Yoke Chemicals and New Materials (Shanghai) Co., Ltd.

and its subsidiaries Shekoy Chemicals Europe and USA

Material Safety Data Sheet Conforms to Regulation (EC) 1272/2008

Yoke T-9

Issuing date: 03-01-2021, Version 2.4.

Section 1: Product and Company Identification

1.1 Product identifier

Product form	Substance
Trade name	Yoke T-9
CAS No.	301-10-0
EC no	206-108-6
Proper shipping name	None
REACH registration No.	01-2119485798-13-0008
Formula	C16H30O4Sn
Synonyms	tin bis(2-ethylhexanoate)
Product group	Raw material

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

1.2.1 Relevant identified uses

Main use category	Industrial use
Use of the substance/preparation	Polyurethane catalyst
Function or use category	Catalyst

1.2.2 Uses advised against

No additional information available

1.3 Details of the supplier of the safety data sheet

Yoke Chemicals and New Materials (Shanghai) Co., Ltd.
Economic Development Zone
Yixing, Jiangsu Province
China
Tel: +86 510 87126528
Email: shenfu@yokechem.com

Only representative company name:

Shekoy Chemicals Europa B.V.
Kromme Spieringweg 431
2141 AH Vijfhuizen.
The Netherlands
Tel: +31-(0)23-3035365
Email: purchase@shekoy.com

E-mail address of the competent person responsible for the sds: gc@yokechem.com

1.4 Emergency telephone number

Country	Emergency telephone	Hours of operation
Belgium	+32 70 245 245	24hrs
France	+33 1 45 42 59 59	24hrs
Germany	+49 214 3099300	24hrs
Italy	+39 800 883 300	24hrs
Norway	+47 22 59 13 00	24hrs
Poland	+48 42 63 14 724	24hrs
Portugal	+351 808 250 143	24hrs
Romania	+402 212 106 282	24hrs
Spain	+34 156 20420	24hrs
Sweden	+46 8 33 12 31 / 112	24hrs
Switzerland	+41 44 251 5151 (in Switzerland dial 145)	24hrs
The Netherlands	+31 30 274 8888	24hrs
Turkey	+90 312 433 7001 or +90 800 314 7900	24hrs
United Kingdom of Great Britain and Northern Ireland	+44 844 892 0111	24hrs

Section 2 Hazards Identification / Classification and Labeling

2.1. Classification of the substance or mixture

Classification in accordance with the CLP Regulation EC/1272/2008:

Classification: Eye damage cat.1,
Skin sensitization cat.1,
Reproductive cat.2

2.2. Label elements

Labeling in accordance with the CLP Regulation EC/1272/2008:

Signal word: Danger

Hazard Statement: H318: Causes serious eye damage.
H317: May cause an allergic skin reaction
H361: Suspected of damaging fertility or the unborn child.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P273: Avoid release to the environment.
P280: wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313: IF exposed or concerned: Get medical advice/ attention.
P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3. Other hazards

Substance does meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII: No.
Substance does meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII: No.
Other hazards which does not results in a classification: none

Section 3 Chemical Information / Composition

3.1. Substances

Substance	% Weight	CAS No	EC No	CLP	Haz. St.
Tin bis(2-ethylhexanoate)	90-100	301-10-0	206-108-6	Eye damage cat.1 Skin sens. cat.1 Reproductive tox. Cat.2 Harmful to aquatic life	H318 H317 H361 H412
2-Ethylhexanoic acid	>5	149-57-5	205-743-6	Reproductive tox. Cat.2	H361

For limit values for occupational exposure: see section 8.

3.2. Mixtures

Not applicable

Section 4: First-Aid Measures

4.1. Description of first aid measures

First-aid measures general:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation:

Move exposed person to fresh air. Keep person warm and at rest.
If not breathing, if breathing is irregular or if respiratory arrest occurs provide artificial respiration or oxygen by trained personnel. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

First-aid measures after ingestion:

Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit doesn't enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in the recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

First-aid measures after skin contact:

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after eye contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

4.2. Most important symptoms and effects both acute and delayed

Symptoms/Injuries after inhalation:	No data available
Symptoms/Injuries after skin contact:	May cause sensitization
Symptoms/Injuries after eye contact:	Serious irritation
Symptoms/Injuries after ingestion:	No data available
Chronic symptoms:	No effects known

4.3. Indication of any immediate medical attention and special treatment needed

NOTES TO PHYSICIAN: Treat symptomatically.

