

## **Accompanying information for EBRC's presentation**

# Chesar – Scope of exposure assessment

chesar Logged in as: [ebrc17 \(logout\)](#)  
About Chesar

Selected Substance: **EBRC-Example Substance** Selected CSA: **Default CSA**

Substance Management  
CSA Management  
Substance Identity  
Phys-Chem Prop / Fate  
Phys-Chem Hazard  
Environmental Hazard  
Human Health Hazard  
**Scope of assessment**

**Environment**

		Risk characterisation type
Water	Freshwater	Qualitative PBT
	Sediment (freshwater)	Qualitative PBT
	Marine water	Qualitative PBT
	Sediment (marine water)	Qualitative PBT
	Predator (freshwater)	Qualitative PBT
	Predator (marine water)	Qualitative PBT
	Top predator (marine water)	Qualitative PBT
	Sewage treatment plant	Qualitative PBT
Air		Qualitative PBT
Soil	Agricultural soil	Qualitative PBT
	Predator (terrestrial)	Qualitative PBT

**Workers**

		Risk characterisation type
Inhalation	Systemic, long-term	Undefined (hazard conclusion missing)
	Systemic, acute	Undefined (hazard conclusion missing)
	Local, long-term	Undefined (hazard conclusion missing)
	Local, acute	Undefined (hazard conclusion missing)
Dermal	Systemic, long-term	Undefined (hazard conclusion missing)
	Systemic, acute	Undefined (hazard conclusion missing)
	Local, long-term	Undefined (hazard conclusion missing)
	Local, acute	Undefined (hazard conclusion missing)
Eye	Local	Undefined (hazard conclusion missing)

**Consumers**

		Risk characterisation type
	Systemic, long-term	Undefined (hazard conclusion missing)

# Chesar – Example life cycle tree

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[About Chesar](#)

Selected Substance: **EBRC-Example Substance** Selected CSA: **Default CSA**

Manuf.Imp. (1000.0 t) Manufacture / Import

- Manuf. (1000.0 t) ERC 1: Manufacture of the substance
- Market (1000.0 t) Manufacture of other substances (intermediate use)
  - Site (1000.0 t) ERC 6a: Industrial use of the substance as intermediate in the r
- Market (1000.0 t) Use of the substance in surface treatment
  - Formul. (1000.0 t) ERC 2: Formulation of preparations containing the substance
  - Site (1000.0 t) ERC 5: Industrial use of the substance for surface treatment
    - ERC 5: Industrial use of the substance for surface treatment
      - PROC 26: Raw material handling of solids
      - PROC 8b: Raw material handling of aqueous solutions
      - PROC 4: Wet processes
      - PROC 13: Plating / Application in conveyor system
      - PROC 8a: Cleaning and maintenance (wet splashes)
      - PROC 26: Cleaning and maintenance (dust exposure)
  - Serv.(Site.) (1000.0 t) ERC 12a: Industrial use of the article
  - Serv.(Prof.) (1000.0 t) ERC 11a: Professional use of the article
  - Serv.(Consum.) (1000.0 t) ERC 11a: Consumer use of article

**Use at industrial site - Industrial use of the substance for surface treatment**

Environment Release Category (ERC)	ERC 5: Industrial use resulting in inclusion into or onto a matrix
Explanation for CSFR exposure scenario	
Tonnage (tonnes/year)	1000
Sector of End Use (SU)	<ul style="list-style-type: none"> <li>• SU 15: Manufacture of fabricated metal products, except machinery and equipment</li> <li>• SU 16: Manufacture of computer, electronic and optical products, electrical equipment</li> </ul>
Generic description for SU	
Subsequent relevant service lives	<ul style="list-style-type: none"> <li>• Professional use of the article</li> <li>• Consumer use of article</li> <li>• Industrial use of the article</li> </ul>
Internal remarks	
Number of sites (range)	
Substance supplied as such	yes
Substance supplied as mixture	yes
Technical function of the substance	TF 37: Plating agents and metal surface treating agents

# Chesar Example – MEASE Assessment

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[About Chesar](#)

