SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING.

1.1 Product identifier.

Product Name:	Filnet
Product Code:	0055
Chemical Name:	sulphamic acid
Index No:	016-026-00-0
CAS No:	5329-14-6
EC No:	226-218-8
Registration No:	01-2119488633-28-XXXX

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

Powder descaler for filters

Uses advised against:
Uses other than those recommended.
Exposure scenarios covering uses can be found in the Annex.

1.3 Details of the supplier of the safety data sheet.

Company:	**FLUIDRA COMMERCIAL, S.A.U.**
Address:	Av. Alcalde Barnils, 69
City:	08174 Sant Cugat del Vallès (Barcelona) Spain
Province:	Barcelona
Telephone:	Tel:34 93 724 39 00 Fax:34 93 724 29 93
Fax:	+34 93 713 41 11
E-mail:	fds@inquide.com
Web:	www.astralpool.com

1.4 Emergency telephone number: +34 93 724 39 00 (Only available during office hours; Monday-Friday; 08:00-18:00)
Anti poisoning centre:
ITALY (Rome): 06/305 43 43
ITALY (Milan): 02/66 10 10 29
SPAIN: +34 91 562 04 20
FRANCE (Paris): 01 40 05 48 48 FRANCE (Tolousse): 05 61 77 74 47 FRANCE (Marseille): 04 91 75 25 25
PORTUGAL: 808 250 143
BELGIQUE (Brussel): (+32) 070 245 245
Sweden: 112 - Begär Giftinformation (ask for Poisons Information)
Denmark (Giftlinjen): +45 8212 1212
Finland: 0800 147 111
Norway: +47 22 59 13 00
Cyprus: 1401
Greece: (0030) 2107793777
Netherlands (NVIC): +31 (0)88 755 8000
Romania: +4021 318 360 6 Biroul RSI Si Informare Toxicologica
Apelabil de luni pâna vineri, între orele 8.00-15.00
CAV accreditati: Roma +39 06 68 59 3726; Foggia +39 800 18 34 59; Napoli +39 081 54 53 333; Roma +39 06 49 97 80 00; Roma +39 06 30 54 343; Firenze +39 055 79 47 819; Pavia +39 0382 24 444; Milano +39 02 66 10 10 29; Bergamo +39 800 88 33 00; Verona +39 800 01 18 58.

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.
In accordance with Regulation (EU) No 1272/2008:
Aquatic Chronic 3 : Harmful to aquatic life with long lasting effects.
Eye Irrit. 2 : Causes serious eye irritation.
Skin Irrit. 2 : Causes skin irritation.

2.2 Label elements.

Labelling in accordance with Regulation (EU) No 1272/2008:
Pictograms:

-Continued on next page.-

Signal Word:

Warning

Hazard statements:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P102	Keep out of reach of children.
P273	Avoid release to the environment.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents and/or container in accordance with hazardous waste regulations.

Contains:
sulphamic acid

2.3 Other hazards.

The substance is not PBT
The substance is not vPvB
Substance does not have endocrine disrupting properties.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Substances.

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
Index No: 016-026-00-0 CAS No: 5329-14-6 EC No: 226-218-8	sulphamic acid	25 - 100 %	Aquatic Chronic 3, H412 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315	-

3.2 Mixtures.
Not Applicable.

SECTION 4: FIRST AID MEASURES.

IRRITANT MIXTURE. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

4.1 Description of first aid measures.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

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Inhalation.
Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact.
Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance. Dont let the person to rub the affected eye.

Skin contact.
Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

Ingestion.
If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed.
Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate.

4.3 Indication of any immediate medical attention and special treatment needed.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. Cover the affected area with a dry sterile bandage. Protect the affected area from pressure or friction.

SECTION 5: FIREFIGHTING MEASURES.

The product is NOT classified as flammable, in case of fire the following measures should be taken:

5.1 Extinguishing media.
Suitable extinguishing media:
Extinguisher powder or CO2. In case of more serious fires, also alcohol-resistant foam and water spray.

