Annex - Exposure Scenario

The operational conditions and the implementation of Risk Management Measures (RMM) are dependent on the following priority-/lead substances for the respective exposure routes:

Lead substance(s), Oral:
Blocked aliphatic polyisocyanate
For RMMs see chapter 8 of the SDS.

Lead substance(s), Inhalative:
Xylene isomers mixture

Lead substance(s), Dermal:
Xylene isomers mixture

Lead substance(s), Eyes:
Not relevant

Lead substance(s), aquatic environment:
Blocked aliphatic polyisocyanate
For RMMs see chapter 8 of the SDS.

Summary of Exposure Scenarios:

- **Distribution of substance: Industrial (ES1)**
- **Formulation and (re)packing: Industrial (ES2)**
- **Use in coatings: Industrial (ES3)**
- **Use in coatings: Professional (ES4)**
- **Use as laboratory reagent: Industrial (ES5)**
- **Use in laboratory reagents: Professional (ES6)**

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1. Short title of Exposure Scenario: - Distribution of substance: Industrial (ES1)

Main User Groups	:	**SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	**SU8:** Manufacture of bulk, large scale chemicals (including petroleum products) **SU9:** Manufacture of fine chemicals
Process category	:	**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) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **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) **PROC15:** Use as laboratory reagent
Environmental release category	:	**ERC1:** Manufacture of substances **ERC2:** Formulation of preparations **ERC3:** Formulation in materials **ERC4:** Industrial use of processing aids in processes and products, not becoming part of articles

2.1 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15 [Xylene isomers mixture] - Distribution of substance: Industrial

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Vapour pressure	:	0.5 - 10 kPa
Physical Form (at time of use)	:	Liquid substance

Frequency and duration of use

Daily exposure	:	8 hours/day
Remarks	:	Exceptions: Process sampling, Bulk transfer (closed systems) & Bulk transfer (open systems): < 1 h/d

Other operational conditions affecting workers exposure

Remarks	:	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Process sampling

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

Bulk transfers, (closed systems)

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

Bulk transfers, (open systems)

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

Drum and small package filling

Transfer via enclosed lines. Fill containers/cans at dedicated filling points supplied with local extract ventilation.

Equipment cleaning and maintenance

Drain down and flush system prior to equipment opening or maintenance.

Storage, **with occasional controlled exposure**

Store substance within a closed system. Handle substance within a closed system.

PROC1: Use in closed process, no likelihood of exposure

Handle substance within a closed system.

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

Handle substance within a closed system.

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

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

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

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

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

Avoid all skin contact with product, clean up contamination/spills as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any skin contamination immediately. Provide basic employee training to prevent / minimize exposures and to report any skin problems that may

develop. Clear up spills immediately and dispose of waste safely.

These general measures are mandatory for all contributing scenarios.

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterisation ratio (Exposure value/DNEL):
2.1 Not specified.	ECETOC TRA			Not specified.	

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Xylene isomers mixture

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

The necessary separation efficiency for sewage can be reached by the application of on-site technology, either on its own or in combination The necessary separation efficiency for air can be reached by the application of on-site technology, either on its own or in combination Detailed information on scaling and control techniques refer to SpERC data sheet (http://cefic.org/en/reach-for-industries-libraries.html)

1. Short title of Exposure Scenario: - Formulation and (re)packing: Industrial (ES2)

Main User Groups	:	**SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	**SU 10:** Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	:	**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) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **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) **PROC14:** Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC15:** Use as laboratory reagent
Environmental release category	:	**ERC2:** Formulation of preparations

2.1 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15 [Xylene isomers mixture] - Formulation and (re)packing: Industrial

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).

Vapour pressure	:	0.5 - 10 kPa
Physical Form (at time of use)	:	Liquid substance

Frequency and duration of use

Daily exposure	:	8 hours/day
Remarks	:	Exception: Process sampling: < 1 h/day

Other operational conditions affecting workers exposure

Remarks	:	Assumes use at not more than 20°C above ambient temperature. Batch process: elevated temperature
Remarks	:	Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Batch process, at elevated temperatures

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

Process sampling

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

Bulk transfers

Ensure material transfers are under containment or extract ventilation.