Selected Substance: **EBRC-Example Substance** Selected CSA: **Default CSA**

Combined Environmental Assessment

- Manuf (1000.0 t) ERC 1: Manufacture of the substance
  - ERC 1: Manufacture of the substance
  - PROC 26: Raw material handling
  - PROC 3: Wet chemical processes in closed batch process
    - External Tool MEASE**
    - PROC 4: Precipitation, filtration and drying
    - PROC 15: Sampling
  - PROC 26: Packaging
    - PROC 8a: Cleaning and maintenance (wet splashes)
    - PROC 26: Cleaning and maintenance (dust exposure)
- Market (1000.0 t) Manufacture of other substances (intermediate use)
  - Site (1000.0 t) ERC 6a: Industrial use of the substance as intermediate in the man.
- Market (1000.0 t) Use of the substance in surface treatment
  - Formul. (1000.0 t) ERC 2: Formulation of preparations containing the substance
  - Site (1000.0 t) ERC 5: Industrial use of the substance for surface treatment
  - Serv.(Site.) (1000.0 t) ERC 12a: Industrial use of the article
  - Serv.(Prof.) (1000.0 t) ERC 11a: Professional use of the article
  - Serv.(Consum.) (1000.0 t) ERC 11a: Consumer use of article

**Exposure and risk characterisation ratios**

Tool name: MEASE

Internal remark:

	Exposure	RCR
Inhalation, systemic, long-term	0.01 mg/m <sup>3</sup>	
Dermal, systemic, long-term	0.017 mg/kg bw/day	

The dermal exposure estimate represents the actual values in MEASE. For calculation of systemic exposure a body weight of 70 kg for workers is taken into account.

**Conditions of Use**

W-1 Product (article) characteristics		
Physical form of substance	Aqueous solution	
Maximum emission potential of the substance	Very low	
W-2 Amount used (or contained in articles), frequency and duration of use/exposure		
Maximum duration of exposure	> 240 min (not restricted) (Inhal: 0%; Dermal: 0%)	
W-3 Technical and organisational conditions and measures		
Maximum process temperature	130 °C	
Level of containment	Closed process	
Pattern of use	Non-dispersive use	
Pattern of exposure control	Direct handling	
Contact level	Incidental	
W-4 Conditions and measures related to personal protection, hygiene and health evaluation		
General good occupational hygiene practices	General good occupational hygiene practices	
Certified safety clothing and shoes	Certified safety clothing	
W-5 Other conditions affecting workers exposure		
W-6 Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		

# Chesar Example – Assessment based on measured data (for inhalation exposure)

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Selected Substance: **EBRC-Example Substance** Selected CSA: **Default CSA**

Combined Environmental Assessment

- Manuf (1000.0 t) ERC 1: Manufacture of the substance
  - ERC 1: Manufacture of the substance
    - PROC 26: Raw material handling
    - PROC 3: Wet chemical processes in closed batch process
    - PROC 4: Precipitation, filtration and drying
    - PROC 15: Sampling
    - PROC 26: Packaging
      - Measured HH Monitoring
        - External Tool MEASE
        - PROC 8a: Cleaning and maintenance (wet splashes)
        - PROC 26: Cleaning and maintenance (dust exposure)
- Market (1000.0 t) Manufacture of other substances (intermediate use)
  - Site (1000.0 t) ERC 6a: Industrial use of the substance as intermediate in the manuf
- Market (1000.0 t) Use of the substance in surface treatment
  - Formul. (1000.0 t) ERC 2: Formulation of preparations containing the substance
  - Site (1000.0 t) ERC 5: Industrial use of the substance for surface treatment
  - Serv (Site.) (1000.0 t) ERC 12a: Industrial use of the article
  - Serv (Prof.) (1000.0 t) ERC 11a: Professional use of the article
  - Serv (Consum.) (1000.0 t) ERC 11a: Consumer use of article

**Measured dataset:** Monitoring  
**Identity of the substance:** Example Substance

	Exposure	RCR
Inhalation, systemic, long-term	14.6 µg/m³	
Number of measured data points: 21		
Dermal, systemic, long-term		

**Conditions of Use**

W-1 Product (article) characteristics		
Physical form of substance	Solid, powder / dust	✖
Maximum emission potential of the substance	Low	✖
W-2 Amount used (or contained in articles), frequency and duration of use/exposure		
Maximum duration of exposure	> 240 min (not restricted) (Inhal: 0%; Dermal: 0%)	✖
W-3 Technical and organisational conditions and measures		
Process temperature	Ambient	✖
Generic local exhaust ventilation	Lower confidence limit (industrial use) (Inhal: 78%)	✖
Pattern of use	Non-dispersive use	✖
Pattern of exposure control	Direct handling	✖
Contact level	Incidental	✖
W-4 Conditions and measures related to personal protection, hygiene and health evaluation		
Respiratory protective equipment (RPE)	RPE with minimum APF = 10 (Inhal: 90%)	✖
Gloves	Gloves according to EN 374 (Dermal: 90%)	✖
General good occupational hygiene practices	General good occupational hygiene practices	✖
Certified safety clothing and shoes	Certified safety clothing	✖
W-5 Other conditions affecting workers exposure		
W-6 Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		

# IUCLID Section 3.5 – Screenshots

The screenshot shows the IUCLID software interface for 'Substance: EBRC-Example Substance / EBRC Consulting GmbH / Hannover / Germany'. The 'Life Cycle description' section is active, showing a navigation tree on the left and a main data area on the right.