Unsuitable extinguishing media:
Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

5.2 Special hazards arising from the substance or mixture.
Special risks.
Exposure to combustion or decomposition products can be harmful to your health.

5.3 Advice for firefighters.
Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Product residues and extinguishing media may contaminate the aquatic environment.

Fire protection equipment.
According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.
For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions.
Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground.

6.3 Methods and material for containment and cleaning up.
Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.
Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

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6.4 Reference to other sections.
For exposure control and individual protection measures, see section 8.
For later elimination of waste, follow the recommendations under section 13.

SECTION 7: HANDLING AND STORAGE.

7.1 Precautions for safe handling.
For personal protection, see section 8.
In the application area, smoking, eating, and drinking must be prohibited.
Follow legislation on occupational health and safety.
Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

7.2 Conditions for safe storage, including any incompatibilities.
Store according to local legislation. Observe indications on the label. Store the containers between 5 and 25 º C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).
None in particular.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

The product does NOT contain substances with Professional Exposure Environmental Limit Values.The product does NOT contain substances with Biological Limit Values.
Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
sulphamic acid CAS No: 5329-14-6 EC No: 226-218-8	DNEL (Workers)	Dermal, Chronic, Systemic effects	10 (mg/kg bw/day)
	DNEL (Consumers)	Dermal, Chronic, Systemic effects	5 (mg/kg bw/day)
	DNEL (Consumers)	Oral, Chronic, Systemic effects	5 (mg/kg bw/day)

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.
DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.
Concentration levels PNEC:

Name	Details	Value
sulphamic acid CAS No: 5329-14-6 EC No: 226-218-8	aqua (freshwater)	0,048 (mg/L)
	aqua (marine water)	0,0048 (mg/L)
	aqua (intermittent releases)	0,48 (mg/L)
	STP	2 (mg/L)
	sediment (freshwater)	0,173 (mg/kg sediment dw)
	sediment (marine water)	0,0173 (mg/kg sediment dw)
	soil	0,00638 (mg/kg soil dw)

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PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

8.2 Exposure controls.

Measures of a technical nature:
Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration:	**100 %**		
Uses:	**Powder descaler for filters**		
Breathing protection:			
If the recommended technical measures are observed, no individual protection equipment is necessary.			
Hand protection:			
PPE:	Protective gloves against chemicals. 		
Characteristics:	«CE» marking, category III.		
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420		
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.		
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.		
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.): > 480	Material thickness (mm): 0,35
Eye protection:			
PPE:	Face shield. 		
Characteristics:	«CE» marking, category II. Face and eye protector against splashing liquid.		
CEN standards:	EN 165, EN 166, EN 167, EN 168		
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions. Make sure that mobile parts move smoothly.		
Observations:	Face shields should offer a field of vision with a dimension in the central line of, at least, 150 mm vertically once attached to the frame.		
Skin protection:			
PPE:	Protective clothing.		
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.		
CEN standards:	EN 340		
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.		
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.
Physical state: Solid
Colour: White
Odour: Odourless
Odour threshold: Not applicable/Not available due to the nature/properties of the product
Melting point: 205 ºC
Freezing point: Not applicable/Not available due to the nature/properties of the product
Boiling point or initial boiling point and boiling range: Not applicable/Not available due to the nature/properties of the product
Flammability: Not applicable/Not available due to the nature/properties of the product
Lower explosion limit: Not applicable/Not available due to the nature/properties of the product
Upper explosion limit: Not applicable/Not available due to the nature/properties of the product
Flash point: 100 ºC (Estimation based on the indication of the Regulation (CE) Nº1272/2008.)
Auto-ignition temperature: Not applicable/Not available due to the nature/properties of the product
Decomposition temperature: Not applicable/Not available due to the nature/properties of the product
pH: 1,18 (1%)
Kinematic viscosity: Not applicable/Not available due to the nature/properties of the product

