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

1.1 Product identifiers

Product name : MaxiLight+
Product number : 461-003 and 461-015
Brand : Hidex
REACH NO. : A registration number is not available for this mixture. All the substances used within the mixture are either; Pre-REACH registered, fully REACH Registered, exempt from registration or the annual tonnage does not require registration.

Unique Formula Identifier Code: F5R5-TAAE-F10W-WKU6

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

Scientific Research and Development ONLY (Sector of Use: SU24). Not for consumer use.
Application of the substance / the mixture: Liquid Scintillation Cocktail ONLY.

1.3 Details of the supplier of the safety data sheet

Supplier : Hidex Chemicals Oy
Address : Lemminkäisenkatu 62, FIN-20520, Turku, Finland
Telephone : +358 10 843 5570
Website : www.hidex.com
E-mail address : chemicals@hidex.com

1.4 Emergency telephone numbers

Call your local poison centre quoting the Unique Formula Identifier Code given in section 1.1.

Poison Centres

Country	Language	European Poison Centre	Phone	Website
Belgium	French	Centre Antipoisons	070 245 245 (free, 24/7)	https://www.centreantipoisons.be
	Dutch	Antigif centrum	070 245 245 (free, 24/7)	http://www.antigifcentrum.be
Finland	Finnish Swedish English	Helsinki University Hospital– Poison Information Centre	0800 147 111 (free, 24/7) 09 471 977 (charged)	https://www.hus.fi/en/potilaalle/sairaalat-ja-toimipisteet/myrkytystietokeskus
France	French English	Service national d'assistance reglementaire REACH	+ 33 (0) 1 45 42 59 59 (free, 24/7) This number takes you through to local poison centre numbers for the different regions	https://reach-info.ineris.fr/Numero_orfila
Germany	German English	Local Poison Centres:		
		Berlin	+49 (0) 30 19240	https://giftnotruf.charite.de
		Bonn	+49 (0) 228 19240	**http://www.gizbonn.de**
		Erfurt	+49 (0) 361 730730	https://www.ggiz-erfurt.de/home.html
		Freiburg	+49 (0) 761 19240	https://www.uniklinik-freiburg.de/giftberatung.html
		Gottingen	+49 (0) 551 19240	https://www.giz-nord.de/cms/index.php
		Homburg/Saer	+49 (0) 6841 19240	http://www.uniklinikum-saarland.de/de/einrichtungen/kliniken_institute/
		Mainz	+49 (0) 6131 19240	**http://www.giftinfo.uni-mainz.de**
		Munchen	+49 (0) 89 19240	http://www.toxinfo.med.tum.de

Cont…

Country	Language	European Poison Centre	Phone	Website
Hungary	Hungarian	Health toxicology information service	+36 80 201 199 (free 24/7 - only from Hungary) +36 1 476 6464 (24/7, can be called for a normal fee from abroad)	https://www.nnk.gov.hu/index.php/kemiai-biztonsagi-es-kompetens-hatosagi-fo/egeszsegugyi-toxikologiai-tajekoztato-szolgalat
Italy	Italian	Centro Antivelni firenze	+39 055 794 7819 (24/7)	Presentazione (antiveleni.altervista.org)
Ireland	English	Poisons information Centre of Ireland	+353 1 809 21 66 (8am-10pm / 7 days a week) +353 1 809 25 66 (24/7, healthcare profession only)	https://www.poisons.ie/
Lithuania	Lithuanian English	Poison Information Bureau part of The State Medicines Control Agency	+370 8-5 236 20 52 (free, 24/7)	http://www.apsinuodijau.lt/pirma-pagalba/
Netherlands	French English Dutch	National Poisons Information Center / University Medical Center Utrecht	+31 88 75 585 61	https://www.umcutrecht.nl/nl
Poland	Polish	National Poison Information Centres:		
		Krakow	+48 12 411 99 99	http://www.oit.cm.uj.edu.pl
		Gdansk	+48 58 682 04 04	http://www.pctox.pl/new/
		Poznań	+48 61 847 69 46	N/A
		Warszawa	+48 607 218 174	N/A
Romania	Romanian	National Institute for Public Health, Ministry of Health		
		CNMRMC	+40 213 183 606	N/A
		Spitalul Clinic de Urgenta Bucuresti	+40 215 992 300 int. 291	N/A
		Spitalul Clinic Judetean de Urgenta Targu Mures	+40 265.212.111	N/A
Slovakia	Slovak	National Toxicological Information Centre	+421 2 5477 4166	http://www.ntic.sk/ntic_en.php
Spain	Spanish	National Emergency Telephone Number of Spanish Poison Centre	+34 91 562 04 20	https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/productos-quimicos/portal-reach-clp/novedades/detalle_novedades.aspx?id=tcm:30-193752-16
Sweden	Swedish English	Swedish Poison Information Centre	**112 (24/7) Emergency** 010-456 6700 Less urgent	In English - Giftinformationscentralen
UK	English	National Poisons Information Service NHS	+44 (0) 344 892 0111 - Healthcare Professionals ONLY 111 – General public	https://www.npis.org/Industrynotify.html https://www.nhs.uk/nhs-services/