**Navigation Tree (Left):**

- 0 Related Information
- 1 General Information
- 2 Classification & Labelling and PBT asses
  - 2.1 GHS
  - 2.2 DSD - DPD
  - 2.3 PBT assessment
- 3 Manufacture, use and exposure
  - 3.1 Technological process
  - 3.2 Estimated quantities
  - 3.3 Sites
  - 3.4 Information on mixtures
  - 3.5 Life Cycle description
  - 3.6 Uses advised against
  - 3.7 Exposure Scenarios, exposure an
  - 3.8 Biocidal information
  - 3.9 Emissions information
  - 3.10 Application for authorisation of
- 4 Physical and chemical properties
- 5 Environmental fate and pathway
- 6 Ecotoxicological information
- 7 Toxicological information
- 8 Analytical methods
- 9 Residues in food and feedstuffs
- 10 Effectiveness against target organisms
- 11 Guidance on safe use
- 12 Literature search
- 13 Assessment reports
- 14 Information requirements

**Main Data Area (Right):**

**Generic Information**

Justification why no identified uses are reported

**Manufacture**

Flags	Manufacture number	Manufacture name	Tonnage of substa...	Number of sites ra...	Environmental Rel...	Process Category	Exposure scenario...	Use c...
	1	Manufacture of the substance	1000.0		ERC 1: Manufactur...	PROC 26: Handlin...	Manufacture of th...	Use co

**Formulation**

Flags	Identified Use number	Identified Use name	Brief description o...	Tonnage of substa...	Number of sites ra...	Environmental Rel...
	1	Formulation of preparations containing the substance		1000.0		ERC 2: Formulatio... PS

**Uses at industrial sites**

Flags	Identified Use number	Identified Use name	Brief description o...	Tonnage of substa...	Number of sites ra...
	1	Industrial use of the substance as intermediate in the manufacture of other substances		1000.0	
	2	Industrial use of the substance for surface treatment		1000.0	

The screenshot shows the 'Use at industrial sites' dialog box. The fields are filled with the following data:

- Local UUID: L-c1b35020-34a0-476b-ba1a-c4826493ca49
- Identified Use number: 2
- Identified Use name: Industrial use of the substance for surface treatment
- Brief description of use process: (Empty)
- Tonnage of substance: 1000
- Number of sites range: (Dropdown menu)
- Environmental Release Category: ERC 5: Industrial use resulting in inclusion into or onto a matrix
- Process Category: PROC 26: Handling of solid inorganic substances at ambient temperature; PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities; PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises; PROC 13: Treatment of articles by dipping and pouring; PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities; PROC 26: Handling of solid inorganic substances at ambient temperature
- Product Category used: PC 14: Metal surface treatment products, including galvanic and electroplating products
- Sector of end use: SU 15: Manufacture of fabricated metal products, except machinery and equipment; SU 16: Manufacture of computer, electronic and optical products, electrical equipment
- Technical function of the substance: Plating agents and metal surface treating agents
- Substance supplied to that use in form of: As such; In a mixture
- Subsequent service life relevant for that use?: yes
- Link to the subsequent service life: A-2-Professional use of the article; A-3-Consumer use of article; A-1-Industrial use of the article
- Exposure scenario reference in the CSR: Industrial use of the substance for surface treatment
- Use coverage in CSR: Use covered by an own CSR
- Remarks: (Empty)

pc-1304 - EBRC-Example Substance / EBRC Consulting GmbH / Hannover / Germany

File Edit Go Window Help Plugins

(Search by UUID)

