

## Annex to the extended Safety Data Sheet (eSDS)

Version:1.0

### Annex for 2-hydroxyethyl-methacrylate

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### Exposure Scenario V.

#### Formulation & (re)packing of substances and mixtures

##### I.1 List of use descriptors

<b>Sector(s) of Use</b>	SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites
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<b>Product categories [PC]:</b>	not relevant.
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<b>Name of contributing environmental scenario and corresponding ERC:</b>	
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<b>List of names of contributing worker scenarios and corresponding PROCs:</b>	<p>PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC5: Mixing or blending in batch processes</p> <p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC15: Use as laboratory reagent</p>
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### I.2.1 Contributing exposure scenario controlling worker exposure

<b>Process Categories:</b>	<p>PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC5: Mixing or blending in batch processes</p> <p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC15: Use as laboratory reagent</p>
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### Product characteristics

<b>Concentration of the substance in a mixture:</b>	Covers percentage substance in the product up to: 100%
<b>Physical form of the product:</b>	liquid
<b>Vapour pressure:</b>	not relevant
<b>Process temperature:</b>	not relevant

### Amounts used

This information is not available.

### Frequency and duration of use

	<b>Use duration:</b>	<b>Frequency of use:</b>	<b>Remarks</b>
<b>Exposure time</b>	> 4 h	5 days/week	

### Human factors not influenced by risk management

<b>Exposed skin surface</b>	960 cm <sup>2</sup> PROC8b PROC8a
<b>Exposed skin surface</b>	480 cm <sup>2</sup> PROC9 PROC5 PROC2 PROC4
<b>Exposed skin surface</b>	240 cm <sup>2</sup> PROC1 PROC3 PROC15

**Other given operational conditions affecting workers exposure**

Area of use	room size:	Temperature :	Ventilation rate	Remarks
Indoor use	not relevant.		not relevant.	PROC9, PROC 8b, PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC15

**Risk management measures (RMM)****Technical conditions and measures at process level (source) to prevent release**

See section 8 of the safety data sheet

**Technical conditions and measures to control dispersion from source towards the worker**

PROC9, PROC5, PROC2, PROC3, PROC4, PROC8a, PROC15:	Inhalation.: with local exhaust ventilation Effectiveness: 90 %.
PROC8b:	Inhalation.: with local exhaust ventilation Effectiveness: 95 %.

**Conditions and measures related to personal protection, hygiene and health evaluation**

PROC8b, PROC9, PROC5, PROC2, PROC3, PROC4, PROC8a, PROC15:	eye: Use suitable eye protection.
PROC1:	Worker - all relevant routes: If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes.
PROC8b, PROC9, PROC5, PROC4, PROC8a:	dermal: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 95 %.
PROC2, PROC3, PROC15:	dermal: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90 %.

See section 8 of the safety data sheet (Personal protection equipment)

**I.3 Exposure estimation****Environment:****Health:**

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**PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,6857 mg/kg bw/day	0,527473	EASY TRA	
Inhalation, systemic, long term	1,356 mg/m <sup>3</sup>	0,276662	EASY TRA	
Combined routes, systemic, long-term	0,8794 mg/kg bw/day	0,804135	EASY TRA	

**PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing):**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,3429 mg/kg bw/day	0,263736	EASY TRA	
Inhalation, systemic, long term	2,711 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,7302 mg/kg bw/day	0,81706	EASY TRA	

**PROC5: Mixing or blending in batch processes:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,6857 mg/kg bw/day	0,527473	EASY TRA	
Inhalation, systemic, long term	1,898 mg/m <sup>3</sup>	0,387327	EASY TRA	
Combined routes, systemic, long-term	0,9568 mg/kg bw/day	0,914799	EASY TRA	

**PROC1: Use in closed process, no likelihood of exposure:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0343 mg/kg bw/day	0,026374	EASY TRA	
Inhalation, systemic, long term	0,0542 mg/m <sup>3</sup>	0,011066	EASY TRA	
Combined routes, systemic, long-term	0,0420 mg/kg bw/day	0,03744	EASY TRA	

**PROC2: Use in closed, continuous process with occasional controlled exposure:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,1371 mg/kg bw/day	0,105495	EASY TRA	
Inhalation, systemic, long term	0,5423 mg/m <sup>3</sup>	0,110665	EASY TRA	
Combined routes, systemic, long-term	0,2146 mg/kg bw/day	0,216159	EASY TRA	