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Solubility: Not applicable/Not available due to the nature/properties of the product
Hydrosolubility: 213 g/l
Liposolubility: Not applicable/Not available due to the nature/properties of the product
Partition coefficient n-octanol/water (log value): Not applicable/Not available due to the nature/properties of the product
Vapour pressure: Not applicable/Not available due to the nature/properties of the product
Absolute density: Not applicable/Not available due to the nature/properties of the product
Relative density: 2.12 (20 ºC)
Relative vapour density: Not applicable/Not available due to the nature/properties of the product
Particle characteristics: Not applicable/Not available due to the nature/properties of the product

9.2 Other information
Viscosity: Not applicable/Not available due to the nature/properties of the product
Explosive properties: Not applicable/Not available due to the nature/properties of the product
Oxidizing properties: No aplicable
Dropping point: Not applicable/Not available due to the nature/properties of the product
Blink: Not applicable/Not available due to the nature/properties of the product

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.
The product does not present hazards by their reactivity.

10.2 Chemical stability.
Unstable in contact with:
- Bases.

10.3 Possibility of hazardous reactions.
Neutralization can occur on contact with bases.

10.4 Conditions to avoid.
- Avoid contact with bases.

10.5 Incompatible materials.
Avoid the following materials:
- Bases.

10.6 Hazardous decomposition products.
Depending on conditions of use, can be generated the following products:
- Corrosive vapors or gases.

SECTION 11: TOXICOLOGICAL INFORMATION.

IRRITANT MIXTURE. Splashes in the eyes can cause irritation.
IRRITANT MIXTURE. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

11.1 Information on hazard classes as defined in Regulation (EC) Nº 1272/2008.
Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Toxicological information.

Name	Acute toxicity			
	Type	Test	Kind	Value
sulphamic acid CAS No: 5329-14-6 EC No: 226-218-8	Oral	L50	Rat	> 2000 mg/kg
	Dermal	LD50	Rat	>2000 mg/kg bw [1] [1] Study report, 2010.
	Inhalation			

a) acute toxicity;
Not conclusive data for classification.

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b) skin corrosion/irritation;
Product classified:
Skin irritant, Category 2: Causes skin irritation.

c) serious eye damage/irritation;
Product classified:
Eye irritation, Category 2: Causes serious eye irritation.

d) respiratory or skin sensitisation;
Not conclusive data for classification.

e) germ cell mutagenicity;
Not conclusive data for classification.

f) carcinogenicity;
Not conclusive data for classification.

g) reproductive toxicity;
Not conclusive data for classification.

h) STOT-single exposure;
Not conclusive data for classification.

i) STOT-repeated exposure;
Not conclusive data for classification.

j) aspiration hazard;
Not conclusive data for classification.

11.2 Information on other hazards.
Endocrine disrupting properties
This product does not contain components with endocrine-disrupting properties with effects on human health.
Other information
There is no information available on other adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

Name	Ecotoxicity			
	Type	Test	Kind	Value
sulphamic acid CAS No: 5329-14-6 EC No: 226-218-8	Fish	LC50	Pimephales promelas	70.3 mg/l (96 h) [1] [1] Aquatic Toxicity of Forty Industrial Chemicals: Testing in Support of Hazardous Substance Spill Prevention Regulation, M.W. CURTIS and C.H. WARD, 1981.
	Aquatic invertebrates	EC50	Daphnia magna	71.6 mg/l (48 h) [1] [1] Study report, 2010.
	Aquatic plants	EC50	Desmodesmus subspicatus	48 mg/l (72 h) [1] [1] Study report, 2010. OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2 Persistence and degradability.
No information is available regarding the biodegradability
No information is available on the degradability
No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potential.

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No information is available regarding the bioaccumulation.

12.4 Mobility in soil.
No information is available about the mobility in soil.
The product must not be allowed to go into sewers or waterways.
Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.
No information is available about the results of PBT and vPvB assessment of the product.

12.6 Endocrine disrupting properties.
This product doesn't contain components with environmental endocrine disrupting properties.

