



SAFETY DATA SHEET (1907/2006)

R0717776

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Si-Tec DM 0.65

Formulation of personal care products; industrial

1. Processes and activities covered by this description

PROC5 is considered as a worst-case for formulation processes, so the other PROCs of these processes are not quantified.

Relevant use descriptors for this scenario:

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

ERC2: Formulation of preparations

PROC1: Use in closed process, no likelihood of exposure; **PROC2:** Use in closed, continuous process with occasional controlled exposure; **PROC3:** Use in closed batch process (synthesis or formulation); **PROC5:** Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact); **PROC8a:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities; **PROC8b:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities; **PROC9:** Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

SU 10: Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)

PC39: Cosmetics, personal care products

Concentration of substance in preparation/mixture or article:

The exposure scenario is based on the following ingredients:
Hexamethyldisiloxane

Relevant substance concentrations are given in the contributing scenarios. Unless otherwise stated, values in the exposure scenarios are related to the following substances, and not to the complete product.

2. Exposure scenarios

2.1 Contributing scenario controlling environmental exposure: ERC2

Concentration of substance in preparation/mixture or article:

<=100% Hexamethyldisiloxane

Amounts used:

Annual amount per site : 20 t

Environment factors not influenced by risk management:

Receiving Surface Water (Flow Rate): 18.000 m³/day

Dilution factor (river) : 10

Dilution factor (coastal areas) : 100

Other given operational conditions affecting environmental exposure:

Emission days per year : 200
Emission or release factor : 0,02 % (Air)
Emission or release factor : 0,09 % (Water)

Risk management measures related to the environment:

Air : scrubbers ; Condenser ; incineration

Conditions and measures related to sewage treatment plant:

STP type : default-sized municipal WWTP
STP effluent : 2.000 m³/day
Sludge treatment : Recovery for agriculture or horticulture can not be excluded.

Conditions and measures related to external treatment of waste for disposal:

Solid wastes are ultimately disposed of via landfill or incineration.

2.2 Contributing scenario controlling worker exposure: PROC5

Concentration of substance in preparation/mixture or article:

<=100% Hexamethyldisiloxane

Physical state during application:

liquid

Vapour pressure : 6375 Pa

Amounts used:

Not of relevance.

Duration and frequency of use:

Exposure time : 15 - 60 min; per day

Risk management measures related to human health (worker):

Local exhaust ventilation plus good work practice required. (Effectiveness: 90 %)

Goggles/face shield is required where full face respirator is not worn.

2.3 Contributing scenario controlling worker exposure: PROC8a

Concentration of substance in preparation/mixture or article:

<=100% Hexamethyldisiloxane

Physical state during application:

liquid

Vapour pressure : 6375 Pa

Amounts used:

Not of relevance.

Duration and frequency of use:

Exposure time : > 4 h; per day

Risk management measures related to human health (worker):

Local exhaust ventilation plus good work practice required. (Effectiveness: 90 %)

Goggles/face shield is required where full face respirator is not worn.

2.4 Contributing scenario controlling worker exposure: PROC8b

Concentration of substance in preparation/mixture or article:

<=100% Hexamethyldisiloxane

Physical state during application:

liquid

Vapour pressure : 6375 Pa

Amounts used:

Not of relevance.

Duration and frequency of use:

Exposure time : > 4 h; per day

Risk management measures related to human health (worker):

Local exhaust ventilation required. (Effectiveness: 97 %)

Goggles/face shield is required where full face respirator is not worn.

2.5 Contributing scenario controlling worker exposure: PROC9

Concentration of substance in preparation/mixture or article:

<=10% Hexamethyldisiloxane

Physical state during application:

liquid

Vapour pressure : 6375 Pa

Amounts used:

Not of relevance.

Duration and frequency of use:

Exposure time : > 4 h; per day

Risk management measures related to human health (worker):

Local exhaust ventilation plus good work practice required. (Effectiveness: 90 %)

Goggles/face shield is required where full face respirator is not worn.

3. Exposure estimation and reference to its source

DNEL and PNEC values of relevant ingredients are given in section 8 of the main part of this document.

Small numeric values in the scenario may be rounded for technical reasons.

Unless otherwise specified in the scenario, default parameters of the methods and conditions have been used.

For each type of exposure usually only the most critical value is given, without differentiation between, e.g., short term and long term exposure.

For a complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.

RCR = Risk Characterization Ratio

Exposure type	Specific conditions	Level of exposure	RCR	Method
freshwater	-	0,00022 mg/l	0,028	EUSES 2.1.1
marine water	-	0,00045 mg/l	0,56	EUSES 2.1.1
Sediment (freshwater)	-	0,0018 mg/kg wet weight	0,28	EUSES 2.1.1
	A factor of 10 was applied to the RCR.			
Sediment (marine water)	-	0,0037 mg/kg wet weight	5,7	EUSES 2.1.1
	A factor of 10 was applied to the RCR. Applying waste water treatment as risk management measure would give an RCR similar to the fresh water value.			
Soil	-	0,0010 mg/kg wet weight	0,040	EUSES 2.1.1
	A factor of 10 was applied to the RCR.			
sewage treatment plant	-	0,0022 mg/l	0,00022	EUSES 2.1.1
dermal, long-term	PROC 5.	0,07 mg/kg/day	0,00055	ECETOC TRA v2.0
inhalative, long-term	PROC 5.	6,6 mg/m ³	0,0074	ECETOC TRA v2.0
dermal, long-term	PROC 8a.	0,14 mg/kg/day	0,0011	ECETOC TRA v2.0
inhalative, long-term	PROC 8a.	33 mg/m ³	0,037	ECETOC TRA v2.0
dermal, long-term	PROC 8b.	0,69 mg/kg/day	0,0055	ECETOC TRA v2.0
inhalative, long-term	PROC 8b.	10 mg/m ³	0,011	ECETOC TRA v2.0
dermal, long-term	PROC 9.	0,07 mg/kg/day	0,00055	ECETOC TRA v2.0
inhalative, long-term	PROC 9.	20 mg/m ³	0,022	ECETOC TRA v2.0

4. Evaluation guidance to downstream user

no data available .