Navigation

Query results Folders Section tree

Complete

- 0 Related information
- 1 General information
- 2 Classification & Labelling and PBT asses
  - 2.1 GHS
  - 2.2 DSD - DPD
  - 2.3 PBT assessment
- 3 Manufacture, use and exposure
  - 3.1 Technological process
  - 3.2 Estimated quantities
  - 3.3 Sites
  - 3.4 Information on mixtures
  - 3.5 Life Cycle description
  - 3.6 Uses advised against
  - 3.7 Exposure Scenarios, exposure an
  - 3.8 Biocidal information
  - 3.9 Emissions information
  - 3.10 Application for authorisation of
- 4 Physical and chemical properties
- 5 Environmental fate and pathway
- 6 Ecotoxicological information
- 7 Toxicological information
- 8 Analytical methods
- 9 Residues in food and feedingstuffs
- 10 Effectiveness against target organisms
- 11 Guidance on safe use
- 12 Literature search
- 13 Assessment reports
- 14 Information requirements

Uses by professional workers

Flags	Identified U...	Identified U...	Brief descri...	Tonnage of ...	Environmen...	Process Cat...	Product Cat...	Sector of en...	Technical f...	Substance s...	Subsequent...	Link to the
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Consumer Uses

Flags	Identified U...	Identified U...	Tonnage of ...	Environmen...	Product Cat...	Technical f...	Substance s...	Subsequent...	Link to the ...	Exposure s...	Use covers...	Remarks
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Article service life

Flags	Service life number	Service life name	Tonnage of subst.	Article used by	Article category re...	Further descriptio...	Exposure related...	Environm
	1	Industrial use of the article	1000.0	workers	AC 2: Machinery, ...			ERC 12a...
	2	Professional use of the article	1000.0	workers	AC 2: Machinery, ...			ERC 11a...
	3	Consumer use of article	1000.0	consumers	AC 2: Machinery, ...			ERC 11a...

Information

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ebrc39

Article service life

Edit the article service life

Local UUID: L-c930c1f0-ea50-40ca-87a0-c79c7886fea5

Service life number: 1

Service life name: Industrial use of the article

Tonnage of substance: 1000

Article used by: workers

Article category related to subsequent service life: AC 2: Machinery, mechanical appliances, electrical/electronic articles  
AC 7: Metal articles

Further description of article:

Exposure related description of article:

Environmental Release Category: ERC 12a: Industrial processing of articles with abrasive techniques (low release)

Process Category for articles used by workers: PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles  
PROC 21: Low energy manipulation of substances bound in materials and/or articles

Typical concentration of the substance in article (%):

Technical function of the substance: Plating agents and metal surface treating agents

