

## Annotated template for an ES for communication - Example for industrial site use

The template below is intended to help downstream users to understand the format and type of information they can expect in the ES they receive, when the substance is intended for industrial use. Registrants may also find it useful when building the ES for communication. Please note:

- Explanations of typical content are in normal font and examples are in blue italics.
- The examples are mainly taken from the *ES illustrative example*. They are not intended to be consistent with each other, but serve to illustrate the different sections.
- All sub-headings may not be relevant for all cases.
- This template applies to the ES of a substance. It may not always be appropriate for mixtures.

### ES TITLE [SHORT TITLE]<sup>1</sup>

The Short Title can be used to build a Table of Contents of all the annexed ESs to facilitate the selection of relevant ES by the recipient.

*Example: ES 3: Use at industrial site. Coatings and paints, thinners, paint removers.*

### 1. TITLE SECTION

The title section gives the use name and an overview of all the tasks/activities covered by the ES.

<b>ES/use name</b>	A short description of the scope of the ES may be given in this section. <i>Example: Industrial application of coatings or inks.</i>
<b>Scope</b>	This row includes a comprehensive list of all the tasks/activities (or "contributing scenarios (CS)") covered by the ES. It is based on the Use Descriptor System.

*Example:*

#### ENVIRONMENT

<i>CS 1: Industrial application of coatings and inks. Water-based scrubbing process</i>	<i>ERC 5</i>
<i>CS 2: Industrial application of coatings and inks. Dry processes</i>	<i>ERC 5</i>

#### WORKER

<i>CS 3: Industrial application of coatings and inks. Closed systems.</i>	<i>PROC 2</i>
<i>CS 4: Raw material transfer and/or dispensing with dedicated equipment</i>	<i>PROC 8b</i>
<i>CS 5: Mixing operations (open systems)</i>	<i>PROC 5</i>
<i>CS 6: Loading of application equipment; Manual</i>	<i>PROC 8a</i>
<i>CS 7: Spraying</i>	<i>PROC 7</i>
<i>CS 8: Roller, spreader, flow coating or printing</i>	<i>PROC 10</i>
<i>CS 9: Dipping, immersion and pouring</i>	<i>PROC 13</i>
<i>CS 10: Force drying (50 - 100°C)</i>	<i>PROC 2</i>
<i>CS 11: Equipment cleaning and maintenance; Manual</i>	<i>PROC 8a</i>

<sup>1</sup> The structure and composition of the Short Title is currently under discussion in the context of the Exchange Network on Exposure Scenarios (ENES). See relevant presentations at:

<http://echa.europa.eu/about-us/exchange-network-on-exposure-scenarios>

## 2. CONDITIONS OF USE AFFECTING EXPOSURE

This section is the core of the ES as it includes the Operational Conditions (OCs) and Risk Management Measures (RMMs) for each contributing scenario. It is usually structured into sub-headings for each activity/contributing scenario.

### 2.1 ENVIRONMENT CONTRIBUTING SCENARIO:

The block below is repeated for each CS, generally starting with the CS title.

#### Product (article) characteristics

This section includes information on the product affecting environmental exposure. Concentration information is normally not relevant for industrial uses as any limitation related to amounts will be given in the section "Amount used.."

*Example: Supply the product in a packaging that does not require cleaning/disposal.*

#### Amount used, frequency and duration of use (or from service life)

This section normally includes the maximum amount per site in [tonnes/day] or [tonnes/year].

*Example: Daily amount per site  $\leq$  0.02 tonnes/day.*

*Annual amount per site  $\leq$  4.0 tonnes/year.*

#### Technical and organisational conditions and measures

This section may include different measures that aim to prevent losses from processes and/or clean up the streams (water or air) leaving the processes on site.

*Example: Treat air emission to provide a typical removal efficiency of 99 %; e.g. by air incineration*

#### Conditions and measures related to sewage treatment plant

Advice is given here on the specific type of treatment plant required or the minimum capacity.

*Example: Estimated substance removal from wastewater via municipal sewage treatment 20 %.*

*Assumed municipal sewage treatment plant flow  $\geq$  2000 m<sup>3</sup>/d.*

#### Conditions and measures related to treatment of waste (including article waste)

Advice is given here on the appropriate disposal route or any need for special (pre-) treatment.

*Example: Dispose of residues from cleaning of containers or equipment as hazardous waste for incineration.*

#### Other conditions affecting environmental exposure

Other operational conditions that have been used in the assessment can be indicated here.

*Example: Receiving surface water flow  $\geq$  18000 m<sup>3</sup>/d*

#### Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply

This section includes use specific measures expected to reduce the predicted emissions. This information is not the outcome of the risk assessment and therefore it is not mandatory.

*Example: Retain drain downs in sealed storage pending disposal or for subsequent recycle.*

## 2.2 WORKER CONTRIBUTING SCENARIO

The block below is repeated for each CS, generally starting with the CS title.

### Product characteristics

Physical form of the product [gas/liquid/solid]. For solids, the dustiness may be specified, for liquids the vapour pressure. The concentration of the substance in a product can also be indicated here.

*Example: Limit the substance content in the product to 5 %.*

### Amount used (or contained in articles), frequency and duration of use/exposure

This section includes the limitations in terms of duration of the particular task covered in the contributing scenario.

