

LCID Example 1b - Introduction

1. Purpose of the example

The purpose of this example is to illustrate how the results of the “example 2” of the REACH Practical Guide¹ can be annexed to a Safety Data sheet (SDS). Like for the example in the guide, only the toxicological part is taken into account for this representation. Please note that there is an SDS provided in parallel, which uses exactly the same content, but provides the information in the main part of the SDS. As opposed to the practical guide, a complete scenario with all PROCs are selected and the corresponding RMMs and OCs have been provided in this example.

The example is very generic but still an ideal illustration of how LCID can be applied. Nevertheless, as a limiting requirement, the example is based on the assumption that the addressed scenario with corresponding OCs and RMMs is available for all components.

2. Mixture information

2.1. Information on the mixture

Composition:	Methanol >= 25 % - <= 50 % Propanol >= 50 % - <= 75 %
Classification of the mixture:	H319 Causes serious eye irritation H336 May cause drowsiness or dizziness H370 Causes damage to organs H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled
Use of the mixture:	Use as cleaning agent (industrial application)

2.2. Hazardous substances entering in the composition of the mixture

Substance	DNELs	CLP classification
Methanol	Worker, LT, systemic, dermal: 20 mg/kg Worker, LT, systemic, inhal.: 130 mg/m ³ Only relevant DNELs provided	Acute Tox. 3 (Inhalation - vapour) Acute Tox. 3 (oral) Acute Tox. 3 (dermal) STOT SE 1 SCLs: STOT SE 2: 3 - < 10 % STOT SE 1: >= 10 %
Propanol	Worker, LT, systemic, dermal: 888mg/kg Worker, LT, systemic, inhal.: 500mg/m ³ Only relevant DNELs provided	Eye Dam./Irrit. 2 STOT SE 3 (drowsiness and dizziness)

¹ REACH Practical Guide on Safe Use Information for Mixtures under REACH – The Lead Component Identification (LCID) Methodology
<http://www.cefic.org/Documents/IndustrySupport/REACH-Implementation/Guidance-and-Tools/REACH-Practical-Guide-on-Safe-Use-Information-for-Mixtures-under-REACH-The-LCID-Methodology.pdf>

3. Outcome of the LCID methodology

Lead component systemic effects (dermal and inhalation)	Methanol
Additional local effects	Eye irritation

4. OC and RMM associated to Lead Component for the selected use

This example covers the hypothetical industrial use in cleaning agents which includes PROCs 1, 2, 3, 7, 8a, 8b, 10, and 13. In the annexed version, there is no need for consolidation of RMMs and OCs from the lead component, since all PROCs are provided with their corresponding use conditions. The only difference to the lead component exposure information are the additional RMMs to cover the local effects (eye irritation) caused by the second component. Consequently, eye protection has been added to all contributing scenarios in the annex.

5. Consolidated OC/RMM for the mixture

Use suitable eye protection.

Example 1b - Safety Data Sheet content

Extract of relevant safe use information derived by application of the LCID methodology

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Annexed Expo

Chemical name: Mix
CAS Number: 9999-88-7

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use as cleaning agent (industrial application)

1.3. Details of the supplier of the safety data sheet

Company:
LCID Ltd
Europe

Telephone: +xx xxx xx-x
E-mail address: info@lcid-ltd.com

1.4. Emergency telephone number

International emergency number:
Telephone: +xx xxx xx-x

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 3 (Inhalation - vapour)
Acute Tox. 3 (oral)
Acute Tox. 3 (dermal)
Eye Dam./Irrit. 2
STOT SE 1
STOT SE 3 (Vapours may cause drowsiness and dizziness.)

H319, H336, H370, H301 + H311 + H331

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:



Signal Word:
Danger

Hazard Statement:

- H319
- H336
- H370
- H301 + H311 + H331
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- Causes damage to organs.
- Toxic if swallowed, in contact with skin or if inhaled

Precautionary Statements (Prevention):

- P271
- P280
- P260
- P270
- P264
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Do not breathe dust/gas/mist/vapours.
- Do not eat, drink or smoke when using this product.
- Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

- P311
- P305 + P351 + P338
- P304 + P340
- P301 + P310
- P303 + P352
- P361 + P364
- P330
- Call a POISON CENTER or doctor/physician.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- IF ON SKIN (or hair): Wash with plenty of soap and water.
- Take off immediately all contaminated clothing and wash it before reuse.
- Rinse mouth.

Precautionary Statements (Storage):

- P403 + P233
- P405
- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.

Precautionary Statements (Disposal):

- P501
- Dispose of contents/container to hazardous or special waste collection point.