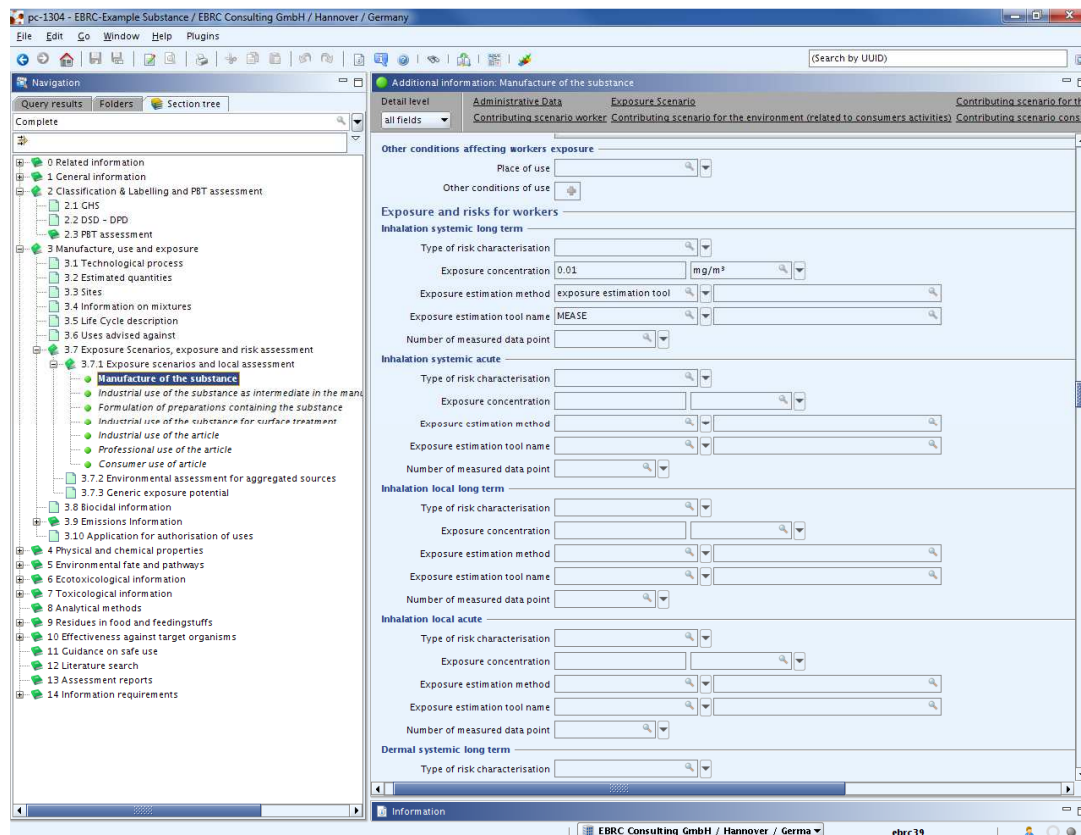
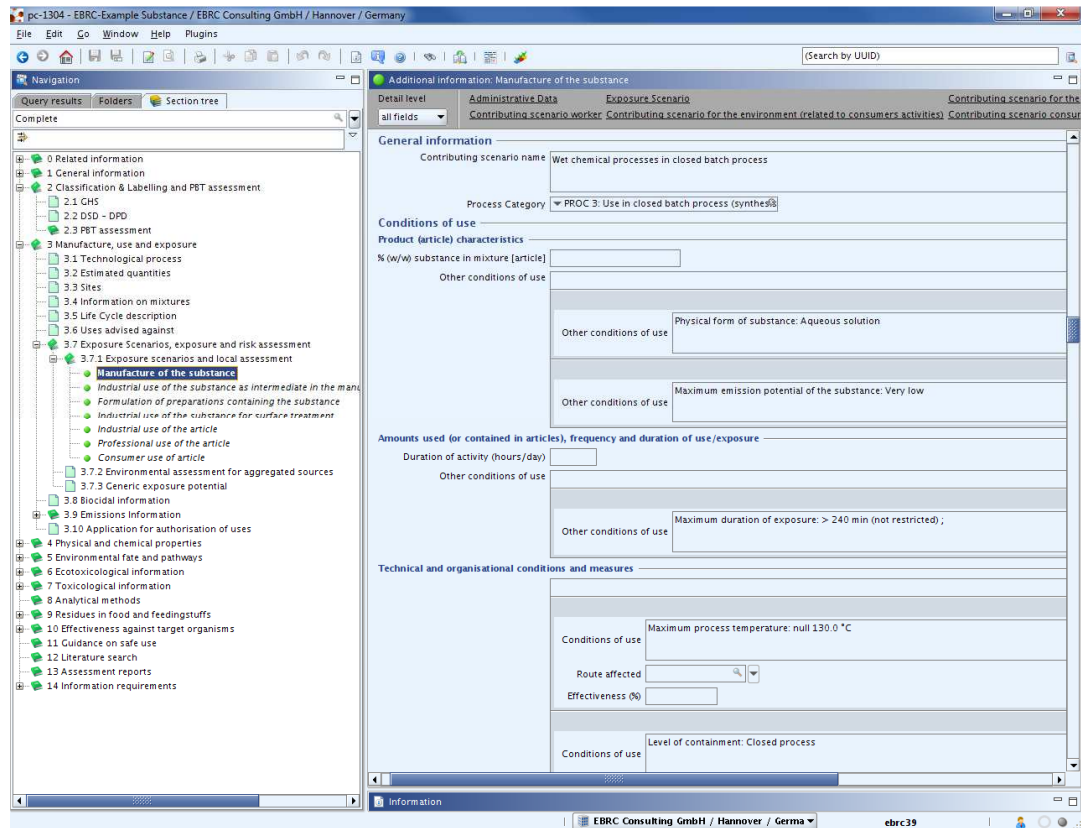
Exposure scenario reference in the CSR: Industrial use of the article

Use coverage in CSR: Use covered by an own CSR

Remarks:

OK Cancel

# IUCLID Section 3.7 – Screenshots



## CSR Section 2

### 2. MANUFACTURE AND USES

No information available on quantities

#### 2.1. Manufacture

**Table 1. Manufacture**

Identifiers	Use descriptors	Other information
M-1: Manufacture of the substance	<b>Environmental release category (ERC):</b> ERC 1: Manufacture of substances  <b>Process category (PROC):</b> PROC 26: Handling of solid inorganic substances at ambient temperature 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 15: Use as laboratory reagent PROC 26: Handling of solid inorganic substances at ambient temperature PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 26: Handling of solid inorganic substances at ambient temperature	Tonnage of substance: 1000.0

No information available on manufacturing process related to the specified manufacture(s)

No information available on production of articles covered by the specified use(s)

