SAFETY DATA SHEET (1907/2006)

R0718405
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PROPARGYL ALCOHOL

Annex: Exposure Scenarios

Index

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1. Short title of exposure scenario

Charging and discharging of substances and mixtures
SU3; ERC7; PROC8a, PROC8b, PROC9

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC7: Industrial use of substances in closed systems.
Operational conditions	
Annual amount used in the EU	2,200,000 kg

Minimum emission days per year	140
Emission factor air	0.01 %
Emission factor water	0.002 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	43,541 m3/min
Dilution factor river	187.61
Dilution factor coast	1,876.07
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	336,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.10787
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	145,678.2 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
PROC8a: Transfer of substance or (charging/discharging) from/to ves- **Use descriptors covered** non- Use domain: industrial	preparation sels/large containers at dedicated facilities
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear suitable respiratory protection.	Effectiveness: 90 %

Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the	
work area every day. Ensure minimization of manual phases	
In case of potential exposure:, Wear suitable respiratory protection., In case no respiratory protection is used:, Reduce duration of activity to less than 60 min	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.4114 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.495697
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.7008 mg/m³
Risk Characterization Ratio (RCR)	0.149096
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	

Local exhaust ventilation	Effectiveness: 95 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs	
followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
In case of potential exposure:, Wear suitable respiratory protection., In case no respiratory protection is used:, Reduce duration of activity to less than 240 min	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.826162
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.292 mg/m³
Risk Characterization Ratio (RCR)	0.062123
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs	
followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
In case of potential exposure:, Wear suitable respiratory protection., In case no respiratory protection is used:, Reduce duration of activity to less than 60 min	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.3429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.413081
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	1.1679 mg/m³
Risk Characterization Ratio (RCR)	0.248493
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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2. Short title of exposure scenario

Formulation
SU3; ERC2; PROC1, PROC2, PROC3, PROC4, PROC5

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC2: Formulation of preparations
Operational conditions	
Annual amount used in the EU	500,000 kg
Minimum emission days per year	200

Emission factor air	0 %
Emission factor water	0.002 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	43,541 m3/min
Dilution factor river	187.61
Dilution factor coast	1,876.07
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	336,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.031058
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	80,495.4 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.0069 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.008262
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0234 mg/m³
Risk Characterization Ratio (RCR)	0.00497
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.330465
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	1.1679 mg/m³
Risk Characterization Ratio (RCR)	0.248493
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Use in closed batch process (synthesis or
	formulation). Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.165232
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2.3358 mg/m³
Risk Characterization Ratio (RCR)	0.496986
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.2057 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.247849
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2.803 mg/m³
Risk Characterization Ratio (RCR)	0.596383
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.4114 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.495697
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2.1023 mg/m³
Risk Characterization Ratio (RCR)	0.447287
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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3. Short title of exposure scenario

Use in laboratories
SU3; ERC4; PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Operational conditions	
Annual amount used in the EU	1,000 kg
Minimum emission days per year	20
Emission factor air	100 %
Emission factor water	100 %
Emission factor soil	5 %
Receive Surf. Water (Flow Rate).	43,541 m3/min
Dilution factor river	187.61

Dilution factor coast	1,876.07
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	336,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.38024
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	131.5 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are	
being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic

Exposure estimate	0.0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.082616
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2.3358 mg/m³
Risk Characterization Ratio (RCR)	0.496986
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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4. Short title of exposure scenario

Use in laboratories
SU22; ERC8a; PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC8a: Wide dispersive indoor use of processing aids in open systems
Operational conditions	
Annual amount used in the EU	1,000 kg
Minimum emission days per year	365
Emission factor air	100 %
Emission factor water	100 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.040543
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	0.135152 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario

Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: professional
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 80 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.0411 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.04957
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2.803 mg/m³
Risk Characterization Ratio (RCR)	0.596383
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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5. Short title of exposure scenario

Use as an intermediate
SU3; ERC6a; PROC1, PROC2, PROC3

Control of exposure and risk management measures

Contributing exposure scenario

Use descriptors covered	ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)
Operational conditions	
Annual amount used in the EU	2,300,000 kg
Minimum emission days per year	300
Emission factor air	0 %
Emission factor water	0.002 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.651859
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	11,761.2 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

Risk Management Measures	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.0069 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.008262
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.0234 mg/m³
Risk Characterization Ratio (RCR)	0.00497
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.330465
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	1.1679 mg/m³
Risk Characterization Ratio (RCR)	0.248493
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Use in closed batch process (synthesis or formulation). Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %

Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.165232
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2.3358 mg/m³
Risk Characterization Ratio (RCR)	0.496986
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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6. Short title of exposure scenario