Transfer from/pouring from containers, Manual

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Drum/batch transfers

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Drum and small package filling

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Equipment cleaning and maintenance

Drain down and flush system prior to equipment opening or maintenance.

Storage, **with occasional controlled exposure**

Store substance within a closed system. Handle substance within a closed system.

PROC1: Use in closed process, no likelihood of exposure

Handle substance within a closed system.

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

Handle substance within a closed system.

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

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

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

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

PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact): **with potential for aerosol generation**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

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

Avoid all skin contact with product, clean up contamination/spills as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any skin contamination immediately. Provide basic employee training to prevent / minimize exposures and to report any skin problems that may develop. Clear up spills immediately and dispose of waste safely.

These general measures are mandatory for all contributing scenarios.

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterisation ratio (Exposure

					value/DNEL):
2.1 Not specified.	ECETOC TRA			Not specified.	

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Xylene isomers mixture

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

The necessary separation efficiency for sewage can be reached by the application of on-site technology, either on its own or in combination The necessary separation efficiency for air can be reached by the application of on-site technology, either on its own or in combination Detailed information on scaling and control techniques refer to SpERC data sheet (http://cefic.org/en/reach-for-industries-libraries.html)

1. Short title of Exposure Scenario: - Use in coatings: Industrial (ES3)

Main User Groups	:	**SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	:	**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) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **PROC5:** Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) **PROC7:** Industrial spraying **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 **PROC10:** Roller application or brushing **PROC13:** Treatment of articles by dipping and pouring **PROC14:** Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC15:** Use as laboratory reagent
Environmental release category	:	**ERC4:** Industrial use of processing aids in processes and products, not becoming part of articles

2.1 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC10, PROC13, PROC14, PROC15 [Xylene isomers mixture] - Use in coatings: Industrial

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).

Vapour pressure	:	> 10 kPa
Physical Form (at time of use)	:	Liquid substance

Frequency and duration of use

Daily exposure	:	8 hours/day

Other operational conditions affecting workers exposure

Remarks	:	Assumes use at not more than 20°C above ambient temperature. Film formation - force drying (50 - 100 °C)
Remarks	:	Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

General exposures, (closed systems), with sample collection, use in contained system

Handle substance within a closed system.

Film formation - force drying (50 - 100 °C)

Handle substance within a closed system. Provide extraction ventilation at points where emissions occur.

Film formation - air drying

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

Bulk transfers

Ensure material transfers are under containment or extract ventilation.

Drum/batch transfers, Material transfers, Transfer from/pouring from containers

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Material transfers

Ensure material transfers are under containment or extract ventilation.

Equipment cleaning and maintenance

Drain down and flush system prior to equipment opening or maintenance.

Storage, **with occasional controlled exposure**

Store substance within a closed system. Handle substance within a closed system.

PROC1: Use in closed process, no likelihood of exposure

Handle substance within a closed system.

PROC5: Mixing or blending in batch processes for formulation of preparations and articles

(multistage and/ or significant contact): **General exposures, (closed systems)**

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

PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact): **Preparation of material for application, (open systems)**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

PROC7: Industrial spraying: **Automatic**

Operation must be performed in a vented cabin with a laminar air flow

PROC7: Industrial spraying: **Manual**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

PROC10: Roller application or brushing

Provide extraction ventilation at points where emissions occur.

PROC13: Treatment of articles by dipping and pouring: **Dipping, immersion and pouring**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

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

Avoid all skin contact with product, clean up contamination/spills as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any skin contamination immediately. Provide basic employee training to prevent / minimize exposures and to report any skin problems that may develop. Clear up spills immediately and dispose of waste safely. 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.

These general measures are mandatory for all contributing scenarios. Additional measures are specific for the following contributing scenarios:

PROC7: Industrial spraying: **Manual**

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

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterisation ratio (Exposure value/DNEL):
2.1 Not specified.	ECETOC TRA			Not specified.	