Section 5 Fire-fighting Measures

FIRE FIGHTING
Alert Fire Brigade and tell them location and nature of hazard.
Wear full body protective clothing with breathing apparatus.
Prevent, by any means available, spillage from entering drains or water course.
Use water delivered as a fine spray to control fire and cool adjacent area.
Avoid spraying water onto liquid pools.
DO NOT approach containers suspected to be hot.
Cool fire exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.

5.1. Extinguishing Media

Suitable extinguishing media:
In case of fire use water spray (fog), foam, dry chemical or CO2.
Unsuitable extinguishing media:
None

5.2. Special hazards arising from the substance or mixture

Combustion products include: carbon dioxide (CO2). May emit poisonous fumes. May emit corrosive fumes.

In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

5.3. Advice for fire brigade

Special protective equipment for fire-fighters: Fire fighters should wear appropriate protective equipment and a self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

Section 6 Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through split material. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Avoid dispersal of split material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Large spill: Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labeled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labeled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

Small spill: Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapors and contact with skin and eyes. Control personal contact by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labeled container for waste disposal.

6.4. Reference to other sections

See section 1 for emergency contact.
See section 8 for personal protection equipment.
See section 13 for additional waste treatment.

Section 7 Handling and Storage

7.1. Precautions for safe handling

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. DO NOT allow clothing wet with material to stay in contact with skin. May cause sensitization of susceptible persons by skin contact.

7.2. Conditions for safe storage, including any incompatibilities

SUITABLE CONTAINER: Metal can or drums; Packaging as recommended by manufacturer. Check all containers are clearly labeled and free from leaks.
STORAGE INCOMPATIBILITY: Avoid reaction with oxidizing agents.
STORAGE REQUIREMENTS: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10), food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in un-labeled containers. Use appropriate containment to avoid environmental contamination.

7.3. Specific end use(s)

No additional information available

Section 8 Exposure Control and Personal Protection

8.1. Control parameters

Exposure limits

Tin bis(2-ethylhexanoate) Time Weighted Average (TWA): EH40 WEL - 0.1 mg/m3

Tin bis(2-ethylhexanoate) Short Term Exposure Limit (STEL): EH40 WEL - 0.2 mg/m3

DNEL/DMEL Exposure Route	Units	Exposure Frequency	Industrial Worker	Professional Worker	General Population
Oral	mg/kg bw/d	Short-term	NA	NA	NA
Oral	mg/kg bw/d	Long-term, repeated	NA	NA	0,9
Dermal	mg/kg bw/d	Short-term	NA	NA	NA
Dermal	mg/kg bw/d	Long-term, repeated	NA	NA	NA
Inhalation	mg/m³	Short-term	NA	NA	NA
Inhalation	mg/m³	Long-term, repeated	8	8	4,8

NA: Not applicable.

PNEC Exposure Route	Units	Environment
Fresh Water	mg/l	0,007
Marine Water	mg/l	0,001
Sediment	mg/kg dw	0,053
Marine Sediment	mg/kg dw	0,005
Soil	mg/kg dw	0,006
Sewage Treatment Plant	mg/l	6,5
Secondary Poisoning	mg/kg food	No potential for bioaccumulation

8.2. Exposure controls

Occupational exposure controls:

Technical measures: If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protection measures:

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Hand protection: Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Polyvinyl alcohol ("PVA"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier..

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Chemical goggles should be consistent with EN 166 or equivalent.

Skin protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental exposure controls:

Technical measures: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9 Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Color	Light yellow
Odor	Slight
Boiling point/range	>150°C
Melting point/range	9°C at 101.3 kPa
Flash point	137°C at 1013 hPa
Flammability	Not flammable
Auto ignition temperature	400°C at 1013 hPa
Explosive properties	Non explosive
Explosion limits	Not applicable
Oxidizing properties	Not determined
Vapor pressure	0.3 Pa at 20°C
Density	1.260 kg/m³
Bulk density	Not applicable
Solubility in water	4500mg/L at 20°C
Solubility in other solvents	Not determined
pH value	Not determined
Acid value	Not determined
Partition coefficient n-octanol/water	2.64 at 25°C
Relative vapor density (air=1)	Not determined
Viscosity	<380 mPa.s

9.2. Other information

No other information available.

