SAFETY DATA SHEET

Annex

Exposure Scenario (taken from section 9 of the Chemical Safety Report (CSR) for CTO)

9.1. Manufacture and on-site uses of CTO

9.1.1. Exposure scenario

1. Short title of Exposure Scenario	
Manufacture and on-site uses of CTO	
2. Description of activities/process(es) covered in the Exposure Scenario	
Sector of use	**SU 3** (Industrial uses: uses of substances as such or in preparations at industrial sites) **SU 8** (Manufacture of bulk, large scale chemicals)
Product category	Not applicable
Process category	**PROC 1** (Use in closed process, no likelihood of exposure) **PROC 2** (Use in closed, continuous process with occasional controlled exposure (e.g. sampling)) **PROC 3** (Use in closed batch process (synthesis or formulation)) **PROC 8b** (Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities)
Article category	Not applicable
Environmental release category	**ERC 1** (Manufacture of substances)
3. Operational conditions	
3. 1 Duration and frequency of use for which the ES ensures control of risk	
Duration of exposure at workplace:	8 h/d (ECHA default)
Frequency of exposure at workplace:	Up to 240 d per year
Annual amount used per site	Up to 30 000 tonnes
Emission days per site:	Up to 300 days/year
4. 1 Physical form of product in which the substance is contained	
Typically liquid. Hydrogen sulphide may sometimes be found in the headspace of storage vessels.	
4.2 Concentration of substance in preparation or article	
Not applicable	
4.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	
Respiration volume under conditions of use:	10 m^3/d
Area of skin contact with the substance under conditions of use	PROC 2 and PROC 8b: 480 cm^3 PROC3: 240 cm^3
Body weight	70 kg
5. Other operational conditions determining exposure, e.g. temperature, capacity of receiving environment (water flow; room size x ventilation rate), emission or release factors to the relevant compartments	
See PFA (2010f). Generic approach to exposure of the environment and workers to CTO. Peter Fisk Associates Limited, Kent, UK. The referenced document above is available from the supplier of this safety data sheet.	
6. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
6.1 Risk management Measures related to workers	

Technical measures Organisational measures	 H_2S gas can accumulate over time in the headspace of CTO storage tanks and tank trucks. Its presence can pose a significant hazard to humans and the risk has to be recognised and managed. Appropriate risk management measures include local exhaust ventilation, the setting of standard protocols for proper venting of the tank before entrance, use of workspace and personal gas detectors, and use of respiratory protective equipment.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or gases.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
6.2 Environment related measures; type and efficiency of single options or combination of options on exposure to be quantified; options to be phrased as instructive guidance	
Organisational measures Abatement measures waste water	 Standard size waste water treatment plant for highly industrial sites.
Abatement measures waste air	Substance has low volatility and so releases to air are expected to be minimal.
Soil	The spreading of sludge is assumed as a worst-case scenario.
7. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
Type of waste Disposal technique	Aqueous waste Details of the treatment of aqueous waste vary at different production sites but as a minimum it is assumed that the effluent is treated off-site in a waste water treatment plant before discharge to waste water. Discharge to marine water without biological treatment cannot be ruled out, but for such sites the dilution is known to be in excess of 1000.
Fraction released to environment during waste treatment	Negligible
8. Prediction of exposure resulting from the conditions described above (entries 3-6) and the substance properties	
Workers (oral)	No significant oral exposure.
Workers (dermal)	Estimated by the means of the ECETOC TRA model. Only values with LEV are shown.
PROC 2	1.37 mg/kg/day
PROC 3	0.034 mg/kg/day
PROC 8b	0.69 mg/kg/day
Workers (inhalation)	CTO is assigned to the 'low fugacity' category according to the ECETOC TRA definitions, based on the estimated vapour pressure of 22.7 Pa. This value represents a contribution from a low fraction of volatiles; many constituents are of lower vapour pressure. Therefore, for human health, the exposures via the vapour phase are overestimates. The Guidance does not set out how to deal with UVCBs in respect of human exposure. Only values with LEV are shown.
PROC 2	1.20 mg/m³
PROC 3	3.59 mg/m³
PROC 8b	1.79 mg/m³

	Some exposures (both dermal and inhalation) without local exhaust ventilation (LEV) lead to possible risk for PROC 3 and 8b. However it is possible to reduce these risks by reducing the exposure time to between 15 minutes and 1 hour.
Environment Water (fresh-water) Soil STP Humans via the environment	(EUSES 2.1.1) 0.471 mg/kg w.w. (Block 12, maximum value) 0.288 mg/kg w.w. (Block 2, maximum value) 0.032 mg/l (Block 4, maximum value) Calculations for man via the environment have not been carried out owing to the limited dispersive use