12.7 Other adverse effects.
No information is available about other adverse effects for the environment.

SECTION 13: DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.
Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.
Follow the provisions of Directive 2008/98/EC regarding waste management.

SECTION 14: TRANSPORT INFORMATION.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.
Land: Transport by road: ADR, Transport by rail: RID.
Transport documentation: Consignment note and written instructions
Sea: Transport by ship: IMDG.
Transport documentation: Bill of lading
Air: Transport by plane: ICAO/IATA.
Transport document: Airway bill.

14.1 UN number or ID number.
UN No: UN2967

14.2 UN proper shipping name.
Description:
ADR/RID: UN 2967, SULPHAMIC ACID, 8, PG III, (E)
IMDG: UN 2967, SULPHAMIC ACID, 8, PG III
ICAO/IATA: UN 2967, SULPHAMIC ACID, 8, PG III

14.3 Transport hazard class(es).
Class(es): 8

14.4 Packing group.
Packing group: III

14.5 Environmental hazards.
Marine pollutant: No
Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-A,S-B

14.6 Special precautions for user.
Labels: 8

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Hazard number: 80
ADR LQ: 5 kg
IMDG LQ: 5 kg
ICAO LQ: 5 kg

Provisions concerning carriage in bulk ADR:
VC1 Carriage in bulk in sheeted vehicles, sheeted containers or sheeted bulk containers is permitted.
VC2 Carriage in bulk in closed vehicles, closed containers or closed bulk containers is permitted.
AP7 Carriage in bulk shall only be as a full load.
Proceed in accordance with point 6.
IMDG Code segregation group: 1 Acids

14.7 Maritime transport in bulk according to IMO instruments.
The product is not transported in bulk.

SECTION 15: REGULATORY INFORMATION.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.
The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Volatile organic compound (VOC)
VOC content (p/p): 0 %
VOC content: 0 g/l

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A
The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.
The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

Kind of pollutant to water (Germany): WGK 1: Slightly hazardous to water. (Autoclassified according to the AwSV Regulations)

15.2 Chemical safety assessment.
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
Available Product Exposure Scenario.

SECTION 16: OTHER INFORMATION.

Classification codes:

Aquatic Chronic 3 : Chronic effect to the aquatic environment, Category 3
Eye Irrit. 2 : Eye irritation, Category 2
Skin Irrit. 2 : Skin irritant, Category 2

Changes regarding to the previous version:

- Modification of specific hazards (SECTION 2.3).
- Modification in the firefighting measures (SECTION 5.2).
- Modifications in the accidental release measures (SECTION 6.1).
- Modifications in the accidental release measures (SECTION 6.2).
- Modification in the values of the physical and chemical properties (SECTION 9).
- Change in the hazard classification (SECTION 11.1).
- Modification of the classification ADR/IMDG/ICAO/IATA/RID (SECTION 14).
- National legislative changes (SECTION 15.1).
- Addition of abbreviations and acronyms (SECTION 16).

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Available Product Exposure Scenario.

Abbreviations and acronyms used:

ADR/RID:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
AwSV:	Facility Regulations for handling substances that are hazardous for the water.
CEN:	European Committee for Standardization.
DMEL:	Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.
DNEL:	Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.
EC50:	Half maximal effective concentration.
PPE:	Personal protection equipment.
IATA:	International Air Transport Association.
ICAO:	International Civil Aviation Organization.
IMDG:	International Maritime Code for Dangerous Goods.
LC50:	Lethal concentration, 50%.
LD50:	Lethal dose, 50%.
PNEC:	Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail.
WGK:	Water hazard classes.

Key literature references and sources for data:
http://eur-lex.europa.eu/homepage.html
http://echa.europa.eu/
Regulation (EU) 2020/878.
Regulation (EC) No 1907/2006.
Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.

