according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Scharlau

Version number 2.0

Revision: 02.06.2021

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

- · 1.1 Product identifier
- Trade name: Selenium, standard solution 1000 mg/l Se for AA (selenium dioxide in nitric acid 0,5 mol/l)
- · Article number: SE0011
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.
- · Application of the substance / the preparation: Laboratory reagent
- · 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Scharlab, S.L.
 C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa 08181 Sentmenat (Barcelona) SPAIN
 Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
 email: scharlab@scharlab.com
 Internet Web Site: www.scharlab.com

 Regional representation: Scharlab, S.L.
 C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa 08181 Sentmenat (Barcelona) SPAIN
 Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
 email: scharlab@scharlab.com
 Internet Web Site: www.scharlab.com

 Further information obtainable from: technical department
 1.4 Emergency telephone number: Toxicological Information National Institute of Toxicology and Forensic Sciences: + 34 91 562 04 20. The information will be provided (24h/365 days) Please contact the regional Scharlab distributor/dealer in your country During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



Eye Dam. 1 H318 Causes serious eye damage.



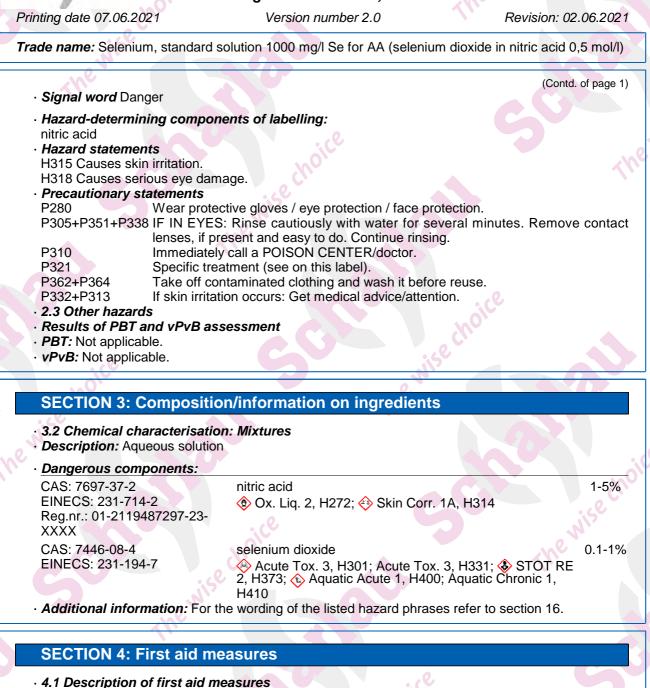
Skin Irrit. 2 H315 Causes skin irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008
- The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



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according to 1907/2006/EC, Article 31



- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

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Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. *After swallowing:* If symptoms persist consult doctor.

- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Trade name: Selenium, standard solution 1000 mg/l Se for AA (selenium dioxide in nitric acid 0,5 mol/l)

- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
- 6.4 Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

- Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- Additional information about design of technical facilities: No further data; see item 7.
- Ingredients with limit values that require monitoring at the workplace:

7697-37-2 nitric acid

WEL Short-term value: 2.6 mg/m³, 1 ppm

· Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

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General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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(Contd. of page 3)

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:
- Form: Colour:
- Odour:
- Odour threshold:
- · pH-value:
- Change in condition 0°C Melting point/freezing point: Initial boiling point and boiling range: Undetermined.
- · Flash point:
- Flammability (solid, gas):
- · Decomposition temperature:
- Auto-ignition temperature:
- Explosive properties:
- · Explosion limits: Lower: **Upper:**
- Vapour pressure at 20 °C:
- Density at 20 °C:
- · Relative density
- · Vapour density

- Fluid Colourless Odourless Not determined.
- Not determined.

Not applicable.

Not applicable.

Not determined.

Product is not selfigniting.

Product does not present an explosion hazard.

Not determined. Not determined.

23 hPa

1 g/cm³ Not determined. Not determined.

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Trade name: Selenium, standard solution 1000 mg/l Se for AA (selenium dioxide in nitric acid 0,5 mol/l) (Contd. of page 4) Not determined.

- Evaporation rate
- Solubility in / Miscibility with water:

Not determined.

Not determined.

Not determined.

96.8 %

Not miscible or difficult to mix.

- · Partition coefficient: n-octanol/water:
- · Viscosity: Dynamic: Kinematic:
- Solvent content: Water:

Solids content:

9.2 Other information

0.1 %

No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- · Acute toxicity Based on available data, the classification criteria are not met.
- Primary irritant effect:
- · Skin corrosion/irritation Causes skin irritation.
- Serious eye damage/irritation Causes serious eye damage.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Additional toxicological information:
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- *Reproductive toxicity* Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.

