

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture:

PMS 4 B-KOMP

Section 1: - Title

Short title of the exposure scenario:

Professional end uses of MDI, adhesives and sealants

Process Category:

PROC04 - Use in batch and other process (synthesis) where opportunity for exposure arises

PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC08a - Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities

PROC08b - Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities

PROC10 - Roller application or brushing

PROC11 - Non industrial spraying

PROC13 - Treatment of articles by dipping and pouring

Substance supplied to that use in form of: As such, in a mixture

Sector of end use: SU22

Subsequent service life relevant for that use: No.

Environmental contributing scenarios:

ERC08c - Wide dispersive indoor use resulting in inclusion into or onto a matrix

ERC08f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for:

ERC08c - Wide dispersive indoor use resulting in inclusion into or onto a matrix

ERC08f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Further specification: Same for all ERC

Product characteristics:

Substance is a unique structure or Substance is complex UVCB

Predominantly hydrophobic

Not biodegradable

Amounts used:

Fraction of EU tonnage used in region: 1

Regional use tonnage (tonnes/year): up to 60,000 (Sealants and adhesives and Coating.)

Fraction of Regional tonnage used locally: 2.0×10^{-3}

Maximum daily site tonnage (kg/day): 329 (Sealants and adhesives and Coating.)

Frequency and duration of use

Type of release: Dispersive use, emission days (days/year): 365:

Environment factors not influenced by risk management:

Local freshwater dilution factor: 10

Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure:

Indoor / Outdoor use

Used in open systems

Dry process

Release fraction to air from process: 0.15

Release fraction to wastewater from process: 0

Release fraction to soil from process (regional only): 5.0×10^{-3}

Technical conditions and measures at process level (source) to prevent release:

Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:

No air emission controls required; required removal efficiency is 0%.

Soil emission controls are not applicable as there is no direct release to soil.

Risk management measures – Soil: Not applicable

Organisational measures to prevent/limit release from site:

Prevent discharge of undissolved substance to or recover from wastewater.

Conditions and measures related to municipal sewage treatment plant:

Wastewater emission controls are not applicable as there is no direct release to wastewater.

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

Not applicable

Conditions and measures related to external recovery of waste:

Not applicable

Contributing scenario controlling worker exposure for:

PROC04 - Use in batch and other process (synthesis) where opportunity for exposure arises. Further specification: Activities close to the former line: during mat dumping, sampling, maintenance, equipment cleaning, occasional intervention at open areas.

PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC08a - Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities

PROC08b - Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities

PROC10 - Roller application or brushing

PROC13 - Treatment of articles by dipping and pouring

Concentration of substance in mixture or article: Covers percentage substance in the product up to 100% (unless stated differently).

Physical state: liquid (only solid when specifically mentioned)

Amounts used: Not applicable.

Frequency and duration of use: Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management: None identified.

Area of use: Indoor and outdoor use.

Ventilation control measures:

Activities close to the former line:

Provide extract ventilation to material transfer points and other openings. Minimal efficiency exhaust ventilation: 25%

Adhesives and sealants

Provide extract ventilation to points where emissions occur.

At product temperatures below 40°C for pure MDI or below 45°C for other MDI based substances:

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

At product temperatures above 40°C for pure MDI or above 45°C for other MDI based substances: Same as above, and:

Provide extract ventilation to points where emissions occur.

or

Provide extract ventilation to material transfer points and other openings.

or

Handle in a fume cupboard or under extract ventilation.

or

demonstrate, e.g. by workplace monitoring, that exposures are below the relevant worker DNEL values for acute and long-term.

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene: Avoid contact with skin and clothing. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Provide adequate information, instruction and training for operators.

Personal protection: Use suitable eye protection and gloves. Wear suitable coveralls to prevent exposure to the skin.

If exposure may be possible: Wear suitable gloves tested to EN374.

Respiratory protection:

At product temperatures above 40°C for pure MDI or above 45°C for other MDI based substances: Same as above, and:

If technical extraction or ventilation is not possible or inadequate, respiratory protection must be worn.

Wear a respirator conforming to EN140 with Type A filter or better.

Activities close to the former line:

Wear a respirator conforming to EN140 with Type A/P2 filter or better.

Contributing scenario controlling worker exposure for:

PROC11 - Non industrial spraying

Concentration of substance in mixture or article: Covers percentage substance in the product up to 60%.

Physical state: liquid (only solid when specifically mentioned)

Amounts used: Not applicable.

Frequency and duration of use: Covers daily exposures up to 8 hours (unless stated differently).

Indoor use: Avoid carrying out activities involving exposure for more than 4 hours.

Human factors not influenced by risk management: None identified.

Area of use: Indoor and outdoor use.