Section 10 Stability and Reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical Stability

Stable under normal conditions of use. Keep out of direct exposure to sunlight. Keep in a well-ventilated storage. If open, store under Nitrogen.

Provided the container is not open and kept in a ventilated area, away from direct sunlight exposition, the shelf-life of the product is one year.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid:

Exposure to sunlight. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

Section 11 Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Oral LD50	rat: 5870 mg/kg
Dermal LD50	rat: >2000 mg/kg

Irritation

Skin rabbit:	Slightly irritating
Eye rabbit:	Highly-irritating
Respiratory or skin sensitization:	Sensitizing

Genotoxicity

in vivo bone marrow cytogenicity:	Not mutagenic
Ames test:	Not mutagenic
in vitro cell gene mutation test (in mouse lymphoma cells):	Not mutagenic
in vitro cytogenetic test (in mouse lymphoma cells):	Not mutagenic

Reproductive toxicity

NOAEL (F1):	100 mg/kg bw/day
NOAEL (P)	300 mg/kg bw/day

Possible risk of harm to the unborn child.

Other toxicological information

Specific target organ toxicity (single exposure):	No data available
Specific target organ toxicity (repeated exposure):	No data available
Carcinogenicity (2-year feeding study, rat):	Not carcinogen

Section 12 Ecological Information

12.1. Toxicity

Ecotoxicity

Fish 96h-LC50 (Pimeohalespromelas):	>116 mg/l
NOEC:	68 mg/l
Aquatic invertebrates (Daphnia magna) 48h EC50	66.3 mg/l
Algae/aquatic plants (Pseudokirchnerellasubcapitata) 72h EC50:	6,9 mg/l
NOEC:	0.54 mg/l

12.2. Persistence and degradability

Readily biodegradable

12.3. Bioaccumulative potential

log Kow of the substance is < 3.

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

Neither PBT nor vPvB

12.6. Other adverse effects

No information available

Section 13 Disposal Considerations

13.1. Waste treatment methods

Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste List (EWL).

Section 14 Transport Information

Not regulated

Section 15 Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EC regulation 1272/2008 (CLP)

See section 2

Replaces 67/548/EC as from December 1st 2010

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - 67/548/EEC, 1999/45/EC, Regulation (EC) No 1272/2008, Regulation (EC) No 1907/2006, 98/24/EC, 92/85/EEC, 94/33/EC, 91/689/EEC and 1999/13/EC.

15.2. Chemical safety assessment

A risk assessment has been performed under the Regulation (EC) No 1907/2006 (REACH) on the evaluation and control of the risks of existing substances. A chemical assessment has been carried out on the substance.

Number and title	Preparation Category (PC)	Article (AC)	Environmental release category (ERC)	Process Category (PROC)
Exposure Scenario 1: Formulation and Re-packing	32		2	1, 2,4, 5, 8a, 8b, 9, 15
Exposure Scenario 2: Flexible foam-Industry applications	32		5	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15, 21
Exposure Scenario 3: Foam granules and rebound PUR foam-Industry applications			5	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15, 21
Exposure Scenario 4: CASE-Industry applications	1, 9a, 21, 32		5	1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 13, 14, 15
Exposure Scenario 5: Laboratory use	21		8c	15
Exposure Scenario 6: CASE-Professional applications, including service life	1, 9a, 32	1, 4	8c	5, 8a, 8b, 10, 11, 13
Exposure Scenario 7: Flexible foam-Service life		1, 5	11A	

Section 16 Other Information

16.1 Indication of changes

Extension

16.2. Key literature references and sources for data

- ESIS (European chemical Substances Information System), http://esis.jrc.ec.europa.eu/
- REACH registered chemicals, http://echa.europa.eu/chem_data_en.asp
- IFA GESTIS - International limit values for chemical agents - occupational exposure limits (OELs), http://www.dguv.de/ifa/en/gestis/limit_values/index.jsp

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information and recommendations set forth herein are presented in good faith according to our best present knowledge, but without warranty. Information is supplied upon the condition that the persons receiving the same will make their own determination as to its safety and suitability for their purposes prior to use. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product. In no event will Jiangsu Yoke Technology Co., Ltd or its affiliates be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information.