## 2.2. Identified uses

**Table 2. Formulation**

Identifiers	Use descriptors	Other information
F-1: Formulation of preparations containing the substance	<p><b>Environmental release category (ERC):</b> ERC 2: Formulation of preparations</p> <p><b>Process category (PROC):</b> PROC 26: Handling of solid inorganic substances at ambient temperature PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p><b>Product Category formulated:</b> PC 14: Metal surface treatment products, including galvanic and electroplating products</p> <p><b>Technical function of the substance during formulation:</b> Plating agents and metal surface treating agents</p>	<p>Tonnage of substance: 1000.0</p> <p>Substance supplied to that use: As such</p>

**Table 3. Uses at industrial sites**

Identifiers	Use descriptors	Other information
<p>IW-1: Industrial use of the substance as intermediate in the manufacture of other substances</p>	<p><b>Environmental release category (ERC):</b>            ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p><b>Process category (PROC):</b>            PROC 26: Handling of solid inorganic substances at ambient temperature            PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises            PROC 1: Use in closed process, no likelihood of exposure            PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities            PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p><b>Product Category used:</b>            PC 19: Intermediate</p> <p><b>Sector of end use:</b>            SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)            SU 9: Manufacture of fine chemicals</p> <p><b>Technical function of the substance during formulation:</b>            Intermediates</p>	<p>Tonnage of substance: 1000.0</p> <p>Substance supplied to that use:            As such</p> <p>Subsequent service life relevant for that use: no</p>

Identifiers	Use descriptors	Other information
IW-2: Industrial use of the substance for surface treatment	<p><b>Environmental release category (ERC):</b> ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p><b>Process category (PROC):</b> PROC 26: Handling of solid inorganic substances at ambient temperature PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 13: Treatment of articles by dipping and pouring PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p><b>Product Category used:</b> PC 14: Metal surface treatment products, including galvanic and electroplating products</p> <p><b>Sector of end use:</b> SU 15: Manufacture of fabricated metal products, except machinery and equipment SU 16: Manufacture of computer, electronic and optical products, electrical equipment</p> <p><b>Technical function of the substance during formulation:</b> Plating agents and metal surface treating agents</p>	<p>Tonnage of substance: 1000.0</p> <p>Substance supplied to that use: As such In a mixture</p> <p>Subsequent service life relevant for that use: yes</p> <p>Link to the subsequent service life: A-2: Professional use of the article A-3: Consumer use of article A-1: Industrial use of the article</p>

**Table 4. Article service life**

Identifiers	Use descriptors	Other information
SL-1: Industrial use of the article	<p><b>Article category related to subsequent service life (AC):</b>  AC 2: Machinery, mechanical appliances, electrical/electronic articles  AC 7: Metal articles</p> <p><b>Environmental release category (ERC):</b>  ERC 12a: Industrial processing of articles with abrasive techniques (low release)</p> <p><b>Process category (PROC):</b>  PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles  PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p><b>Technical function of the substance during formulation:</b>  Plating agents and metal surface treating agents</p>	<p>Article used by:  workers</p> <p>Tonnage of substance: 1000.0</p>
SL-2: Professional use of the article	<p><b>Article category related to subsequent service life (AC):</b>  AC 2: Machinery, mechanical appliances, electrical/electronic articles  AC 7: Metal articles</p> <p><b>Environmental release category (ERC):</b>  ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p><b>Process category (PROC):</b>  PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles  PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p><b>Technical function of the substance during formulation:</b>  Plating agents and metal surface treating agents</p>	<p>Article used by:  workers</p> <p>Tonnage of substance: 1000.0</p>
SL-3: Consumer use of article	<p><b>Article category related to subsequent service life (AC):</b>  AC 2: Machinery, mechanical appliances, electrical/electronic articles  AC 7: Metal articles</p> <p><b>Environmental release category (ERC):</b>  ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p><b>Technical function of the substance during formulation:</b>  Plating agents and metal surface treating agents</p>	<p>Article used by:  consumers</p> <p>Tonnage of substance: 1000.0</p>