SECTION 2: Hazards Identification

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

Aspiration Toxicity	Category 1	H304
Aquatic Toxicity	Chronic 1	H410

For the full text of the H-Statements mentioned here - see section 16

2.2 Label elements
Classification according to Regulation (EC) No 1272/2008

Hazard pictograms

GHS08

GHS09

Signal word Danger

Contains Di-isopropylnaphthalene isomers

Hazard statements

H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe mist / vapours / spray
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501	Dispose of contents / container in accordance with local/national regulations.

2.3 Other hazards

Results of PBT and vPvB assessment: This product contains di-isopropylnaphthalene isomers (CAS # 38640-62-9) and should be handled accordingly as if it were a PBT/vPvB.
Endocrine Disrupting Properties: This product does not contain any substances that have endocrine disrupting properties.

SECTION 3: Composition / Information on Ingredients

3.1 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

Hazardous components:

Di-isopropylnaphthalene isomers					
CAS #: 38640-62-9 EC NUMBER: 254-052-6 REACH: 01-2119565150-48-XXXX	Aspiration Toxicity category 1 Chronic aquatic 1	H304 H410	80-99%	ATE: M Factor: SCL:	N/A Chronic=1 N/A

For the full text of the H-Statements - see section 16 & for further information on Regulations – see section 15.

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General information: Consult a doctor. Show this safety data sheet to the doctor in attendance.
If inhaled: Move person into fresh air.

In case of contact with skin contact: Wash off with plenty of water.
In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor. Protect unharmed eye.
If swallowed: Danger of aspiration. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call for a doctor immediately.

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 information available.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media
Suitable extinguishing agents: Carbon Dioxide, dry powder or water spray.
Fight larger fires with water spray or alcohol resistant foam.
5.2 Special hazards arising from the substance or mixture
No further relevant information available.
5.3 Advice for fire-fighters
Special Protective equipment: Wear self-contained respiratory protective device and a fully protective suit.

Further Information: Cool closed containers exposed to fire with water spray. Contaminated water must not be discharged into drains.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment. Keep unprotected persons away.
Special precautions: Not applicable.

6.2 Environmental precautions

Environmental precautions: Inform respective authorities in case of seepage into water course.
Do not allow to enter surface or ground water.
Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Absorb with liquid binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Pick up mechanically
Dispose of according to local regulations (see section 13).

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

Advice on safe handling: Wear personal protective equipment.
Avoid inhalation of vapour or mist.
Ensure good ventilation/exhaustion at the workplace.
Information about fire and explosion protection:
Keep away from sources of ignition.
Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

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.
Protect from exposure to the light.

7.3 Specific end use(s): Advised temperature of use: 15-25°C.
Uses identified and documented.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

Components with workplace control parameters:

Component	CAS Number	Exposure	Value	Control parameter
Di-isopropylnaphthalene isomers	38640-62-9	DNEL	long term	2.1 mg/kg/d ORAL 2.1 mg/kg/d DERMAL 7.4 mg/kg/d INHALATION

General protective and hygienic measures: Handle in accordance with good industrial hygiene and safety practice.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Avoid inhalation of vapour or mist.
Do not eat, drink, smoke or sniff while working.
Wear suitable gloves, body and eye protection and a face shield.

Personal Protective Equipment:
Respiratory protection: No personal respiratory protective equipment normally required.
Skin protection: Handle with protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Splash contact Material: Nitrile-rubber
Minimum layer thickness 0.425 mm
Break through time: 60-120 min
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye / face protection: Tightly fitting safety goggles / safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(Us) or EN 166(EU).

Body protection: Protective work clothing – complete suit protecting against chemicals. The type of protective clothing must be selected according to the concentration and amount of the dangerous substance at the specified workplace.