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· STOT-single exposure Based on available data, the classification criteria are not met.

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- Additional ecological information:
- General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.
- **SECTION 13: Disposal considerations**
- · 13.1 Waste treatment methods
- Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number
- ADR, IMDG, IATA
- · 14.2 UN proper shipping name
- · ADR

UN3264

3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, selenium dioxide) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, selenium dioxide)

- · IMDG, IATA
- · 14.3 Transport hazard class(es)
- · ADR, IMDG, IATA



Class 8 Corrosive substances. Label 8 · 14.4 Packing group · ADR, IMDG, IATA ш · 14.5 Environmental hazards: · Marine pollutant: No 14.6 Special precautions for user Warning: Corrosive substances. Hazard identification number (Kemler code): 80 EMS Number: F-A,S-B Segregation groups Acids Stowage Category Stowage Code SW2 Clear of living quarters. 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable. Transport/Additional information: · ADR Limited quantities (LQ) 5L · Transport category 3

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Trade name: Selenium, standard solution 1000 mg/l Se for AA (selenium dioxide in nitric acid 0,5 mol/l)

- Tunnel restriction code
- · UN "Model Regulation":

UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, SELENIUM DIOXIDE), 8, III

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
- None of the inaredients is listed.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- H272 May intensify fire; oxidiser.
- H301 Toxic if swallowed.
- H314 Causes severe skin burns and eye damage.
- H331 Toxic if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- Classification according to Regulation (EC) No 1272/2008
- The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- · Department issuing SDS: product safety department
- Contact: msds@scharlab.com
- Abbreviations and acronyms:
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation
- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative
- Ox. Liq. 2: Oxidizing liquids Category 2 Acute Tox. 3: Acute toxicity Category 3

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- Skin Corr. 1A: Skin corrosion/irritation Category 1A
- Skin Irrit. 2: Skin corrosion/irritation Category 2
- Eye Dam. 1: Serious eye damage/eye irritation Category 1
- STOT RE 2: Specific target organ toxicity (repeated exposure) Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment acute aquatic hazard Category 1

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The wise choice

the wise choice

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Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

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Annex: Exposure scenario 1

 1 - Short title of the exposure scenario Exposure scenario: Nitric acid 65% Industrial use

Sector of Use

- SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- Product category PC21 Laboratory chemicals
- Process category PROC15 Use as laboratory reagent
- Environmental release category
- ERC2 Formulation into mixture
- ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- 2 Conditions of use
- Duration and frequency 8hrs (full working shift).
- Physical parameters
- The data on the physical chemical properties in the Exposure Scenario is based on the properties of the preparation.
- Physical state Fluid
- Concentration of the substance in the mixture The substance is main component.
- Other operational conditions Observe the general safety regulations when handling chemicals.
- Other operational conditions affecting environmental exposure No special measures required.

Other operational conditions affecting worker exposure

Avoid contact with eyes. Avoid contact with the skin.

Keep away from combustible material.

- Other operational conditions affecting consumer exposure No special measures required. Other operational conditions affecting consumer exposure during the use of the product The consumer has to be advised of warnings regarding overdosage in the instructions for use. The directions for use must indicate the limits for proper use.
- Risk management measures
- Worker protection
- Organisational protective measures

Surround with a dyke storage facilities to prevent contamination of soil and water in case of spillage Handle in a fume cupboard or under extract ventilation

Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

Provide a good standard of controlled ventilation (10 to 15 air changes per hour) Keep away from food, beverages and animal feed.

Provide Internal Plant Instruction.

Technical protective measures

Ensure that suitable extractors are available on processing machines Use only in well ventilated areas.

Store in cool, dry place in tightly closed receptacles.

Only handle and refill product in closed systems.

Carry out filling operations only at sites with extractors available.