-End of safety data sheet.-

The following exposure scenarios have been assessed for the product mentioned above:

1. Exposure scenario title	**ES 1: Manufacturing of cleaning and maintenance products, surface treatment products and/or biocidal products**
2. Identified uses covered in the Exposure Scenario	
(ES 1 just covers the manufacture or formulation of these end products) Identified Use 1 “Kitchen cleaner, dishwash product” Identified Use 2 “Floor and sanitary cleaner” Identified Use 4 “Oil well cleaner” Identified Use 5 “Metal surface treatment products, e.g. electroplating” Identified Use 6 “pH regulator” Identified Use 7 “Pulp and paper industry as a chloride stabilizer” Identified Use 10 “Cleaning metals and ceramics” Identified Use 11 “Surface disinfectant” Identified Use 12 “Laundry aid, laundry detergent” Identified Use 13 “Polishes and wax blends” Identified Use 14 “Non-metal surface treatment products” Identified Use 15 “Welding and soldering products, flux products” Identified Use 16 “Leather tanning industry for leather finishing” Identified Use 19 “Air care product”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU10 Formulation (mixing) of preparations and/or re-packaging PC 3 Air care products PC 8 Biocidal products (e.g. Disinfectants, pest control) PC 14 Metal surface treatment products, including galvanic and electroplating products PC 15 Non-metal-surface treatment products PC 20 Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific PC 23 Leather tanning, dye, finishing, impregnation and care products PC 26 Paper and board dye, finishing and impregnation products PC 31 Polishes and wax blends PC 35 Washing and cleaning products (including solvent based products) PC 38 Welding and soldering products, flux products PROC 3 Use in closed batch process (synthesis or formulation) PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7 Industrial spraying PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13 Treatment of articles by dipping and pouring PROC 15 Use as laboratory reagent ERC2 Formulation of preparations	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	Duration of use: >4 h/day (all PROCs)
4.2 Frequency of use for which the ES ensures control of risk	Not restricted
4.3 Amount of use for which the ES ensures control of risk	1000t/y(based on the worst case)
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid/solid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in	0-100%

preparation	
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not restricted
6. Other operational conditions determining exposure	
Room volume	≥ 20m^3
Ventilation rate:	not specified
Temperature:	< 60 °C
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution. Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Not addressed.
Personal protective equipment (PPE)	
	Hand protection: Disposable gloves for brief application Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures,

	Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	It is recommended that rainwater, sanitary sewage and industrial waste water can be separated from the sewerage and disposed by the sewage disposal apparatus. Neutralize before introducing into open waters (Regular control of the pH value during introduction into open waters). Remainders on application devices with much water. Diluted before discharge when necessary.

8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)

The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product.

Discharges of sulphamic Acid from production sites to sewage treatment plants (STP)/waste water treatment plants and receiving waters are well controlled. Taking into account the existing EU Directives for pH-control for surface water and national regulations to control the pH of waster waters and surface waters is concluded that STPs and surface waters are sufficiently protected with regard to pH changes.

9. Prediction of exposure resulting from the conditions described above

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

Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented.

The environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.