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Xylene isomers mixture

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

The necessary separation efficiency for sewage can be reached by the application of on-site technology, either on its own or in combination The necessary separation efficiency for air can be reached by the application of on-site technology, either on its own or in combination Detailed information on scaling and control techniques refer to SpERC data sheet (http://cefic.org/en/reach-for-industries-libraries.html)

1. Short title of Exposure Scenario: - Use in coatings: Professional (ES4)

Main User Groups	:	**SU 22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	:	**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) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **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 **PROC10:** Roller application or brushing **PROC11:** Non industrial spraying **PROC13:** Treatment of articles by dipping and pouring **PROC15:** Use as laboratory reagent
Environmental release category	:	**ERC8a:** Wide dispersive indoor use of processing aids in open systems **ERC8c:** Wide dispersive indoor use resulting in inclusion into or onto a matrix **ERC8d:** Wide dispersive outdoor use of processing aids in open systems **ERC8f:** Wide dispersive outdoor use resulting in inclusion into or onto a matrix

2.1 Contributing scenario controlling worker exposure for:
PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15
[Xylene isomers mixture]
- Use in coatings: Professional

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Vapour pressure	:	0.5 - 10 kPa
Physical Form (at time of use)	:	Liquid substance

Frequency and duration of use

Daily exposure	:	8 hours/day
Remarks	:	Exceptions: Preparation of the material (indoor + outdoor), Film formation (outdoor): < 1 h/day; PROC 11 (outdoor), PROC 13 (indoor), PROC 19 (outdoor), Equipment cleaning and maintenance: < 4 h/day

Other operational conditions affecting workers exposure

Remarks	:	Assumes use at not more than 20°C above ambient temperature.
Remarks	:	Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

General exposures, (closed systems)

Handle substance within a closed system. Ensure material transfers are under containment or extract ventilation.

Filling/ preparation of equipment from drums or containers.

Handle substance within a closed system. Ensure material transfers are under containment or extract ventilation.

General exposures, (closed systems), use in contained system

Handle substance within a closed system. Ensure material transfers are under containment or extract ventilation.

Preparation of material for application

Handle substance within a closed system. Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Preparation of material for application, **Indoor use**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Preparation of material for application, **Outdoor use**

Ensure operation is undertaken outdoors.

Film formation - air drying, **Outdoor use**

Ensure operation is undertaken outdoors.

Material transfers, Drum/batch transfers

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

Film formation - air drying, **Indoor use**

Provide extraction ventilation at points where emissions occur. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Equipment cleaning and maintenance

Drain down and flush system prior to equipment opening or maintenance.

Storage, **with occasional controlled exposure**

Store substance within a closed system. Handle substance within a closed system. Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

PROC10: Roller application or brushing: **Roller, brush, flow application**, **Indoor use**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

PROC10: Roller application or brushing: **Roller, brush, flow application**, **Outdoor use**

Ensure operation is undertaken outdoors.

PROC11: Non industrial spraying: **Manual**, **Indoor use**

Carry out in a vented booth or extracted enclosure.

PROC11: Non industrial spraying: **Manual**, **Outdoor use**

Ensure operation is undertaken outdoors.

PROC13: Treatment of articles by dipping and pouring: **Dipping, immersion and pouring**, **Indoor use**

Provide extraction ventilation at points where emissions occur.

PROC13: Treatment of articles by dipping and pouring: **Dipping, immersion and pouring**, **Outdoor use**

Ensure operation is undertaken outdoors.

PROC15: Use as laboratory reagent

Handle in a fume cupboard or under extract ventilation.

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

Avoid all skin contact with product, clean up contamination/spills as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any skin contamination immediately. Provide basic employee training to prevent / minimize exposures and to report any skin problems that may develop. Clear up spills immediately and dispose of waste safely. 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.

These general measures are mandatory for all contributing scenarios. Additional measures are specific for the following contributing scenarios:

Film formation - air drying, **Outdoor use**

Wear suitable gloves tested to EN374.

PROC10: Roller application or brushing: **Roller, brush, flow application**, **Indoor use**

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

PROC10: Roller application or brushing: **Roller, brush, flow application**, **Outdoor use**

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

PROC11: Non industrial spraying: **Manual**, **Outdoor use**

Wear a respirator conforming to EN140 with Type A filter or better. Wear suitable gloves tested to EN374.