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 5 %, Inhalation - vapour

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 5 %, Inhalation - mist

2.3. Other hazards

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

methanol

Lead component

Content (W/W): $\geq 25\%$ - $< 50\%$

CAS Number: 67-56-1

EC-Number: 200-659-6

INDEX-Number: 603-001-00-X

Flam. Liq. 2

Acute Tox. 3 (Inhalation - vapour)

Acute Tox. 3 (oral)

Acute Tox. 3 (dermal)

STOT SE (Central nervous system, Optic nerve)
1

H225, H311, H331, H301, H370

Specific concentration limit:

STOT SE 2: 3 - $< 10\%$

STOT SE 1: $\geq 10\%$

propan-2-ol; isopropyl alcohol; isopropanol

Local effect

Content (W/W): $\geq 50\%$ - $< 75\%$

CAS Number: 67-63-0

EC-Number: 200-661-7

INDEX-Number: 603-117-00-0

Flam. Liq. 2

Eye Dam./Irrit. 2

STOT SE 3 (drowsiness and dizziness)

H225, H319, H336

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

SECTION 5: Fire-Fighting Measures

SECTION 6: Accidental Release Measures

SECTION 7: Handling and Storage

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

67-56-1: methanol

Skin Designation (OEL (EU))

The substance can be absorbed through the skin.

TWA value 260 mg/m³; 200 ppm (OEL (EU))

indicative

Components with DNEL

67-56-1: methanol

worker: Long-term exposure- systemic effects, dermal: 20 mg/kg

worker: Short-term exposure - systemic effects, dermal: 20 mg/kg

worker: Long-term exposure- systemic effects, Inhalation: 130 mg/m³

worker: Short-term exposure - systemic effects, Inhalation: 130 mg/m³

consumer: Long-term exposure- systemic effects, oral: 4.0 mg/kg

consumer: Short-term exposure - systemic effects, oral: 4.0 mg/kg

consumer: Long-term exposure- systemic effects, dermal: 4.0 mg/kg

consumer: Short-term exposure - systemic effects, dermal: 4.0 mg/kg

consumer: Long-term exposure- systemic effects, Inhalation: 26 mg/m³

consumer: Short-term exposure - systemic effects, Inhalation: 26 mg/m³

67-63-0: propan-2-ol; isopropyl alcohol; isopropanol

worker: Long-term exposure- systemic effects, dermal: 888 mg/kg

worker: Long-term exposure- systemic effects, Inhalation: 500 mg/m³

consumer: Long-term exposure- systemic effects, dermal: 319 mg/kg

consumer: Long-term exposure- systemic effects, Inhalation: 89 mg/m³

consumer: Long-term exposure- systemic effects, oral: 26 mg/kg

8.2. Exposure controls

SECTION 9: Physical and Chemical Properties

SECTION 10: Stability and Reactivity

SECTION 11: Toxicological Information

SECTION 12: Ecological Information

SECTION 13: Disposal Considerations

SECTION 14: Transport Information

SECTION 15: Regulatory Information

SECTION 16: Other Information

Relevant exposure scenario information for the components of this mixture has been included in the annex attached to this SDS.

Safe use information for mixtures

The LCID methodology has been used to derive safe use information for mixtures based on the information available for the constituents of the product.

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1. Use in Cleaning Agents, (use in industrial settings)
 ERC4; PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13
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1. Short title of exposure scenario

Use in Cleaning Agents, (use in industrial settings)
 ERC4; PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.
Operational conditions	

Contributing exposure scenario	
Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: $\geq 0\%$ - $\leq 100\%$
Physical state	Liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Assumes activities are at ambient temperature.	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker Worker - dermal, long-term – systemic
Exposure estimate	0,0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,001714
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker Worker - inhalation, long-term – systemic

Exposure estimate	0,0134 mg/m ³
Risk Characterization Ratio (RCR)	0,000103
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: >= 0 % - <= 100 %
Physical state	Liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,013714
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	3,3377 mg/m ³
Risk Characterization Ratio (RCR)	0,025675
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,006857
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	6,6754 mg/m ³
Risk Characterization Ratio (RCR)	0,051349
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1,3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,068571
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	13,3508 mg/m ³
Risk Characterization Ratio (RCR)	0,102698
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC7: Industrial spraying Use domain: industrial
Operational conditions	

Concentration of the substance	methanol Content: $\geq 0\%$ - $\leq 25\%$
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	2,1429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,107143
Assessment method	EASY TRA v4.2, Workplace measurements
	Worker - inhalation, long-term - systemic
Exposure estimate	19,14 mg/m ³
Risk Characterization Ratio (RCR)	0,147231
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: $\geq 0\%$ - $\leq 100\%$
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic

Exposure estimate	2,7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,137143
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	33,377 mg/m ³
Risk Characterization Ratio (RCR)	0,256746
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	2,7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,137143
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	10,0131 mg/m ³
Risk Characterization Ratio (RCR)	0,077024
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: >= 0 % - <= 80 %
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor

	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	4,3886 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,219429
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	26,7016 mg/m ³
Risk Characterization Ratio (RCR)	0,205397
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates)	

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial
Operational conditions	
Concentration of the substance	methanol Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	16927 Pa
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Assumes activities are at ambient temperature.
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Use suitable eye protection	
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	2,7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,137143
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	33,377 mg/m ³
Risk Characterization Ratio (RCR)	0,256746
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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