Annex

Exposure Scenario (taken from section 9 of the Chemical Safety Report (CSR) for CTO)

9.2. Use in fractionation

9.2.1. Exposure scenario

1. Short title of Exposure Scenario	
Use in fractionation.	
2. Description of activities/process(es) covered in the Exposure Scenario	
Sector of use	**SU 3** (Industrial uses: uses of substances as such or in preparations at industrial sites) **SU 8** (Manufacture of bulk, large scale chemicals)
Product category	Not applicable
Process category	**PROC 1** (Use in closed process, no likelihood of exposure) **PROC 2** (Use in closed, continuous process with occasional controlled exposure (e.g. sampling)) **PROC 3** (Use in closed batch process (synthesis or formulation)) **PROC 4 (**Use in batch and other process (synthesis) where opportunity for exposure arises) **PROC 8b** (Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities) **PROC 9** (Transfer of substance or preparation into small containers (dedicated filling line, including weighing))
Article category	Not applicable
Environmental release category	**ERC 1** (Manufacture of substances)
3. Operational conditions	
3. 1 Duration and frequency of use for which the ES ensures control of risk	
Duration of exposure at workplace:	8 h/d (ECHA default)
Frequency of exposure at workplace:	Up to 240 d per year
Annual amount used per site	Up to 100 000 tonnes
Emission days per site:	Up to 300 days/year
4. 1 Physical form of product in which the substance is contained	
Typically liquid.	
4.2 Concentration of substance in preparation or article	
Not applicable	
4.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	
Respiration volume under conditions of use:	10 m^3/d
Area of skin contact with the substance under conditions of use	PROC 2, 8b and 9: 480 cm^3 PROC3: 240 cm^3
Body weight	70 kg
5. Other operational conditions determining exposure, e.g. temperature, capacity of receiving environment (water flow; room size x ventilation rate), emission or release factors to the relevant compartments	
See PFA (2010g). Generic approach to exposure of the environment from fractionation of crude tall oil. Reach Environmental Exposure Scenarios for Crude Tall Oil. Peter Fisk Associates Limited, Kent, UK. The referenced document above is available from the supplier of this safety data sheet.	

6. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
6.1 Risk management Measures related to workers	
Technical measures Organisational measures	H_2S gas can accumulate over time in the headspace of CTO storage tanks and tank trucks. Its presence can pose a significant hazard to humans and the risk has to be recognised and managed. Appropriate risk management measures include local exhaust ventilation, the setting of standard protocols for proper venting of the tank before entrance, use of workspace and personal gas detectors, and use of respiratory protective equipment.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or gases.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
6.2 Environment related measures; type and efficiency of single options or combination of options on exposure to be quantified; options to be phrased as instructive guidance	
Organisational measures Abatement measures waste water	Standard size waste water treatment plant for highly industrial sites.
Abatement measures waste air	Substance has low volatility and so releases to air are expected to be minimal.
Soil	The spreading of sludge is assumed as a worst-case scenario.
7. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
Type of waste	Aqueous waste
Disposal technique	Details of the treatment of aqueous waste vary at different fractionation sites but as a minimum for a generic site it is assumed that the effluent is treated off-site in a waste water treatment plant.
Fraction released to environment during waste treatment	Negligible
8. Prediction of exposure resulting from the conditions described above (entries 3-6) and the substance properties	
Workers (oral)	No significant oral exposure.
Workers (dermal)	Estimated by the means of the ECETOC TRA model. Only values with LEV are shown, except for PROC 1.
PROC 1	0.343 mg/kg/day (no Local Exhaust Ventilation)
PROC 2	0.137 mg/kg/day
PROC 8b	0.686 mg/kg/day
PROC 9	0.686 mg/kg/day
Workers (inhalation)	CTO is assigned to the 'low fugacity' category according to the ECETOC TRA definitions, based on the estimated vapour pressure of 22.7 Pa. This value represents a contribution from a low fraction of volatiles; many constituents are of lower vapour pressure. Therefore, for human health, the exposures via the vapour phase are overestimates. The Guidance does not set out how to deal with UVCBs in respect of human exposure. Only values with LEV are shown, except for PROC 1.