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Form:	Liquid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Flash point:	>140°C
Flammability (solid, gaseous):	Not applicable
Ignition temperature:	>425°C
Self-igniting:	Product is not self igniting
Danger of explosion:	Product in not explosive.
Vapour pressure:	0.005 hPa
Density at 20 °C:	0.958 g/cm^3
Relative density	Not determined
Vapour density	Not determined
Evaporation rate	Not determined
Solubility in water:	Not soluble in water
Particle size	NA
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	
Dynamic:	Not determined
Kinematic:	Not determined

9.2 Other information

Information with regard to physical hazard class:	No additional information
Other Safety Characteristics:	No additional information

SECTION 10: Stability and Reactivity

10.1 Reactivity: No data available

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: No decomposition if used according to specifications.

10.4 Conditions to avoid No further relevant information available

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Combustion can produce oxides of carbon, carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Component	CAS Number	LC50/ LD50 Values
Di-isopropylnaphthalene isomers	38640-62-9	>4,000 mg/kg (rat) ORAL >4,000 mg/kg (rat) DERMAL >5.6 mg/l (rat) INHALATION

Skin corrosion / irritation:	Based on available data, classification criteria not met
Serious eye damage / eye irritation:	Based on available data, classification criteria not met
Respiratory sensitisation:	Based on available data, classification criteria not met.

Germ cell mutagenicity: Based on available data, classification criteria not met.
Carcinogenicity: Based on available data, classification criteria not met.
Reproductive toxicity: Based on available data, classification criteria not met.
Specific Target Organ Toxicity – Single Exposure: Based on available data, classification criteria not met.
Specific Target Organ Toxicity – Repeated Exposure: Based on available data, classification criteria not met.
Aspiration hazard: Maybe fatal if swallowed and enters airways.
Additional information: The toxicological properties have not been fully investigated.

11.2 Endocrine disrupting properties This product does not contain any substances that have endocrine disrupting properties.

11.3 Information on other hazards No additional health effects are reported.

SECTION 12: Ecological Information

12.1 Toxicity

Aquatic toxicity:

Component	CAS NUMBER	LC50
Di-isopropylnaphthalene isomers	38640-62-9	Daphnia 1.7 mg/l

12.2 Persistence and degradability: Not readily biodegradable.

12.3 Bio accumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

12.5 Results of PBT and vPvB Assessment: This product contains di-isopropylnaphthalene isomers (CAS #38640-62-9) that is PBT/vPvB and should be handled accordingly.

12.6 Endocrine Disrupting Properties: This product does not contain any substances that have endocrine disrupting properties.

12.7 Other adverse effects
Additional ecological information: Toxic to aquatic life with long lasting effects.
General notes: Do not allow large quantities of product, undiluted or un-neutralised to reach ground water, water course or sewage system. Dangerous to drinking water, even if small quantities leak into the ground. Poisonous to fish and plankton.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods
Product: Waste product must be disposed of according to local authority recommendations, e.g. convey to a suitable incinerator.
Uncleaned Packaging: Disposal must be made according to official regulations. Uncleaned packaging may be classifiable as hazardous waste.

SECTION 14: Transport Information

14.1 UN-Number
ADR, IMDG, IATA UN3082
ADR/IMDG: Not restricted as per special provision 375
IATA: Not restricted as per special provision A 197

14.2 UN proper shipping name
ADR, IMDG, IATA 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S (Di-isopropylnaphthalene isomers)

14.3 Transport hazard class(es) ADR, IMDG, IATA	9 miscellaneous dangerous goods
14.4 Packing group - ADR, IMDG, IATA	III
14.5 Environmental hazards:	This product contains environmentally hazardous substances: Di-isopropylnaphthalene isomers Marine pollutant Symbol (fish and tree) Special marking (ADR) Symbol (fish and tree)
14.6 Special precautions for user	Warning: miscellaneous dangerous substances and articles
Hazard index number	90
EMS Number:	F-A,S-F ***Cont…***

14.7 Maritime transport in bulk according to IMO instruments

Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30ml Maximum net quantity per outer packaging: 1000ml
Transport category	3
Tunnel restriction code	E
IMDG	
UN "Model Regulation":	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE. LIQUID, N.O.S (Di-isopropylnaphthalene isomers), 9, III

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No further information available.

15.2 Chemical safety assessment
A Chemical Safety Assessment has been carried out on the major REACH Registered component.

SECTION 16: Other Information

Hazard statements

H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects

Precautionary statements

P260	Do not breathe mist / vapours / spray
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P501	Dispose of contents / container in accordance with local/national regulations.

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.