## CSR Section 9

**Table 5. Overview of exposure scenarios and contributing scenarios**

Identifiers	Market Sector	Titles of exposure scenarios and the related contributing scenarios	Tonnage (tonnes per year)
ES1 - M1		Manufacture - Manufacture of the substance - Manufacture of the substance (ERC 1) - Raw material handling (PROC 26) - Wet chemical processes in closed batch process (PROC 3) - Precipitation, filtration and drying (PROC 4) - Sampling (PROC 15) - Packaging (PROC 26) - Cleaning and maintenance (wet splashes) (PROC 8a) - Cleaning and maintenance (dust exposure) (PROC 26)	1000.0
ES2 - IW1	PC 19	Use at industrial site - Industrial use of the substance as intermediate in the manufacture of other substances - Industrial use of the substance as intermediate in the manufacture of other substances (ERC 6a) - Raw material handling (PROC 26) - Wet chemical reaction (PROC 4) - Calcination (PROC 1) - Cleaning and maintenance (wet splashes) (PROC 8a) - Cleaning and maintenance (dust exposure) (PROC 26)	1000.0
ES3 - F1	PC 14	Formulation - Formulation of preparations containing the substance - Formulation of preparations containing the substance (ERC 2) - Raw material handling (PROC 26) - Formulation step (PROC 5) - Filling of solutions (PROC 9) - Cleaning and maintenance (wet splashes) (PROC 8a) - Cleaning and maintenance (dust exposure) (PROC 26)	1000.0
ES4 - IW2	PC 14	Use at industrial site - Industrial use of the substance for surface treatment - Industrial use of the substance for surface treatment (ERC 5) - Raw material handling of solids (PROC 26) - Raw material handling of aqueous solutions (PROC 8b) - Wet processes (PROC 4) - Plating / Application in conveyor system (PROC 13) - Cleaning and maintenance (wet splashes) (PROC 8a) - Cleaning and maintenance (dust exposure) (PROC 26)	1000.0
ES5 - SL-IW1	PC 14	Service life (worker at industrial site) - Industrial use of the article - Industrial use of the article (ERC 12a) - Mechanical processing of plated articles (PROC 24) - Handling of plated articles (PROC 21)	1000.0
ES6 - SL-PW1	PC 14	Service life (professional worker) - Professional use of the article - Professional use of the article (ERC 11a) - Mechanical processing of plated articles (PROC 24) - Handling of plated articles (PROC 21)	1000.0
ES7 - SL-C1	PC 14	Service life (consumers) - Consumer use of article - Consumer use of article (ERC 11a) - Handling and transfer of articles, high abrasive tasks (AC 2) - Handling and transfer of articles, high abrasive tasks (AC 7)	1000.0
<b>Manufacture: M-#, Formulation: F-#, Industrial end use at site: IW-#, Professional end use: PW-#, Consumer end use: C-#, Service life (by workers in industrial site): SL-IW-#, Service life (by professional workers): SL-PW-#, Service life (by consumers): SL-C-#.</b>			

## CSR Section 9.0.2.3

### 9.0.2.3. Workers

#### Scope and type of assessment

The scope of exposure assessment and type of risk characterisation required for workers are described in the following table based on the hazard conclusions presented in section 5.11.

**Table 6. Type of risk characterisation required for workers**

Route	Type of effect	Type of risk characterisation	Hazard conclusion (see section 5.11)
<b>Inhalation</b>	Systemic, long-term	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
	Systemic, acute	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
	Local, long-term	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
	Local, acute	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
<b>Dermal</b>	Systemic, long-term	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
	Systemic, acute	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
	Local, long-term	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	

Route	Type of effect	Type of risk characterisation	Hazard conclusion (see section 5.11)
	Local, acute	section 7 Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	
Eye	Local	Undefined (hazard conclusion missing)  <b>CAUTION: No hazard conclusion or no DN(M)EL value provided in IUCLID section 7</b>	

## CSR Section 9.1

### 9.1. Exposure scenario 1: Manufacture - Manufacture of the substance

Environment contributing scenario(s):	
Manufacture of the substance	ERC 1
Worker contributing scenario(s):	
Raw material handling	PROC 26
Wet chemical processes in closed batch process	PROC 3
Precipitation, filtration and drying	PROC 4
Sampling	PROC 15
Packaging	PROC 26
Cleaning and maintenance (wet splashes)	PROC 8a
Cleaning and maintenance (dust exposure)	PROC 26

[...]

### 9.1.3. Worker contributing scenario 2: Wet chemical processes in closed batch process (PROC 3)

#### 9.1.3.1. Conditions of use

Task(s) covered with this contributing scenario: Chemical reactions, mixing.