1. ES 1: Formulation or re-packing; Polymer Preparations and Compounds (PC 32)

1.1. Title section

ES name: *Formulation into mixture*
Product category: Polymer Preparations and Compounds (PC 32)

Environment	
1: *Formulation into mixture*	ERC 2
Worker	
2: *Formulation into mixture*	PROC 1, PROC 8b, PROC 15, PROC 5, PROC 2, PROC 4, PROC 9, PROC 8a

1.2. Conditions of use affecting exposure

1.2.1. Control of environmental exposure: *Formulation into mixture* (ERC 2)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 5 tonnes/day
Annual amount per site <= 500 tonnes/year
Technical and organisational conditions and measures
batch process, no onsite RMM considered as there is no contact/release to water
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Receiving surface water flow >= 1.8E4 m3/day

1.2.2. Control of worker exposure: *Formulation into mixture* (PROC 1, PROC 8b, PROC 15, PROC 5, PROC 2, PROC 4, PROC 9, PROC 8a)

Product (article) characteristics
Covers concentrations up to 2 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.; If skin

contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.
Other conditions affecting workers exposure
Indoor use
Assumes process temperature up to 40 °C
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Local exhaust ventilation; Inhalation - minimum efficiency of 90%

1.3. Exposure estimation and reference to its source

1.3.1. Environmental release and exposure: *Formulation into mixture* (ERC 2)

Release route	Release rate	Release estimation method
Water	5E-6 kg/day	Estimated release factor
Air	5E-6 kg/day	Estimated release factor
Soil	0 kg/day	Estimated release factor

Protection target	Exposure estimate	RCR
Fresh water	4.4E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	1.25E-6 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	4.33E-9 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	1.23E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	3.1E-7 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	1.91E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	5.06E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	8.68E-9 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

1.3.2. Worker exposure: *Formulation into mixture* (PROC 1, PROC 8b, PROC 15, PROC 5, PROC 2, PROC 4, PROC 9, PROC 8a)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0.034 mg/m³ (TRA Workers 3.0)	< 0.01
Combined, systemic, long term		< 0.01

1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

For Inhalation and dermal local contact, the hazard is medium (no threshold derived). As product is considered as a sensitizer, hand protection is required.

For eye contact, the hazard is high but no threshold are derived, eye protection is required.

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled

2. ES 2: Use at industrial sites; Polymer Preparations and Compounds (PC 32); Manufacture of plastics products, including compounding and conversion (SU 12)

2.1. Title section

ES name: *Flexible foam Industry applications*
Product category: Polymer Preparations and Compounds (PC 32)
Sector of use: Manufacture of plastics products, including compounding and conversion (SU 12)

Environment	
1: *Flexible foam Industry applications*	ERC 5
Worker	
2: *Flexible foam production*	PROC 1, PROC 3, PROC 8b, PROC 21, PROC 15, PROC 5, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a

2.2. Conditions of use affecting exposure

2.2.1. Control of environmental exposure: *Flexible foam Industry applications* (ERC 5)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 10 tonnes/day
Annual amount per site <= 200 tonnes/year
Technical and organisational conditions and measures
batch process, no onsite RMM considered as there is no contact/release to water
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Receiving surface water flow >= 1.8E4 m3/day

2.2.2. Control of worker exposure: *Flexible foam production* (PROC 1, PROC 3, PROC 8b, PROC 21, PROC 15, PROC 5, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a)

Product (article) characteristics
Covers concentrations up to 2 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.
Other conditions affecting workers exposure
Indoor use
Assumes process temperature up to 40 °C
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Local exhaust ventilation; Inhalation - minimum efficiency of 90%

2.3. Exposure estimation and reference to its source

2.3.1. Environmental release and exposure: *Flexible foam Industry applications* (ERC 5)

Release route	Release rate	Release estimation method
Water	1E-5 kg/day	Estimated release factor
Air	1E-5 kg/day	Estimated release factor
Soil	0 kg/day	Estimated release factor

Protection target	Exposure estimate	RCR
Fresh water	7.5E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	2.12E-6 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	7.43E-9 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	2.1E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	6.2E-7 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	3.62E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	2.77E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	6.24E-9 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

2.3.2. Worker exposure: *Flexible foam production* (PROC 1, PROC 3, PROC 8b, PROC 21, PROC 15, PROC 5, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0.034 mg/m³ (TRA Workers 3.0)	< 0.01
Combined, systemic, long term		< 0.01

2.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

For Inhalation and dermal local contact, the hazard is medium (no threshold derived). As product is considered as a sensitizer, hand protection is required.