PROC 1 PROC 2 PROC 8b PROC 9	0.12 mg/m³ (no Local Exhaust Ventilation) 1.20 mg/m³ 1.80 mg/m³ 5.90 mg/m³ Some exposures (both dermal and inhalation) without local exhaust ventilation (LEV) lead to possible risk for PROC 8b and 9. However it is possible to reduce these risks by reducing the exposure time to between 15 minutes and 1 hour. The use of gloves will further reduce the risk.
Environment Water (fresh-water) Soil STP Humans via the environment	(EUSES 2.1.1) 0.264 mg/kg w.w. (Block 12, maximum value) 0.16 mg/kg w.w. (Block 2, maximum value) 0.0178 mg/l (Block 4, maximum value) Calculations for man via the environment have not been carried out owing to the limited dispersive use

Annex

Exposure Scenario (taken from section 9 of the Chemical Safety Report (CSR) for CTO)

9.3. Use as a fuel in energy generation

9.3.1. Exposure scenario

1. Short title of Exposure Scenario	
Use as a fuel in energy generation	
2. Description of activities/process(es) covered in the Exposure Scenario	
Sector of use	**SU 3** (Industrial uses: uses of substances as such or in preparations at industrial sites) **SU 10** (Formulation [mixing] of preparations and/or re-packaging) **SU 23** (Recycling)
Product category	**PC 13** (Fuels)
Process category	**PROC 2** (Use in closed, continuous process with occasional controlled exposure (e.g. sampling)) **PROC 3** (Use in closed batch process (synthesis or formulation)) **PROC 5 (**Mixing or blending in batch processes (multistage and/or significant contact)) **PROC 8a** (Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities) **PROC 8b** (Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities) **PROC 9** (Transfer of substance or preparation into small containers (dedicated filling line, including weighing)) **PROC 16** (Using material as fuel sources, limited exposure to unburned product to be expected)
Article category	Not applicable
Environmental release category	**ERC 2** (Formulation of preparations)
3. Operational conditions	
3. 1 Duration and frequency of use for which the ES ensures control of risk	
Duration of exposure at workplace:	8 h/d (ECHA default)
Frequency of exposure at workplace:	Up to 240 d per year
Annual amount used per site	1000 tonnes
Emission days per site:	300 days/year
4. 1 Physical form of product in which the substance is contained	
Typically liquid.	
4.2 Concentration of substance in preparation or article	
Not applicable	
4.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	
Respiration volume under conditions of use:	10 m^3/d
Area of skin contact with the substance under conditions of use	PROC 2, 8b and 9: 480 cm^3 PROC3: 240 cm^3
Body weight	70 kg
5. Other operational conditions determining exposure, e.g. temperature, capacity of receiving environment (water flow; room size x ventilation rate), emission or release factors to the relevant compartments	

Formulation of fuels: Fraction of applied amount lost from process/use to waste gas	0.0025 kg/kg (Applied to blocks with vapour pressures of between 0.01 Pa and 100 Pa. See PFA (2010h). Use of CTO in energy generation. Reach environmental exposure scenarios for Crude Tall Oil. Peter Fisk Associates Limited, Kent, UK.) 0.01 kg/kg (Applied to blocks with vapour pressures of between 0>100 Pa. See PFA (2010h). Use of CTO in energy generation. Reach environmental exposure scenarios for Crude Tall Oil. Peter Fisk Associates Limited, Kent, UK.
Fraction of applied amount lost from process/use to waste water	0.002 kg/kg (Based on ERC2).
Use of fuels: Fraction of applied amount lost from process/use to waste gas	~0 kg/kg (CTO will be destroyed during combustion)
Fraction of applied amount lost from process/use to waste water	0.0005 kg/kg. See PFA (2010h). Use of CTO in energy generation. Reach environmental exposure scenarios for Crude Tall Oil. Peter Fisk Associates Limited, Kent, UK. Referenced documents above are available from the supplier of this safety data sheet.

6. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups

6.1 Risk management Measures related to workers

Technical measures	
Organisational measures	H_2S gas can accumulate over time in the headspace of CTO storage tanks and tank trucks. Its presence can pose a significant hazard to humans and the risk has to be recognised and managed. Appropriate risk management measures include local exhaust ventilation, the setting of standard protocols for proper venting of the tank before entrance, use of workspace and personal gas detectors, and use of respiratory protective equipment.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or gases.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

6.2 Environment related measures; type and efficiency of single options or combination of options on exposure to be quantified; options to be phrased as instructive guidance

Organisational measures	
Abatement measures waste water	Onsite: Bunded areas and oil water separator assumed to be 90% efficient. Default standard waste water treatment plant assumed.
Abatement measures waste air	CTO will be destroyed during combustion.
Soil	The spreading of sludge is assumed as a worst-case scenario.

7. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
Type of waste	Aqueous waste
Disposal technique	Details of the treatment of aqueous waste will vary at different sites but as a minimum it is assumed that on-site treatment such as an oil-water separator is used and the effluent is treated off-site in a standard waste water treatment plant.
Fraction released to environment during waste treatment	Emissions to waste water are likely to be very low (<<1 kg/day).
8. Prediction of exposure resulting from the conditions described above (entries 3-6) and the substance properties	
Workers (oral)	No significant oral exposure.
Workers (dermal)	Estimated by the means of the ECETOC TRA model. Only values with LEV are shown.
PROC 2	0.137 mg/kg/day
PROC 3	0.034 mg/kg/day
PROC 5	0.067 mg/kg/day
PROC 8a	0.137 mg/kg/day
PROC 8b	0.686 mg/kg/day
PROC 9	0.686 mg/kg/day
PROC 16	0.034 mg/kg/day
Workers (inhalation)	Only values with LEV are shown.
PROC 2	1.2 mg/m³
PROC 3	3.6 mg/m³
PROC 5	6.0 mg/m³
PROC 8a	12.0 mg/m³
PROC 8b	1.80 mg/m³
PROC 9	6.0 mg/m³
PROC 16	1.2 mg/m³
	Some exposures (both dermal and inhalation) without local exhaust ventilation (LEV) lead to possible risk for PROC 5, 8a,8b and 9. However it is possible to reduce these risks by reducing the exposure time to between 15 minutes and 1 hour. The use of gloves will further reduce the risk.
Environment	(EUSES 2.1.1)
Water (fresh-water)	31.2 mg/kg w.w. (Block 12, maximum value)
Soil	4.8 mg/kg w.w. (Block 2, maximum value)
STP	0.533 mg/l (Block 4, maximum value)
Humans via the environment	Calculations for man via the environment have not been carried out owing to the limited dispersive use

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Annex

Exposure Scenario (taken from section 9 of the Chemical Safety Report (CSR) for CTO)

9.4. Generic formulations/preparations and use of these preparations

9.4.1. Exposure scenario

1. Short title of Exposure Scenario	
Generic formulations/preparations and use of these preparations.	
2. Description of activities/process(es) covered in the Exposure Scenario	
Sector of use	**SU 3** (Industrial uses: uses of substances as such or in preparations at industrial sites) **SU 10** (Formulation [mixing] of preparations and/or re-packaging) **SU 22** (Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Product category	**PC 9a** (Coatings and paints, thinners, paint removers) **PC 18** (Ink and toners) **PC 32** (Polymer preparations and compounds) **PC 35** (Washing and cleaning products (including solvent based products))
Process category	**PROC 2** (Use in closed, continuous process with occasional controlled exposure (e.g. sampling)) **PROC 3** (Use in closed batch process (synthesis or formulation)) **PROC 5 (**Mixing or blending in batch processes (multistage and/or significant contact)) **PROC 8a** (Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities) **PROC 8b** (Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities) **PROC 9** (Transfer of substance or preparation into small containers (dedicated filling line, including weighing))
Article category	Not applicable
Environmental release category	**ERC 2** (Formulation of preparations) **ERC 4** (Industrial use of processing aids in processes and products, not becoming part of articles) **ERC 5** (Industrial use resulting in inclusion into or onto a matrix)
3. Operational conditions	
3. 1 Duration and frequency of use for which the ES ensures control of risk	
Duration of exposure at workplace:	8 h/d (ECHA default)
Frequency of exposure at workplace:	Up to 240 d per year
Annual amount used per site	100-300 tonnes
Emission days per site:	100-300 days/year
4. 1 Physical form of product in which the substance is contained	
Typically liquid. Headspace of storage vessels may contain hydrogen sulphide.	
4.2 Concentration of substance in preparation or article	
Not applicable	
4.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	
Respiration volume under conditions of use:	10 m^3/d
Area of skin contact with the substance under	PROC3: 240 cm^3 PROC 2, 5, 8b: 480 cm^3