Personal protective measures

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

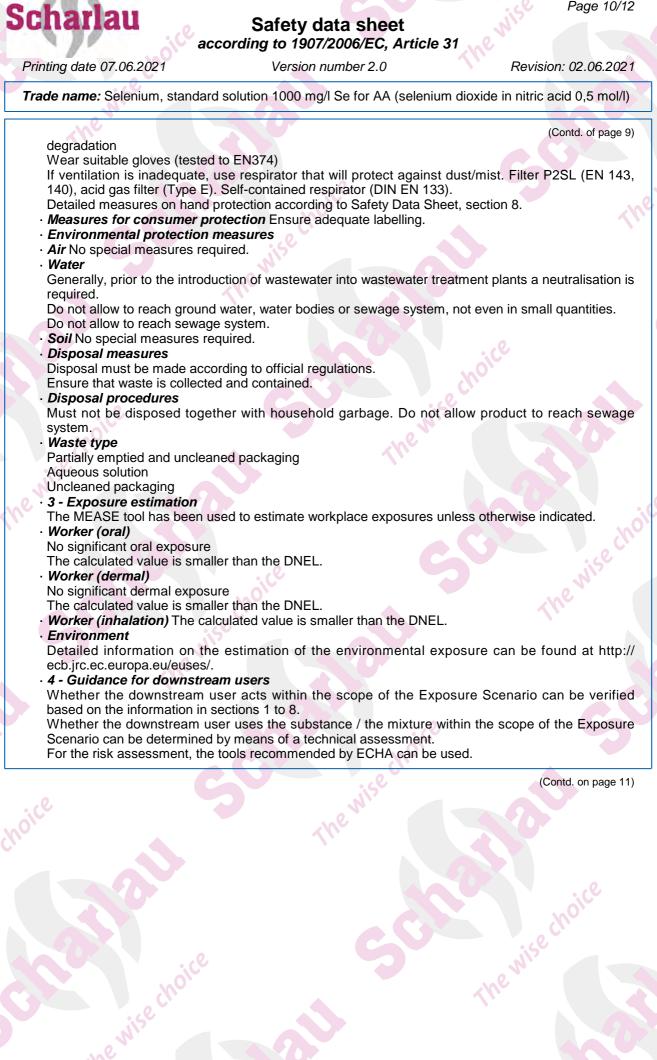
- Tightly sealed goggles
- Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the

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Trade name: Selenium, standard solution 1000 mg/l Se for AA (selenium dioxide in nitric acid 0,5 mol/l)

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Annex: Exposure scenario 2

• 1 - Short title of the exposure scenario Exposure scenario: Nitric acid 65% Laboratory use

· Sector of Use

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

- Product category PC21 Laboratory chemicals
- Process category PROC15 Use as laboratory reagent
- · Environmental release category

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

- · 2 Conditions of use
- · Duration and frequency 8hrs (full working shift).
- · Physical parameters

The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.

- · Physical state Fluid
- · Concentration of the substance in the mixture The substance is main component.

Other operational conditions Observe the general safety regulations when handling chemicals.

Other operational conditions affecting environmental exposure No special measures required.

- Other operational conditions affecting worker exposure Avoid contact with eyes.
- Avoid contact with the skin.

Keep away from combustible material.

- · Other operational conditions affecting consumer exposure No special measures required.
- Other operational conditions affecting consumer exposure during the use of the product The consumer has to be advised of warnings regarding overdosage in the instructions for use. The directions for use must indicate the limits for proper use.
- · Risk management measures

· Worker protection

· Organisational protective measures

Surround with a dyke storage facilities to prevent contamination of soil and water in case of spillage Handle in a fume cupboard or under extract ventilation

Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

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

Keep away from food, beverages and animal feed.

Provide Internal Plant Instruction. Technical protective measures

Ensure that suitable extractors are available on processing machines

Use only in well ventilated areas.

Store in cool, dry place in tightly closed receptacles.

Only handle and refill product in closed systems.

Carry out filling operations only at sites with extractors available.

Personal protective measures

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the

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preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Wear suitable gloves (tested to EN374)

If ventilation is inadequate, use respirator that will protect against dust/mist. Filter P2SL (EN 143, 140), acid gas filter (Type E). Self-contained respirator (DIN EN 133).

Detailed measures on hand protection according to Safety Data Sheet, section 8.

- · Measures for consumer protection Ensure adequate labelling.
- Environmental protection measures
- · Air No special measures required.

· Water

Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

Do not allow to reach ground water, water bodies or sewage system, not even in small quantities. Do not allow to reach sewage system.

· Soil No special measures required.

· Disposal measures

Disposal must be made according to official regulations. Ensure that waste is collected and contained.

· Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Waste type

Partially emptied and uncleaned packaging

Aqueous solution

- Uncleaned packaging
- · 3 Exposure estimation

The MEASE tool has been used to estimate workplace exposures unless otherwise indicated.

· Worker (oral)

No significant oral exposure

The calculated value is smaller than the DNEL.

- · Worker (dermal)
- No significant dermal exposure

The calculated value is smaller than the DNEL.

· Worker (inhalation) The calculated value is smaller than the DNEL.

Environment

Detailed information on the estimation of the environmental exposure can be found at http://ecb.jrc.ec.europa.eu/euses/.

4 - Guidance for downstream users

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.

For the risk assessment, the tools recommended by ECHA can be used.