For eye contact, the hazard is high but no threshold are derived, eye protection is required.

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled

3. ES 3: Use at industrial sites; Polymer Preparations and Compounds (PC 32); Manufacture of plastics products, including compounding and conversion (SU 12)

3.1. Title section

ES name: *Foam granules and rebound PUR Foam*
Product category: Polymer Preparations and Compounds (PC 32)
Sector of use: Manufacture of plastics products, including compounding and conversion (SU 12)

Environment	
1: *Foam granules and rebound PUR Foam*	ERC 5
Worker	
2: *Foam granules and rebound PUR foam*	PROC 1, PROC 3, PROC 8b, PROC 21, PROC 15, PROC 5, PROC 13, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a

3.2. Conditions of use affecting exposure

3.2.1. Control of environmental exposure: *Foam granules and rebound PUR Foam* (ERC 5)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 10 tonnes/day
Annual amount per site <= 200 tonnes/year
Technical and organisational conditions and measures
batch process, no onsite RMM considered as there is no contact/release to water
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Receiving surface water flow >= 1.8E4 m3/day

3.2.2. Control of worker exposure: *Foam granules and rebound PUR foam* (PROC 1, PROC 3, PROC 8b, PROC 21, PROC 15, PROC 5, PROC 13, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a)

Product (article) characteristics
Covers concentrations up to 2 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a good standard of controlled ventilation (5 to 10 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.
Other conditions affecting workers exposure
Indoor use
Assumes process temperature up to 40 °C
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Local exhaust ventilation; Inhalation - minimum efficiency of 90%

3.3. Exposure estimation and reference to its source

3.3.1. Environmental release and exposure: *Foam granules and rebound PUR Foam* (ERC 5)

Release route	Release rate	Release estimation method
Water	1E-5 kg/day	Estimated release factor
Air	1E-5 kg/day	Estimated release factor
Soil	0 kg/day	Estimated release factor

Protection target	Exposure estimate	RCR
Fresh water	7.5E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	2.12E-6 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	7.43E-9 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	2.1E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	6.2E-7 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	3.62E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	2.77E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	6.24E-9 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

3.3.2. Worker exposure: *Foam granules and rebound PUR foam* (PROC 1, PROC 3, PROC 8b, PROC 21, PROC 15, PROC 5, PROC 13, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0.01 mg/m³ (TRA Workers 3.0)	< 0.01
Combined, systemic, long term		< 0.01

3.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

For Inhalation and dermal local contact, the hazard is medium (no threshold derived). As product is considered as a sensitizer, hand protection is required.

For eye contact, the hazard is high but no threshold are derived, eye protection is required.

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled

4. ES 4: Use at industrial sites; Polymer Preparations and Compounds (PC 32); Manufacture of plastics products, including compounding and conversion (SU 12)

4.1. Title section

ES name: *CASE, professional application*
Product category: Polymer Preparations and Compounds (PC 32)
Sector of use: Manufacture of plastics products, including compounding and conversion (SU 12)

Environment	
1: *CASE, professional application*	ERC 5
Worker	
2: *CASE, professional applications*	PROC 1, PROC 8b, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a, PROC 6, PROC 3, PROC 10, PROC 15, PROC 5, PROC 13, PROC 7

4.2. Conditions of use affecting exposure

4.2.1. Control of environmental exposure: *CASE, professional application* (ERC 5)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 0.5 tonnes/day
Annual amount per site <= 10 tonnes/year
Technical and organisational conditions and measures
batch process, no onsite RMM considered as there is no contact/release to water
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Receiving surface water flow >= 1.8E4 m3/day

4.2.2. Control of worker exposure: *CASE, professional applications* (PROC 1, PROC 8b, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a, PROC 6, PROC 3, PROC 10, PROC 15, PROC 5, PROC 13, PROC 7)

Product (article) characteristics
Covers concentrations up to 2 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.
Other conditions affecting workers exposure
Indoor use
Assumes process temperature up to 40 °C
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Local exhaust ventilation; Inhalation - minimum efficiency of 90%

