use of drift reducing nozzles with reduction by 50 %, 75 % or 90 % (tested and listed by the Federal Research Centre for Cultivated Plants, i.e. Julius-Kuehn-Institute),

or

- definition of safety distances to persons, houses or gardens for application including the restriction of road / pedestrian traffic

or

- definition of conditions for restricted re-entry (time, other particular pre-requisites)

Thank you for your attention

Beate Lichtenberg

Federal Institute for Risk Assessment

Max-Dohrn-Str. 8-10 • 10589 Berlin, GERMANY

Tel. +49 30 - 184 12 - 0 • Fax +49 30 - 184 12 - 47 41

bfr@bfr.bund.de • www.bfr.bund.de