**PROC3: Use in closed batch process (synthesis or formulation):**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0686 mg/kg bw/day	0,052747	EASY TRA	
Inhalation, systemic, long term	1,6276 mg/m <sup>3</sup>	0,331994	EASY TRA	
Combined routes, systemic, long-term	0,3010 mg/kg bw/day	0,384742	EASY TRA	

**PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,3429 mg/kg bw/day	0,263736	EASY TRA	
Inhalation, systemic, long term	2,7119 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,7302 mg/kg bw/day	0,81706	EASY TRA	

**PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,6857 mg/kg bw/day	0,527473	EASY TRA	

Inhalation, systemic, long term	1,627 mg/m <sup>3</sup>	0,331994	EASY TRA	
Combined routes, systemic, long-term	0,9181 mg/kg bw/day	0,859467	EASY TRA	

**PROC15: Use as laboratory reagent:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0343 mg/kg bw/day	0,026374	EASY TRA	
Inhalation, systemic, long term	2,711 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,4216 mg/kg bw/day	0,579698	EASY TRA	

#### I.4 Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

This information is not available.

## Exposure Scenario VI.

### End use as monomer in formulations

#### II.1 List of use descriptors

Sector(s) of Use	SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites
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Product categories [PC]:	not relevant.
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Name of contributing environmental scenario and corresponding ERC:	
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List of names of contributing worker scenarios and corresponding PROCs:	<p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC5: Mixing or blending in batch processes</p> <p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC10: Roller application or brushing</p>
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	<p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation</p> <p>PROC12: use of blowing agents in manufacture of foam</p> <p>PROC15: Use as laboratory reagent</p> <p>PROC19: Hand-mixing with intimate contact and only PPE available</p>
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### II.2.1 Contributing exposure scenario controlling worker exposure

<p><b>Process Categories:</b></p>	<p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC5: Mixing or blending in batch processes</p> <p>PROC1: Use in closed process, no likelihood of exposure</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Use in closed batch process (synthesis or formulation)</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC10: Roller application or brushing</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation</p> <p>PROC12: use of blowing agents in manufacture of foam</p> <p>PROC15: Use as laboratory reagent</p> <p>PROC19: Hand-mixing with intimate contact and only PPE available</p>
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**Product characteristics**

<b>Concentration of the substance in a mixture:</b>	Covers percentage substance in the product more than 25% (PROC 8B,9,5,1,2,3,4,8A,14,12,15) Covers percentage substance in the product up to 1% (PROC19). Covers percentage substance in the product 5-25 % (PROC10 indoors, 13). Covers percentage substance in the product 1-5% (PROC10 (outdoors))
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<b>Physical form of the product:</b>	liquid
<b>Vapour pressure:</b>	not relevant
<b>Process temperature:</b>	not relevant

**Amounts used**

This information is not available.

**Frequency and duration of use**

	<b>Use duration:</b>	<b>Frequency of use:</b>	<b>Remarks</b>
<b>Exposure time</b>	> 4 h	5 days/week	PROC 8b, PROC9, PROC5, PROC1, PROC2, PROC4, PROC3, PROC8a, PROC13, PROC14, PROC12, PROC15
<b>Exposure time</b>	15 min	5 days/week	PROC10
<b>Exposure time</b>	15 min - 1 h	5 days/week	PROC19

**Human factors not influenced by risk management**

<b>Exposed skin surface</b>	960 cm <sup>2</sup> PROC8b PROC8a PROC10
<b>Exposed skin surface</b>	480 cm <sup>2</sup> PROC5 PROC2 PROC4 PROC13 PROC14 PROC9
<b>Exposed skin surface</b>	240 cm <sup>2</sup> PROC1 PROC3 PROC15 PROC12
<b>Exposed skin surface</b>	1980 cm <sup>2</sup> PROC19

**Other given operational conditions affecting workers exposure**

<b>Area of use</b>	<b>room size:</b>	<b>Temperature :</b>	<b>Ventilation rate</b>	<b>Remarks</b>
Indoor use	not relevant.		not relevant.	PROC 8b, PROC9, PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC13, PROC14, PROC12, PROC15, PROC19
Indoor and outdoor use.	not relevant.		not relevant.	PROC10

**Risk management measures (RMM)****Technical conditions and measures at process level (source) to prevent release**

See section 8 of the safety data sheet

### Technical conditions and measures to control dispersion from source towards the worker

PROC5, PROC2, PROC3, PROC4, PROC8a, PROC13, PROC14, PROC12, PROC15, PROC9:	Inhalation.: with local exhaust ventilation Effectiveness: 90 %.
PROC8b:	Inhalation.: with local exhaust ventilation Effectiveness: 95 %.