4.3. Exposure estimation and reference to its source

4.3.1. Environmental release and exposure: *CASE, professional application* (ERC 5)

Release route	Release rate	Release estimation method
Water	5E-7 kg/day	Estimated release factor
Air	5E-7 kg/day	Estimated release factor
Soil	0 kg/day	Estimated release factor

Protection target	Exposure estimate	RCR
Fresh water	1.61E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	4.56E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	1.54E-9 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	4.37E-8 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	3.1E-8 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	3.76E-8 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	1.32E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	2.98E-9 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

4.3.2. Worker exposure: *CASE, professional applications* (PROC 1, PROC 8b, PROC 14, PROC 2, PROC 4, PROC 9, PROC 8a, PROC 6, PROC 3, PROC 10, PROC 15, PROC 5, PROC 13, PROC 7)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0.034 mg/m³ (TRA Workers 3.0)	< 0.01
Combined, systemic, long term		< 0.01

4.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

For Inhalation and dermal local contact, the hazard is medium (no threshold derived). As product is considered as a sensitizer, hand protection is required.

For eye contact, the hazard is high but no threshold are derived, eye protection is required.

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled

5. ES 5: Widespread use by professional workers; Polymer Preparations and Compounds (PC 32); Manufacture of plastics products, including compounding and conversion (SU 12)

5.1. Title section

ES name: *Laboratory use, professional*
Product category: Polymer Preparations and Compounds (PC 32)
Sector of use: Manufacture of plastics products, including compounding and conversion (SU 12)

Environment	
1: *Laboratory use, professional*	ERC 8c
Worker	
2: *Laboratery use, professional*	PROC 15

5.2. Conditions of use affecting exposure

5.2.1. Control of environmental exposure: *Laboratory use, professional* (ERC 8c)

Technical and organisational conditions and measures
batch process, no onsite RMM considered as there is no contact/release to water
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

5.2.2. Control of worker exposure: *Laboratery use, professional* (PROC 15)

Product (article) characteristics
Covers concentrations up to 2 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Local exhaust ventilation; Inhalation - minimum efficiency of 80 %
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.
Other conditions affecting workers exposure
Indoor use
Assumes process temperature up to 40 °C
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification,

refer to section 8 of the SDS.
Local exhaust ventilation; Inhalation - minimum efficiency of 90%

5.3. Exposure estimation and reference to its source

5.3.1. Environmental release and exposure: *Laboratory use, professional* (ERC 8c)

Release route	Release rate	Release estimation method
Water	5.5E-12 kg/day	Estimated release factor
Air	5.5E-12 kg/day	Estimated release factor
Soil	0 kg/day	ERC

Protection target	Exposure estimate	RCR
Fresh water	1.3E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	3.68E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	1.23E-9 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	3.49E-8 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	3.41E-13 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	2.06E-8 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	1.25E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	2.82E-9 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

5.3.2. Worker exposure: *Laboratery use, professional* (PROC 15)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	3.376 mg/m³ (TRA Workers 3.0)	0.422
Combined, systemic, long term		0.422

5.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

For Inhalation and dermal local contact, the hazard is medium (no threshold derived). As product is considered as a sensitizer, hand protection is required.

For eye contact, the hazard is high but no threshold are derived, eye protection is required.

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled

6. ES 6: Widespread use by professional workers; Polymer Preparations and Compounds (PC 32); Manufacture of plastics products, including compounding and conversion (SU 12)

6.1. Title section

ES name: *CASE, professional application*
Product category: Polymer Preparations and Compounds (PC 32)
Sector of use: Manufacture of plastics products, including compounding and conversion (SU 12)

Environment	
1: *CASE, professional application*	ERC 8c
Worker	
2: *CASE, professional application*	PROC 5, PROC 8b, PROC 10, PROC 13, PROC 11, PROC 8a

6.2. Conditions of use affecting exposure

6.2.1. Control of environmental exposure: *CASE, professional application* (ERC 8c)

Technical and organisational conditions and measures
batch process, no onsite RMM considered as there is no contact/release to water
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

6.2.2. Control of worker exposure: *CASE, professional application* (PROC 5, PROC 8b, PROC 10, PROC 13, PROC 11, PROC 8a)