Use in Cleaning Agents, Use in Functional Fluids, Use as Corrosion inhibitor, Use in Metal surface treatment
SU3; ERC4, ERC6b, ERC7; PROC7, PROC10, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Operational conditions	
Annual amount used in the EU	160,000 kg
Minimum emission days per year	200
Emission factor air	0 %
Emission factor water	0.002 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	43,541 m3/min
Dilution factor river	187.61

Dilution factor coast	1,876.07
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	336,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.031057
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	25,758.8 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	ERC6b: Industrial use of reactive processing aids
Operational conditions	
Annual amount used in the EU	200,000 kg
Minimum emission days per year	200
Emission factor air	0 %
Emission factor water	0.002 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	43,541 m3/min
Dilution factor river	187.61
Dilution factor coast	1,876.07
Risk Management Measures	
Soil treatment measures considered suitable are, e.g.	No application of sludge to soil
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	336,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.031057
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	32,198.4 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	ERC7: Industrial use of substances in closed systems.
Operational conditions	
Annual amount per site	40,000 kg
Minimum emission days per year	200
Emission factor air	1 %
Emission factor water	0.1 %
Emission factor soil	0.1 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.844806
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	236.7 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC7: Industrial spraying Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 2 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Ensure that the task is being carried out outside the breathing zone of a worker (distance head-product greater than 1m). Ensure that the task is not carried out overhead. Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases Ensure segregation of worker from the source	
Ensure that the worker is in a seperated (control) room with independent air supply Ensure containment of the emmision source and provide extract ventilation to points where emission occur	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	RISKOFDERM v2.1
	Worker - dermal, long-term - systemic
Exposure estimate	0.07 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.084337
Assessment method	Stoffenmanager v5.6
	Worker - inhalation, long-term - systemic
Exposure estimate	1.72 mg/m³
Risk Characterization Ratio (RCR)	0.365957

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 5 %
Physical state	liquid

Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	0.2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.330465
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	1.7519 mg/m³
Risk Characterization Ratio (RCR)	0.372739
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 5 %
Physical state	liquid

Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Wear chemically resistant gloves in combination with specific activity training	Effectiveness: 95 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	0.0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.041308
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	4.0877 mg/m³
Risk Characterization Ratio (RCR)	0.869725
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

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7. Short title of exposure scenario

Use in Cleaning Agents, Use in Functional Fluids, Use as Corrosion inhibitor, Use in Metal surface treatment
SU22; ERC8b; PROC10, PROC11, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC8b: Wide dispersive indoor use of reactive substances in open systems
Operational conditions	
Annual amount used in the EU	200,000 kg
Minimum emission days per year	365
Emission factor air	0.1 %
Emission factor water	2 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.108509
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	10.1 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: professional
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C

Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)	Effectiveness: 70 %
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	0.1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.165232
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	3.5038 mg/m³
Risk Characterization Ratio (RCR)	0.745479
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

Contributing exposure scenario	
Use descriptors covered	PROC11: Non industrial spraying Use domain: professional
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 2 %
Physical state	liquid
Vapour pressure of the substance during use	1089 Pa

Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 80 %
Wear suitable respiratory protection.	Effectiveness: 95 %
Provide a good standard of general	Effectiveness: 30 %
ventilation (not less than 3 - 5 air changes per hour)	
Wear chemically resistant gloves in combination with 'basic' employee training.	Effectiveness: 90 %
Ensure that the task is being carried out outside the breathing zone of a worker (distance head-product greater than 1m). Ensure that the task is not carried out overhead. Ensure that the direction of airflow is clearly away from the worker. Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	RISKOFDERM v2.1
	Worker - dermal, long-term - systemic
Exposure estimate	0.14 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.168675
Assessment method	Stoffenmanager v5.6
	Worker - inhalation, long-term - systemic
Exposure estimate	3.74 mg/m³
Risk Characterization Ratio (RCR)	0.795745

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: professional
Operational conditions	
Concentration of the substance	prop-2-yn-1-ol; propargyl alcohol Content: >= 0 % - <= 5 %
Physical state	liquid

Vapour pressure of the substance during use	1089 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Risk Management Measures	
Provide a good standard of general or controlled ventilation (5 to 10 air	Effectiveness: 70 %
changes per hour)	
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Regular inspection and maintenance of equipment and machines. Avoid frequent and direct contact with substance. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Clean equipment and the work area every day. Ensure minimization of manual phases	
Use suitable eye protection.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	0.1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.165232
Assessment method	EASY TRA v3.6, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	3.5038 mg/m³
Risk Characterization Ratio (RCR)	0.745479
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

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