Ventilation control measures:

At product temperatures below 40°C for pure MDI or below 45°C for other MDI based substances:

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

At product temperatures above 40°C for pure MDI or above 45°C for other MDI based substances: Same as above, and:

Provide extract ventilation to points where emissions occur.

or

Provide extract ventilation to material transfer points and other openings.

or

Handle in a fume cupboard or under extract ventilation.

or

demonstrate, e.g. by workplace monitoring, that exposures are below the relevant worker DNEL values for acute and long-term.

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene: Avoid contact with skin and clothing. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Provide adequate information, instruction and training for operators.

Personal protection - indoor and outdoor use: Use suitable eye protection and gloves. Wear suitable coveralls to prevent exposure to the skin or other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

At product temperatures below 40°C for pure MDI or below 45°C for other MDI based substances:

Wear suitable gloves tested to EN374.

Respiratory protection:

Indoor and outdoor use:

Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better.

Section 3 – Exposure estimation and reference to its source

Website:

<http://www.isopa.org/isopa/uploads/Documents/documents/ISOPApositionUseDescriptor.pdf>

ERC08c - Wide dispersive indoor use resulting in inclusion into or onto a matrix

ERC08f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): Same for all ERC. Used EUSES model.

Exposure estimation:

Predicted Environmental Concentration:

Fresh water (mg/l): $6,94 \times 10^{-3}$

Marine water (mg/l): $5,45 \times 10^{-4}$

Agricultural soil (mg/kg): 0,240

Grassland (mg/kg): 0,240

Secondary Poisoning: Not relevant.

Humans exposed via the environment: Not relevant

Risk characterisation ratio (PEC/PNEC):

Fresh water (mg/l): $< 6,94 \times 10^{-3}$

Marine water (mg/l): $< 5,45 \times 10^{-4}$

Agricultural soil (mg/kg): $< 0,240$

Grassland (mg/kg): $< 0,240$

Secondary Poisoning: Not relevant.

Humans exposed via the environment: Not relevant

PROC04 - Use in batch and other process (synthesis) where opportunity for exposure arises.

Exposure assessment (human): Measured data has been used to estimate worker exposure.

Exposure estimation:

Inhalation exposure-long term (mg/m³): 0,006

Risk characterisation ratio inhalation-long term (mg/m³): 0,116

Inhalation exposure-short term (mg/m³): 0,012

Risk characterisation ratio inhalation-short term (mg/m³): 0,116

PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

Exposure assessment (human): Measured data has been used to estimate worker exposure.

Exposure estimation:

Inhalation exposure-long term (mg/m³): 0,029 / 0,012 (enclosed)

Risk characterisation ratio inhalation-long term (mg/m³): 0,582 / 0,246 (enclosed)

Inhalation exposure-short term (mg/m³): 0,058 / 0,025 (enclosed)

Risk characterisation ratio inhalation-short term (mg/m³): 0,582 / 0,246 (enclosed)

PROC08a - Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities

PROC08b - Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities

Exposure assessment (human): Measured data has been used to estimate worker exposure.

Exposure estimation:

Inhalation exposure-long term (mg/m³): 0,029

Risk characterisation ratio inhalation-long term (mg/m³): 0,582

Inhalation exposure-short term (mg/m³): 0,058

Risk characterisation ratio inhalation-short term (mg/m³): 0,582

PROC10 - Roller application or brushing

Exposure assessment (human): Measured data has been used to estimate worker exposure.

Exposure estimation:

Inhalation exposure-long term (mg/m³): 0,017

Risk characterisation ratio inhalation-long term (mg/m³): 0,328

Inhalation exposure-short term (mg/m³): 0,034

Risk characterisation ratio inhalation-short term (mg/m³): 0,328

PROC11 - Non industrial spraying

Exposure assessment (human): Measured data has been used to estimate worker exposure.

Exposure estimation:

Inhalation exposure-long term (mg/m³): 0,04 (indoor); 0,043 (outdoor)

Risk characterisation ratio inhalation-long term (mg/m³): 0,80 (indoor); 0,87 (outdoor)

Inhalation exposure-short term (mg/m³): 0,08 (indoor); 0,087 (outdoor)

Risk characterisation ratio inhalation-short term (mg/m³): 0,80 (indoor); 0,87 (outdoor)

PROC13 - Treatment of articles by dipping and pouring

Exposure assessment (human): Measured data has been used to estimate worker exposure.

Exposure estimation:

Inhalation exposure-long term (mg/m³): 0,017

Risk characterisation ratio inhalation-long term (mg/m³): 0,344

Inhalation exposure-short term (mg/m³): 0,034

Risk characterisation ratio inhalation-short term (mg/m³): 0,344

Section 4 – Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment: Not applicable

Health:

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Further information on the assumptions contained in this Exposure Scenario can be found at: <http://www.isopa.org/isopa/uploads/Documents/documents/ISOPApositionUseDescriptor.pdf>

Additional good practice advised beyond the REACH CSA

Environment: Not applicable

Health: Not applicable