Product (article) characteristics
Covers concentrations up to 2 %
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day
Technical and organisational conditions and measures
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Local exhaust ventilation; Inhalation - minimum efficiency of 80 %
Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.
Other conditions affecting workers exposure
Indoor use
Assumes process temperature up to 40 °C
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply

Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.
Local exhaust ventilation; Inhalation - minimum efficiency of 80 %

6.3. Exposure estimation and reference to its source

6.3.1. Environmental release and exposure: *CASE, professional application* (ERC 8c)

Release route	Release rate	Release estimation method
Water	5.5E-12 kg/day	Estimated release factor
Air	5.5E-12 kg/day	Estimated release factor
Soil	0 kg/day	ERC

Protection target	Exposure estimate	RCR
Fresh water	1.3E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	3.68E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	1.23E-9 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	3.49E-8 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	3.41E-13 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	2.06E-8 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	1.25E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	2.82E-9 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

6.3.2. Worker exposure: *CASE, professional application* (PROC 5, PROC 8b, PROC 10, PROC 13, PROC 11, PROC 8a)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	6.752 mg/m³ (TRA Workers 3.0)	0.844
Combined, systemic, long term		0.844

6.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

For Inhalation and dermal local contact, the hazard is medium (no threshold derived). As product is considered as a sensitizer, hand protection is required.

For eye contact, the hazard is high but no threshold are derived, eye protection is required.

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled

7. ES 7: Service life (consumers); Various articles (AC 1, AC 5)

7.1. Title section

ES name: *Flexible foam, service life*
Article category: Vehicles (AC 1), Fabrics, textiles and apparel (AC 5)

Environment	
1: *Flexible foam, service life*	ERC 11a
Consumer	
2: *Flexible foam, service life*	AC 1
3: *Flexible foam, service life*	AC 5

7.2. Conditions of use affecting exposure

7.2.1. Control of environmental exposure: *Flexible foam, service life* (ERC 11a)

Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Municipal sewage treatment plant is assumed.

7.2.2. Control of consumer exposure: *Flexible foam, service life* (AC 1)

Product (article) characteristics
Covers concentrations up to 1E-3 %
Inhalation exposure is considered to be not relevant.
Dermal exposure assumed to be negligible
Oral exposure is considered to be not relevant.
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day

7.2.3. Control of consumer exposure: *Flexible foam, service life* (AC 5)

Product (article) characteristics
Covers concentrations up to 1E-3 %
Inhalation exposure is considered to be not relevant.
Dermal exposure assumed to be negligible
Oral exposure is considered to be not relevant.
Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 events per day

7.3. Exposure estimation and reference to its source

7.3.1. Environmental release and exposure: *Flexible foam, service life* (ERC 11a)

Release route	**Release rate**	**Release estimation method**
Water	2.06E-5 kg/day	ERC
Air	2.06E-5 kg/day	ERC
Soil	0 kg/day	ERC

Protection target	Exposure estimate	RCR
Fresh water	1.41E-7 mg/L (EUSES 2.1.2)	< 0.01
Sediment (freshwater)	3.99E-6 mg/kg dw (EUSES 2.1.2)	< 0.01
Marine water	1.4E-8 mg/L (EUSES 2.1.2)	< 0.01
Sediment (marine water)	3.97E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Sewage Treatment Plant	1.28E-6 mg/L (EUSES 2.1.2)	< 0.01
Agricultural soil	7.24E-7 mg/kg dw (EUSES 2.1.2)	< 0.01
Man via environment - Inhalation	1.25E-10 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	1.59E-8 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes		< 0.01

7.3.2. Consumer exposure: *Flexible foam, service life* (AC 1)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0 mg/m³ (TRA Consumers 3.1)	< 0.01
Oral, systemic, long term	0 mg/kg bw/day (TRA Consumers 3.1)	< 0.01
Combined, systemic, long term		< 0.01

7.3.3. Consumer exposure: *Flexible foam, service life* (AC 5)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0 mg/m³ (TRA Consumers 3.1)	< 0.01
Oral, systemic, long term	0 mg/kg bw/day (TRA Consumers 3.1)	< 0.01
Combined, systemic, long term		< 0.01

7.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

The Operational Conditions (OCs) and Risk Management Measures (RMMs) detailed in this contributing scenario ensure that the risk of T9 exposure to workers is adequately controlled