### Conditions and measures related to personal protection, hygiene and health evaluation

PROC8b, PROC9, PROC5, PROC2, PROC3, PROC4, PROC8a, PROC15, PROC10, PROC13, PROC19, PROC12, PROC14:	eye: Use suitable eye protection.
PROC1:	Worker - all relevant routes: If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes.
PROC8b, PROC5, PROC8a, PROC4, PROC10, PROC13, PROC19, PROC9:	dermal: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 95 %.
PROC2, PROC3, PROC14, PROC12, PROC15:	dermal: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90 %.

See section 8 of the safety data sheet (Personal protection equipment)

## II.3 Exposure estimation

**Environment:**

**Health:**

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#### PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities:

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,6857 mg/kg bw/day	0,527473	EASY TRA	
Inhalation, systemic, long term	1,356 mg/m <sup>3</sup>	0,276662	EASY TRA	
Combined routes, systemic, long-term	0,8793 mg/kg bw/day	0,804135	EASY TRA	

#### PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing):

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,3428 mg/kg bw/day	0,263736	EASY TRA	
Inhalation, systemic, long term	2,711 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,7302 mg/kg bw/day	0,81706	EASY TRA	

#### PROC5: Mixing or blending in batch processes:

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,6857 mg/kg bw/day	0,527473	EASY TRA	
Inhalation, systemic, long	1,898 mg/m <sup>3</sup>	0,387327	EASY TRA	



term				
Combined routes, systemic, long-term	0,9568 mg/kg bw/day	0,914799	EASY TRA	

**PROC1: Use in closed process, no likelihood of exposure:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0343 mg/kg bw/day	0,026374	EASY TRA	
Inhalation, systemic, long term	0,0542 mg/m <sup>3</sup>	0,011066	EASY TRA	
Combined routes, systemic, long-term	0,0420 mg/kg bw/day	0,03744	EASY TRA	

**PROC2: Use in closed, continuous process with occasional controlled exposure:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,1371 mg/kg bw/day	0,105495	EASY TRA	
Inhalation, systemic, long term	0,5423 mg/m <sup>3</sup>	0,110665	EASY TRA	
Combined routes, systemic, long-term	0,2146 mg/kg bw/day	0,216159	EASY TRA	

**PROC3: Use in closed batch process (synthesis or formulation):**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0686 mg/kg bw/day	0,052747	EASY TRA	
Inhalation, systemic, long term	1,627 mg/m <sup>3</sup>	0,331994	EASY TRA	
Combined routes, systemic, long-term	0,3010 mg/kg bw/day	0,384742	EASY TRA	

**PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,3429 mg/kg bw/day	0,263736	EASY TRA	
Inhalation, systemic, long term	2,711 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,7301 mg/kg bw/day	0,81706	EASY TRA	

**PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,6857 mg/kg bw/day	0,527473	EASY TRA	
Inhalation, systemic, long term	1,627 mg/m <sup>3</sup>	0,331994	EASY TRA	
Combined routes, systemic, long-term	0,9181 mg/kg bw/day	0,859467	EASY TRA	

**PROC15: Use as laboratory reagent:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0343 mg/kg bw/day	0,026374	EASY TRA	
Inhalation, systemic, long term	2,711 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,4216 mg/kg bw/day	0,579698	EASY TRA	

**PROC10: Roller application or brushing:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,8229 mg/kg bw/day	0,632967	EASY TRA	
Inhalation, systemic, long term	0,9761 mg/m <sup>3</sup>	0,199197	EASY TRA	
Combined routes, systemic, long-term	0,9623 mg/kg bw/day	0,832164	EASY TRA	

**PROC13: Treatment of articles by dipping and pouring:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,4114 mg/kg bw/day	0,316484	EASY TRA	
Inhalation, systemic, long term	3,254 mg/m <sup>3</sup>	0,663989	EASY TRA	
Combined routes, systemic, long-term	0,8762 mg/kg bw/day	0,980472	EASY TRA	

**PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,3429 mg/kg bw/day	0,263736	EASY TRA	
Inhalation, systemic, long term	2,711 mg/m <sup>3</sup>	0,553324	EASY TRA	
Combined routes, systemic, long-term	0,7301 mg/kg bw/day	0,81706	EASY TRA	