PROC13: Treatment of articles by dipping and pouring: **Dipping, immersion and pouring**, **Outdoor use**

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

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterisation ratio (Exposure value/DNEL):

2.1 Not specified.	ECETOC TRA			Not specified.	

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Xylene isomers mixture

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

The necessary separation efficiency for sewage can be reached by the application of on-site technology, either on its own or in combination The necessary separation efficiency for air can be reached by the application of on-site technology, either on its own or in combination Detailed information on scaling and control techniques refer to SpERC data sheet (http://cefic.org/en/reach-for-industries-libraries.html)

1. Short title of Exposure Scenario: - Use as laboratory reagent: Industrial (ES5)

Main User Groups	:	**SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	**SU 10:** Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	:	**PROC10:** Roller application or brushing **PROC15:** Use as laboratory reagent
Environmental release category	:	**ERC4:** Industrial use of processing aids in processes and products, not becoming part of articles

2.1 Contributing scenario controlling worker exposure for: PROC10, PROC15 [Xylene isomers mixture] - Use as laboratory reagent: Industrial

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Vapour pressure	:	0.5 - 10 kPa
Physical Form (at time of use)	:	Liquid substance

Frequency and duration of use

Daily exposure	:	8 hours/day
Remarks	:	Exception: Cleaning equipment, glassware etc. under general ventilation: 15 min - 1 h/day

Other operational conditions affecting workers exposure

Remarks	:	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

PROC10: Roller application or brushing: **Cleaning, Vessel and container cleaning**

Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

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

Avoid all skin contact with product, clean up contamination/spills as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any skin contamination immediately. Provide basic employee training to prevent / minimize exposures and to report any skin problems that may develop. Clear up spills immediately and dispose of waste safely.

These general measures are mandatory for all contributing scenarios.

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterisation ratio (Exposure value/DNEL):
2.1 Not specified.	ECETOC TRA			Not specified.	

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Xylene isomers mixture

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

The necessary separation efficiency for sewage can be reached by the application of on-site technology, either on its own or in combination The necessary separation efficiency for air can be reached by the application of on-site technology, either on its own or in combination
Detailed information on scaling and control techniques refer to SpERC data sheet (http://cefic.org/en/reach-for-industries-libraries.html)

1. Short title of Exposure Scenario: - Use in laboratory reagents: Professional (ES6)

Main User Groups	:	**SU 22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	:	**PROC10:** Roller application or brushing **PROC15:** Use as laboratory reagent
Environmental release category	:	**ERC8a:** Wide dispersive indoor use of processing aids in open systems

2.1 Contributing scenario controlling worker exposure for: PROC10, PROC15 [Xylene isomers mixture] - Use in laboratory reagents: Professional

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Vapour pressure	:	0.5 - 10 kPa
Physical Form (at time of use)	:	Liquid substance

Frequency and duration of use

Daily exposure	:	8 hours/day

Other operational conditions affecting workers exposure

Remarks	:	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

PROC10: Roller application or brushing: **Cleaning, Vessel and container cleaning**

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Handle in a fume cupboard or under extract ventilation.

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

Avoid all skin contact with product, clean up contamination/spills as soon as they occur. Wear gloves (tested to EN374) if hand contamination likely, wash off any skin contamination immediately. Provide basic employee training to prevent / minimize exposures and to report any skin problems that may develop. Clear up spills immediately and dispose of waste safely.

These general measures are mandatory for all contributing scenarios.

3. Exposure estimation and reference to its source

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	Risk characterisation ratio (Exposure value/DNEL):
2.1 Not specified.	ECETOC TRA			Not specified.	

Based on the applied RMMs the risk towards humans and the environment is sufficiently controlled (RCR ≤ 1).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Xylene isomers mixture

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

The necessary separation efficiency for sewage can be reached by the application of on-site technology, either on its own or in combination The necessary separation efficiency for air can be reached by the application of on-site technology, either on its own or in combination Detailed information on scaling and control techniques refer to SpERC data sheet (http://cefic.org/en/reach-for-industries-libraries.html)