Abbreviations and acronyms:
ADR: Accord européen sur le transport 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)

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

NIOSH: National Institute of Occupational Safety and Health

LL50: Loading rate of test substance resulting in 50% mortality)

LD50: Lethal dose, 50 percent

LC50: Lethal Concentration, 50 percent

ATE: Acute Toxicity Estimate

M Factor: Multiplying factor for substances that are highly toxic to aquatic environment

SCL: Specific Concentration Limit: a concentration limit that is specific to a substance and takes precedence over generic concentration limit or cut-off

Please see annex to this SDS

Annex to the SDS

- This formulation contains several substances.
- The substances that contribute to its hazard classification are detailed in section 3.2 of the SDS.
- The lead component / priority substance in the formulation has been identified as Bis(isopropyl)naphthalene (CAS #: 38640-62-9).
- The exposure scenario data for this substance is covered in this Annex.
- This data has been reproduced exactly from the manufacturer's Extended Safety Data Sheet.
- No scaling has been applied to account for the percentage of substance in the formulation.

Overview Of Exposure Scenarios

This section details the applicable Exposure Scenarios (ES):

ES	Sector of Use (SU)		Process Category (PROC)		Product Category (PC)		Environmental Release Category (ERC)	
1	**SU03**	Industrial uses	PROC01	Use in closed process, no likelihood of exposure.	PC21	Laboratory Chemicals	ERC02	Mixing and blending of substances into (chemical) preparations in all types of formulating industries.
		Manufacture of chemicals	PROC03	Use in closed batch process (synthesis or formulation).				
			PROC08b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.				
			PROC09	Transfer of substance or preparation into small containers (dedicated filling line, including weighing).				
2	**SU21**	Professional Use	PROC15	Use as laboratory reagent.	PC21	Laboratory Chemicals	ERC9a	Wide dispersive indoor use of substances in closed systems.
	SU24	Scientific Research & Development						

- 2 exposure scenarios from the manufactures extended safety data sheet have been deemed applicable to this formulation.
- Each exposure scenario is detailed below.

Exposure Scenario 1 – SU03

SU03

- **Formulation and (re)packing of substances and mixtures,**
- **Formulation in Liquid Scintillation Cocktails**
- **Industrial**

Use Descriptors: SU03; PROC01, PROC03, PROC08b, PROC09; ERC02
Process Category: PROC01, PROC03, PROC08b, PROC09
Environmental Release Category: ERC02
Market sector by type of chemical product: PC21

Environmental contributing scenarios

- **Formulation in scintillation cocktails:** ERC02

Health contributing scenarios

- **Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions:** PROC01
- **Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition:** PROC03
- **Transfer of substance or mixture (charging and discharging) at dedicated facilities:**PROC08b
- **Transfer of substance or mixture into small containers (dedicated filling line, including weighing):** PROC09

Section 2 - SU03 - Exposure Controls

Contributing scenario controlling environmental exposure for:
Amounts used:

- Daily amount per site: ≤0.22 tonnes/day.
- Annual site tonnage: ≤65 tonnes/year.
- Release duration: ≥300 days per year.

Other conditions affecting environmental exposure:

- Receiving surface water flow: ≥18000 m³/d.
- Release factor after on-site risk management:
- Release to waste water from process: 0.0005 % (ESVOC SPERC 2.2.v1).
- Release to air from process: 0.05 % (ESVOC SPERC 2.2.v1).
- Release to soil from process: 0.01 % (ERC02).

Technical conditions and measures at process level (source) to prevent release:

- Type of activity or process: Solvent-based process.
- Negligible waste water emissions as the process operates without water contact.
- Waste water emissions generated from equipment cleaning with water.
- Negligible air emissions as the process operates in a contained system.

Indoor use

- Process optimised for highly efficient use of raw materials.
- On-site Exhaust air treatment: Upgrade of the system in place or additional air treatment measures, such as wet scrubber and/or air filtration and/or thermal oxidation and/or vapour recovery systems, in order to achieve a reduction of the air emissions. (Air - minimum efficiency of: 80 %).

Conditions and measures related to sewage treatment plant

- Municipal Sewage Treatment Plant: Yes. [Treatment effectiveness: 85.29 %].
- Discharge rate: ≥2000 m³/d.
- Application of the STP sludge on agricultural soil: Yes.

Contributing scenario controlling worker exposure for other conditions affecting workers exposure:

- Do not ingest.
- Avoid splashing.
- Avoid contact with contaminated tools and objects.

Organisational measures to prevent/limit releases: dispersion and exposure

- Training for staff on good practice.
- Supervision in place to check that the RMMs in place are being used correctly and
- OCs followed.

Conditions and measures related to personal protection, hygiene and health evaluation
Advice on general: Good standard of personal hygiene.
Occupational hygiene: Assumes a good basic standard of occupational hygiene is implemented.