conditions of use	PROC 8a: 960 cm^3
Body weight	70 kg
5. Other operational conditions determining exposure, e.g. temperature, capacity of receiving environment (water flow; room size x ventilation rate), emission or release factors to the relevant compartments	
Formulation of preparations:	
Fraction of applied amount lost from process/use to waste gas	0.0025 kg/kg (Applied to blocks with vapour pressures of between 0.01 Pa and 100 Pa. See PFA (2010i). Use of Crude tall oil in generic formulations/preparations and uses of these preparations. Reach Environmental Exposure Scenarios for crude tall oil. Peter Fisk Associates Limited, Kent, UK. 0.01 kg/kg (Applied to blocks with vapour pressures of between 0>100 Pa. See PFA (2010i). Use of Crude tall oil in generic formulations/preparations and uses of these preparations. Reach Environmental Exposure Scenarios for crude tall oil. Peter Fisk Associates Limited, Kent, UK.
Fraction of applied amount lost from process/use to waste water	0.02 kg/kg (Based on ERC2).
Use of preparations:	
Fraction of applied amount lost from process/use to waste gas	0.0025 kg/kg (Applied to blocks with vapour pressures of between 0.01 Pa and 100 Pa. See PFA (2010d). Predicted No Effect Concentrations (PNECs) for Crude Tall Oil constituent blocks. Reference code: PFA.203.105.001. Peter Fisk Associates Limited, Kent, UK. 0.01 kg/kg (Applied to blocks with vapour pressures of between 0>100 Pa. See PFA (2010h). Use of CTO in energy generation. Reach environmental exposure scenarios for Crude Tall Oil. Peter Fisk Associates Limited, Kent, UK.
Fraction of applied amount lost from process/use to waste water	0.02 kg/kg. See PFA (2010i). Use of Crude tall oil in generic formulations/preparations and uses of these preparations. Reach Environmental Exposure Scenarios for crude tall oil. Peter Fisk Associates Limited, Kent, UK. Referenced documents above are available from the supplier of this safety data sheet.
6. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
6.1 Risk management Measures related to workers	
Technical measures	
Organisational measures	H_2S gas can accumulate over time in the headspace of CTO storage tanks and tank trucks. Its presence can pose a significant hazard to humans and the risk has to be recognised and managed. Appropriate risk management measures include local exhaust ventilation, the setting of standard protocols for proper venting of the tank before entrance, use of workspace and personal gas detectors, and use of respiratory protective equipment.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or gases.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure

	that eyewash stations and safety showers are close to the workstation location.
6.2 Environment related measures; type and efficiency of single options or combination of options on exposure to be quantified; options to be phrased as instructive guidance	
Organisational measures Abatement measures waste water Abatement measures waste air Soil	 Onsite: Oil water separator assumed to be 90% efficient. Default standard waste water treatment plant assumed. See section 5. The spreading of sludge is assumed as a worst-case scenario.
7. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
Type of waste Disposal technique Fraction released to environment during waste treatment	Aqueous waste Details of the treatment of aqueous waste will vary at different sites but as a minimum it is assumed that on-site treatment such as an oil-water separator is used and the effluent is treated off-site in a standard waste water treatment plant. See section 5.
8. Prediction of exposure resulting from the conditions described above (entries 3-6) and the substance properties	
Workers (oral) **Workers (dermal)** PROC 2 PROC 3 PROC 5 PROC 8a PROC 8b **Workers (inhalation)** PROC 2 PROC 3 PROC 5 PROC 8a PROC 8b **Environment** Water (fresh-water) Soil STP Humans via the environment	No significant oral exposure. Estimated by the means of the ECETOC TRA model. Only values with LEV are shown. 0.137 mg/kg/day 0.034 mg/kg/day 0.067 mg/kg/day 0.137 mg/kg/day 0.686 mg/kg/day Only values with LEV are shown. 1.2 mg/m³ 3.6 mg/m³ 6.0 mg/m³ 12.0 mg/m³ 1.80 mg/m³ Some exposures (both dermal and inhalation) without local exhaust ventilation (LEV) lead to possible risk for PROC 3, 5, 8a and 8b. However it is possible to reduce these risks by reducing the exposure time to between 15 minutes and 1 hour. The use of gloves will further reduce the risk. (EUSES 2.1.1) 3.12 mg/kg w.w. (Block 12, maximum value) 0.48 mg/kg w.w. (Block 2, maximum value) 0.533 mg/l (Block 4, maximum value) Calculations for man via the environment have not been carried out owing to the limited dispersive use