**PROC12: use of blowing agents in manufacture of foam:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0343 mg/kg bw/day	0,026374	EASY TRA	
Inhalation, systemic, long term	1,085 mg/m <sup>3</sup>	0,22133	EASY TRA	
Combined routes, systemic, long-term	0,1892 mg/kg bw/day	0,247703	EASY TRA	

**PROC19: Hand-mixing with intimate contact and only PPE available:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,7071 mg/kg bw/day	0,543956	EASY TRA	
Inhalation, systemic, long term	0,3253 mg/m <sup>3</sup>	0,066399	EASY TRA	
Combined routes, systemic, long-term	0,7536 mg/kg bw/day	0,610355	EASY TRA	

**II.4 Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES**

This information is not available.
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**Exposure Scenario VII.****Professional end use in formulations****III.1 List of use descriptors**

<b>Sector(s) of Use</b>	SU22: Professional uses: Public domain (administration,
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	education, entertainment, services, craftsmen)
<b>Product categories [PC]:</b>	not relevant.
<b>Name of contributing environmental scenario and corresponding ERC:</b>	
<b>List of names of contributing worker scenarios and corresponding PROCs:</b>	<p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC5: Mixing or blending in batch processes</p> <p>PROC10: Roller application or brushing</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC15: Use as laboratory reagent</p> <p>PROC19: Hand-mixing with intimate contact and only PPE available</p>

### III.2.1 Contributing exposure scenario controlling worker exposure

<b>Process Categories:</b>	<p>PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)</p> <p>PROC5: Mixing or blending in batch processes</p> <p>PROC10: Roller application or brushing</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation</p> <p>PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC15: Use as laboratory reagent</p> <p>PROC19: Hand-mixing with intimate contact and only PPE available</p>
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**Product characteristics**

<b>Concentration of the substance in a mixture:</b>	Covers percentage substance in the product more than 25% (PROC14, 15) Covers percentage substance in the product up to 5-25% (PROC8b,5,8a,13,9) Covers percentage substance in the product up to 1-5% (PROC10) Covers percentage substance in the product up to 1% (PROC19).
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<b>Physical form of the product:</b>	liquid
<b>Vapour pressure:</b>	not relevant
<b>Process temperature:</b>	not relevant

**Amounts used**

This information is not available.

**Frequency and duration of use**

	<b>Use duration:</b>	<b>Frequency of use:</b>	<b>Remarks</b>
<b>Exposure time</b>	1 - 4 h	5 days/week	PROC 8b, PROC15, PROC9
<b>Exposure time</b>	15 min	5 days/week	PROC19, PROC8a
<b>Exposure time</b>	15 min - 1 h	5 days/week	PROC5, PROC10, PROC13, PROC14

**Human factors not influenced by risk management**

<b>Exposed skin surface</b>	960 cm <sup>2</sup> PROC8b PROC8a PROC10
<b>Exposed skin surface</b>	480 cm <sup>2</sup> PROC13 PROC14 PROC5 PROC9
<b>Exposed skin surface</b>	240 cm <sup>2</sup> PROC15
<b>Exposed skin surface</b>	1980 cm <sup>2</sup> PROC19

**Other given operational conditions affecting workers exposure**

<b>Area of use</b>	<b>room size:</b>	<b>Temperature :</b>	<b>Ventilation rate</b>	<b>Remarks</b>
Indoor use	not relevant.		not relevant.	PROC 8b, PROC9, PROC5, PROC13, PROC14, PROC8a, PROC15
Indoor and outdoor use.	not relevant.		not relevant.	PROC10, PROC19

**Risk management measures (RMM)****Technical conditions and measures at process level (source) to prevent release**

See section 8 of the safety data sheet

### Technical conditions and measures to control dispersion from source towards the worker

PROC5, PROC8a, PROC13, PROC14, PROC15, PROC9:	Inhalation.: with local exhaust ventilation Effectiveness: 80 %.
PROC8b:	Inhalation.: with local exhaust ventilation Effectiveness: 90 %.

### Conditions and measures related to personal protection, hygiene and health evaluation

PROC8b, PROC9, PROC5, PROC8a, PROC15, PROC10, PROC13, PROC19, PROC14:	eye: Use suitable eye protection.
PROC8b, PROC5, PROC8a, PROC10, PROC13, PROC9, PROC15, PROC14:	dermal: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 90 %.
PROC19:	dermal: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Effectiveness: 95 %.