	Method
<b>Product (article) characteristics</b>	
• Physical form of substance: Aqueous solution	External Tool (MEASE)
• Maximum emission potential of the substance: Very low (Only the highest emission potential (EP) is reported. Lower EPs (e.g. if materials of lower dustiness are being handled in parallel) are thus automatically covered in this assessment.)	External Tool (MEASE)
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>	
• Maximum duration of exposure: > 240 min (not restricted) [Effectiveness Inhal: 0%; Dermal: 0%]	External Tool (MEASE)
<b>Technical and organisational conditions and measures</b>	
• Maximum process temperature: 130 °C	External Tool (MEASE)
• Level of containment: Closed process	External Tool (MEASE)
• Pattern of use: Non-dispersive use	External Tool (MEASE)
• Pattern of exposure control: Direct handling	External Tool (MEASE)
• Contact level: Incidental	External Tool (MEASE)

<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>	
<ul style="list-style-type: none"> <li>• General good occupational hygiene practices: General good occupational hygiene practices (General good occupational hygiene practices are required to ensure safe handling of the substance. These include (i) measures to avoid any contamination of private households via the work-home-interface (e.g. shower and change clothes at end of work shift), (ii) good housekeeping practices in the workplace (i.e. regular cleaning with suitable cleaning devices and immediate cleaning in case of splashes and overspill), and (iii) measures to minimise inadvertent ingestion exposure (e.g. no eating and smoking in the workplace). In general, inhalation and ingestion of the substance should be avoided. Certified working clothing and shoes should be worn during work. In addition, the following principles should be followed: (i) ensure good general ventilation in the workplace, and (ii) do not blow dust (including dust remaining from dried splashes) off with compressed air. Regular training of workers in workplace hygiene practice and proper use of personal protective equipment is required.)</li> </ul>	External Tool (MEASE)
<ul style="list-style-type: none"> <li>• Certified safety clothing and shoes: Certified safety clothing (Certified safety clothing including coveralls and safety shoes are to be worn as appropriate. Face protection may be worn if the type of process is associated with the risk of face injuries due to thermal or mechanical stress.)</li> </ul>	External Tool (MEASE)
<ul style="list-style-type: none"> <li>• Eye protection: Eye protection to be worn to protect from eye irritation (Due to the eye irritating properties of the substance, direct contact with the eyes is to be avoided including hand to eye transfer after touching contaminated surfaces. Suitable eye protection equipment (e.g. goggles or visors) must be worn, unless contact of the substance with the eyes can be excluded. Such exclusion is determined by: (i) the physical appearance of the substance in the specific type of application (e.g. wetting the substance can effectively prevent from the emission of dust), (ii) the emission potential resulting from the nature of the process (e.g. splashes, emission of dust can be excluded in a closed process) and (iii) applied exposure prevention measures (segregation of the emission source or separation of the worker from the emission source). Additionally, face protection may be required to be worn in such cases as appropriate.)</li> </ul>	

### 9.1.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

**Table 7. Exposure concentrations and risks for workers**

<b>Route of exposure and type of effects</b>	<b>Exposure concentration</b>	<b>Risk characterisation</b>
Inhalation, systemic, long-term	<b>0.01 mg/m<sup>3</sup></b> (External Tool (MEASE))	>>>> <b>CAUTION: Risk <u>not</u> controlled</b> (based on qualitative risk characterisation) <<<<
Inhalation, systemic, acute		>>>> <b>CAUTION: Risk <u>not</u> controlled</b> (based on qualitative risk characterisation) <<<<
Inhalation, local, long-term		>>>> <b>CAUTION: Risk <u>not</u> controlled</b> (based on qualitative risk characterisation) <<<<
Inhalation, local, acute		>>>> <b>CAUTION: Risk <u>not</u> controlled</b> (based on qualitative risk characterisation) <<<<
Dermal, systemic, long-term	<b>0.017 mg/kg bw/day</b> (External Tool (MEASE))	>>>> <b>CAUTION: Risk <u>not</u> controlled</b> (based on qualitative risk characterisation) <<<<
Dermal, systemic, acute		>>>> <b>CAUTION: Risk <u>not</u> controlled</b> (based on qualitative risk characterisation) <<<<

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, local, long-term		>>> <b>CAUTION:</b> Risk <u>not</u> controlled (based on qualitative risk characterisation) <<<
Dermal, local, acute		>>> <b>CAUTION:</b> Risk <u>not</u> controlled (based on qualitative risk characterisation) <<<
Eye, local		>>> <b>CAUTION:</b> Risk <u>not</u> controlled (based on qualitative risk characterisation) <<<

**Remarks on exposure data**

**External Tool (MEASE)**

- Dermal, systemic, long-term:  
The dermal exposure estimate represents the actual values in MEASE. For calculation of systemic exposure a body weight of 70 kg for workers is taken into account.