Section 3 – SU03 - Exposure estimation and reference to source

Exposure estimation and reference to its source - Environment:
Exposure assessment (environment): EUSES v2.1.2
Exposure estimation:

- Freshwater: 0.00000846 mg/l.
- Risk characterisation ratio (PEC/PNEC): 0.036.
- Freshwater sediment: 0.031 mg/kg dwt.
- Risk characterisation ratio (PEC/PNEC): 0.359.
- Marine water: 0.000000773 mg/l.
- Risk characterisation ratio (PEC/PNEC): 0.033.
- Marine water sediment: 0.00279 mg/kg dwt.
- Risk characterisation ratio (PEC/PNEC): 0.328.
- Sewage Treatment Plant: 0.0000798 mg/l.
- Risk characterisation ratio (PEC/PNEC): <0.01.
- Soil: 0.016 mg/kg dwt.
- Risk characterisation ratio (PEC/PNEC): 0.907.

Remark: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers:
Exposure assessment: Qualitative approach used to conclude safe use.

Section 4 – SU03 - Guidance to work within boundaries set by Exposure Scenarios

General:	The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit their use. The user has to ensure that risks are managed. The risk assessment methods/tools given in section 3 may be used for this evaluation.
Environment:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Exposure Scenario 2 – SU21 & SU24

SU24

- **Use of Liquid Scintillation Cocktails (scintillation counting in laboratories)**
- **Professional**

Use Descriptors: SU24; SU21, PROC15; ERC09a

Process Category: PROC15

Environmental Release Category: ERC09a

Market sector by type of chemical product: PC21

Environmental contributing scenarios

- **Use of scintillation cocktails (scintillation counting in laboratories) -** ERC09a

Health contributing scenarios

- **Use as laboratory reagent -** PROC15

Section 2 – SU21 & SU24 - Exposure Controls

Contributing scenario controlling environmental exposure for:
Amounts used:

- Daily local widespread use amount: ≤0.000036 tonnes/day.
- Percentage of EU tonnage used at regional scale: 10 %.

Other conditions affecting environmental exposure:

- Release to waste water from process: 0%
- Release to air from process: 0%
- Release to soil from process: 0% (ERC09a)

Conditions and measures related to sewage treatment plant:

- Municipal Sewage Treatment Plant: Treatment effectiveness: 85.29 %.

Contributing scenario controlling worker exposure:

- Do not ingest.
- Avoid splashing.
- Avoid contact with contaminated tools and objects.

Organisational measures to prevent/limit releases dispersion and exposure:

- Training for staff on good practice.
- Supervision in place to check that the RMMs in place are being used correctly and OCs followed

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

Advice on general occupational hygiene

- Good standard of personal hygiene.
- Assumes a good basic standard of occupational hygiene is implemented.

Section 3 – SU21 & SU24 - Exposure estimation and reference to source

Exposure estimation and reference to its source - Environment:
Exposure assessment (environment): EUSES v2.1.2
Exposure estimation:

- Freshwater: 0.000000887 mg/l.
- Risk characterisation ratio (PEC/PNEC): <0.01.
- Freshwater sediment: 0.00321 mg/kg dwt.
- Risk characterisation ratio (PEC/PNEC): 0.038.
- Marine water: 0.000000016 mg/l.
- Risk characterisation ratio (PEC/PNEC): <0.01.
- Marine water sediment: 0.0000579 mg/kg dwt.
- Risk characterisation ratio (PEC/PNEC): <0.01.
- Sewage Treatment Plant: 0 mg/l.
- Risk characterisation ratio (PEC/PNEC): <0.01.
- Soil: 0.0000706 mg/kg dwt.
- Risk characterisation ratio (PEC/PNEC): <0.01.

Remark: Based on the applied RMMs the risk towards environment is sufficiently controlled (RCR < 1).

Exposure estimation and reference to its source - Workers:

Exposure assessment: Qualitative approach used to conclude safe use.

Section 4 – SU21 & SU24 - Guidance to work within boundaries set by Exposure Scenarios

General: The immediate downstream user is required to evaluate whether the operational conditions and risk management measures described in the exposure scenario fit their use. The user has to ensure that risks are managed. The risk assessment methods/tools given in section 3 may be used for this evaluation.

Environment: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Glossary

ERC: Environmental Release Categories
ES: Exposure Scenario
ESVOC: European Solvents Downstream Users Group
EUSES: European Union System for Evaluation of Substances
OCs: Operational Conditions
PC: Product Category
PEC: Predicted Effect Concentration
PNEC: Predicted No-Effect Concentration
PROC: Process Category
RCR: Risk Characterisation Ratio
RMM: Risk Management Measures
SPERC: Specific Environmental Release Categories
STP: Sewage Treatment Plan
SU: Sector of Use