See section 8 of the safety data sheet (Personal protection equipment)

### III.3 Exposure estimation

Environment:

Health:

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#### PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities:

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,8229 mg/kg bw/day	0,632967	EASY TRA	
Inhalation, systemic, long term	1,366 mg/m <sup>3</sup>	0,278875	EASY TRA	
Combined routes, systemic, long-term	1,018 mg/kg bw/day	0,911842	EASY TRA	

#### PROC9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing):

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,4114 mg/kg bw/day	0,316484	EASY TRA	
Inhalation, systemic, long term	2,733 mg/m <sup>3</sup>	0,557751	EASY TRA	
Combined routes, systemic, long-term	0,8019 mg/kg bw/day	0,874234	EASY TRA	

#### PROC5: Mixing or blending in batch processes:

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,8229 mg/kg bw/day	0,632967	EASY TRA	
Inhalation, systemic, long term	0,9110 mg/m <sup>3</sup>	0,185917	EASY TRA	
Combined routes, systemic, long-term	0,9530 mg/kg bw/day	0,818884	EASY TRA	

**PROC10: Roller application or brushing:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,5486 mg/kg bw/day	0,421978	EASY TRA	
Inhalation, systemic, long term	1,627 mg/m <sup>3</sup>	0,331994	EASY TRA	
Combined routes, systemic, long-term	0,7810 mg/kg bw/day	0,753972	EASY TRA	

**PROC13: Treatment of articles by dipping and pouring:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,8229 mg/kg bw/day	0,632967	EASY TRA	
Inhalation, systemic, long term	1,301 mg/m <sup>3</sup>	0,265596	EASY TRA	
Combined routes, systemic, long-term	1,009 mg/kg bw/day	0,898563	EASY TRA	

**PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,3429 mg/kg bw/day	0,263736	EASY TRA	
Inhalation, systemic, long term	2,169 mg/m <sup>3</sup>	0,442659	EASY TRA	
Combined routes, systemic, long-term	0,6527 mg/kg bw/day	0,706395	EASY TRA	

**PROC19: Hand-mixing with intimate contact and only PPE available:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,7071 mg/kg bw/day	0,543956	EASY TRA	
Inhalation, systemic, long term	0,4067 mg/m <sup>3</sup>	0,082999	EASY TRA	
Combined routes, systemic, long-term	0,7652 mg/kg bw/day	0,626955	EASY TRA	

**PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,8229 mg/kg bw/day	0,632967	EASY TRA	
Inhalation, systemic, long term	1,139 mg/m <sup>3</sup>	0,232396	EASY TRA	
Combined routes, systemic, long-term	0,9855 mg/kg bw/day	0,865363	EASY TRA	

**PROC15: Use as laboratory reagent:**

	Exposure level	RCR	Method	Remarks
Dermal, systemic, long term	0,0343 mg/kg bw/day	0,026374	EASY TRA	
Inhalation, systemic, long term	3,254 mg/m <sup>3</sup>	0,663989	EASY TRA	
Combined routes, systemic, long-term	0,4991 mg/kg bw/day	0,690362	EASY TRA	

**III.4 Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES**

This information is not available.

## Exposure Scenario VIII.

### Adhesives and sealants consumer use

#### IV.1 List of use descriptors

Sector(s) of Use	SU21: Consumer uses: Private households (= general public = consumers)
Product categories [PC]:	PC1: Adhesives, sealants
Name of contributing environmental scenario and corresponding ERC:	
List of names of contributing consumer scenarios and corresponding PC:	: PC1: Adhesives, sealants

#### IV.2.1 Contributing exposure scenario controlling consumer exposure

Product Categories:	PC1: Adhesives, sealants
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#### Product characteristics

Concentration of the substance in a mixture:	10%
Physical form of the product:	not relevant
Vapour pressure:	not relevant
Process temperature:	not relevant
Application:	not relevant

#### Amounts used

This information is not available.
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#### Frequency and duration of use

#### Risk management measures (RMM)

This information is not available.
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**IV.3 Exposure estimation and reference to its source****Environment:****Health:**

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	Exposure level	RCR	Method	Remarks
Combined routes, systemic, long-term	0,0596 mg/kg bw/day	0,071747	EASY TRA	
Inhalation, systemic, long term	0,7353 mg/m <sup>3</sup>	0,25355	EASY TRA	
Dermal, systemic, long term	0,1267 mg/kg bw/day	0,325297	EASY TRA	

**IV.4 Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES**

This information is not available.