*Example: Covers daily exposures up to 8 hours.*

### Technical and organisational conditions and measures

The equipment-related aspects are indicated here, for example the need to have a closed process or the details of the necessary ventilation.

*Example: Provide a basic standard of general ventilation (1 to 3 air changes per hour).*

*Local exhaust ventilation - efficiency of at least 90 %.*

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

This section includes elements related to personal protective equipment (PPE) for the workers such as the use of respiratory protection, or the use of dermal protective clothes such as gloves. This is often indicated in a generic way and gives reference to the SDS where more specific advice on the PPE is given (according to Annex II of the REACH Regulation Section 8.2.2).

Health surveillance programmes to be put in place to prevent occupational skin diseases can also be included here. This may be the case for substances that may cause skin sensitisation.

*Example: Wear chemically resistant gloves (tested to EN374) in combination with basic employee training. For further specification, refer to Section 8 of the SDS.*

*Introduce regular inspection of workers' skin as advised by a health professional.*

### Other conditions affecting workers exposure

Other operational conditions that have been used in the assessment can be indicated here.

*Example: Indoor use.*

*Assumes process temperature up to 40 °C.*

### Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply

This section includes some good practice information that the supplier chooses to include in addition to the obligatory measures, as advice to the downstream user. This information is not the outcome of the risk assessment and therefore it is not mandatory.

*Example: Use suitable eye protection where splashes can occur.*

### 3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

This section is not relevant to end users unless they are undertaking a more detailed review of the ES<sup>2</sup>. It includes information on the estimation methods or tools used in the assessment. This section typically includes a series of tables with values for each contributing scenario.

#### 3.1 ENVIRONMENT CONTRIBUTING SCENARIO

The block below is repeated for each CS, generally starting with the CS title.

Environmental release and exposure	<p>The following information is given for each release route (Water/Air/Soil): Release rate (kg/day) and Release estimation method. Information is also given on estimated exposure values per protection target, and the corresponding calculated RCR for quantitative risk characterisation.</p> <p><i>Example:</i></p>		
	<b>RELEASE ROUTE</b>	<b>RELEASE RATE</b>	<b>RELEASE ESTIMATION METHOD</b>
	<i>Water</i>	<i>0.1 kg/day</i>	<i>SpERC based (xxxx 5.1 - a.v1)</i> <i>Industrial use of coatings and inks (low volatiles) - Process with water involved (low volatiles, medium water solubility)</i>
	<i>Air</i>	<i>0.2 kg/day</i>	<i>SpERC based same as above</i>
	<i>Soil</i>	<i>0 kg/day</i>	<i>SpERC based same as above</i>
	<b>PROTECTION TARGET</b>	<b>EXPOSURE ESTIMATE (BASED ON EUSES 2.1.2)</b>	<b>RCR</b>
	<i>Freshwater</i>	<i>0.004 mg/l</i>	<i>0.37</i>
	<i>Sediment (freshwater)</i>	<i>0.31 mg/kg dw</i>	<i>0.37</i>
	<i>Marine water</i>	<i>3.89E-4 mg/l</i>	<i>0.37</i>
	<i>Sediment (marine water)</i>	<i>0.03 mg/kg dw</i>	<i>0.37</i>
<i>Sewage treatment plant</i>	<i>0.03 mg/l</i>	<i>0.02</i>	
<i>Agricultural soil</i>	<i>0.02 mg/kg dw</i>	<i>0.15</i>	
<i>Man via Environment - Inhalation</i>	<i>3.10E-5 mg/m<sup>3</sup></i>	<i>&lt; 0.01</i>	
<i>Man via Environment - Oral</i>	<i>0.01 mg/kg bw/day</i>	<i>&lt; 0.01</i>	

<sup>2</sup> This section may not be included if it is not expected to contain any relevant information for the DU.

### 3.2 WORKER CONTRIBUTING SCENARIO

The block below is repeated for each CS, generally starting with the CS title.

Worker exposure	The following information is given for each exposure route (inhalation, dermal, combined routes...).		
	<i>Example</i>		
	<b>ROUTE OF EXPOSURE AND TYPE OF EFFECTS</b>	<b>EXPOSURE ESTIMATE</b>	<b>RCR</b>
	<i>Inhalation, systemic, long-term</i>	<i>2.5 mg/m<sup>3</sup> (ECETOC TRA Worker v3)</i>	<i>0.10</i>
	<i>Dermal, systemic, long-term</i>	<i>2.7 mg/kg bw/day (ECETOC TRA Worker v3)</i>	<i>0.39</i>
	<i>Combined routes, systemic, long-term (sum of the above)</i>		<i>0.49</i>

### 4. GUIDANCE TO DU TO EVALUATE WHETHER HE WORKS INSIDE THE BOUNDARIES SET BY THE ES

This section includes advice to the downstream users on how they can verify that their use is covered by the ES, if their conditions of use don't exactly match the ES (termed "Scaling"). This information must include:

- Scaling method
- Scalable parameters
- Boundaries of scaling

*Example:*

*Scaling method: Exposure estimation tool used: ECETOC TRA v3.*

*Scalable Parameters: exposure duration and maximum concentration. All other parameters have to be taken directly from the exposure scenario provided.*

*Boundaries of Scaling: RCRs not to be exceeded are given in Section 3 above.*

*For Scaling instructions please go to the following website: <http://companyX-reach/scaling><sup>3</sup>*

<sup>3</sup> Fictional website address