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

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

1. Exposure scenario title	ES 2: Professional use of cleaning and maintenance products, surface treatment products and/or biocidal products
2. Identified uses covered in the Exposure Scenario	
(ES 2 just covers the professional use processes of these end products) Identified Use 1 “Kitchen cleaner, dishwash product” Identified Use 2 “Floor and sanitary cleaner” Identified Use 4 “Oil well cleaner” Identified Use 10 “Cleaning metals and ceramics” Identified Use 11 “Surface disinfectant” Identified Use 12 “Laundry aid, laundry detergent” Identified Use 13 “Polishes and wax blends” Identified Use 14 “Non-metal surface treatment products” Identified Use 19 “Air care product”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 22 “Professional uses: Public domain (administration, education, entertainment, services, craftsmen)” SU 2b “Offshore industries” PC 3 “Air care products” PC 8 “Biocidal products (e.g. Disinfectants, pest control)” PC 13 “Fuels” PC 15 “Non-metal-surface treatment products” PC 31 “Polishes and wax blends” PC 35 “Washing and cleaning products (including solvent based products)” PROC 1 “Use in closed process, no likelihood of exposure” PROC 2 “Use in closed, continuous process with occasional controlled exposure” PROC 4 “Use in batch and other process (synthesis) where opportunity for exposure arises” PROC 5 “Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)” PROC 8a “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities” PROC 8b “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities” PROC 9 “Transfer of substance or preparation into small containers (dedicated filling line, including weighing)” PROC 10 “Roller application or brushing” PROC 11 “Non industrial spraying” PROC 13 “Treatment of articles by dipping and pouring” PROC 16 “Using material as fuel sources, limited exposure to unburned product to be expected” PROC 17 “Lubrication at high energy conditions and in partly open process” PROC 19 “Hand-mixing with intimate contact and only PPE available” PROC 20 “Heat and pressure transfer fluids in dispersive, professional use but closed systems” ERC 8a “Wide dispersive indoor use of processing aids in open systems” ERC 8b “Wide dispersive indoor use of reactive substances in open systems” ERC 8d “Wide dispersive outdoor use of processing aids in open systems” ERC 9a “Wide dispersive indoor use of substances in closed systems” ERC 9b “Wide dispersive outdoor use of substances in closed systems”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	15 min –1 h/d (all PROCs)
4.2 Frequency of use for which the ES ensures control of risk	Not restricted
4.3 Amount of use for which the ES ensures control of risk	7 - 1000 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	3%-15% solution
5.1a Surface area per amount of article containing the substance (if	Not applicable

applicable)	
5.2 Concentration of substance in preparation	3-15%
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not restricted
6. Other operational conditions determining exposure	
Room volume	≥ 20m^3
Ventilation rate:	not specified
Temperature:	<60 °C
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Not addressed. Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all

	indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	Do not discharge to water directly. Diluted when necessary. Remainders on application devices with much water. No special information is available on onsite waste treatment. As the sulphamic acid may be recycled, reused or disposed by the manufacture or their downstream users, the discharge to wastes can be negligible.
8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product.	
9. Prediction of exposure resulting from the conditions described above	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.	
10. Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

1. Exposure scenario title	ES 3: Industrial use of cleaning and maintenance products, surface treatment products and/or biocidal products

2. Identified uses covered in the Exposure Scenario

(ES 3 just covers the use processes of these end products in industrial sites)

Identified Use 5 “Metal surface treatment products, e.g. electroplating”

Identified Use 6 “pH regulator”

Identified Use 7 “Pulp and paper industry as a chloride stabilizer”

Identified Use 10 “Cleaning metals and ceramics”

Identified Use 11 “Surface disinfectant”

Identified Use 12 “Laundry aid, laundry detergent”

Identified Use 15 “Welding and soldering products, flux products”

Identified Use 16 “Leather tanning industry for leather finishing”

3. Description of activities/process(es) covered in the Exposure Scenario

SU 3 “Industrial uses: Uses of substance as such or in preparations at industrial sites “

SU 5 “Manufacture of textiles, leather, fur”

SU 6b “Manufacture of pulp, paper and paper products”

SU 8 “Manufacture of bulk, large scale chemicals (including petroleum products)”

SU 15 “Manufacture of fabricated metal products, except machinery and equipment”

PC 8 “Biocidal products (e.g. Disinfectants, pest control)”

PC 14 “Metal surface treatment products, including galvanic and electroplating products”

PC 20 “Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific”

PC 23 “Leather tanning, dye, finishing, impregnation and care products”

PC 26 “Paper and board dye, finishing and impregnation products”

PC 35 “Washing and cleaning products (including solvent based products)”

PC 38 “Welding and soldering products, flux products”

PROC 2 “Use in closed, continuous process with occasional controlled exposure”

PROC 3 “Use in closed batch process (synthesis or formulation)”

PROC 4 “Use in batch and other process (synthesis) where opportunity for exposure arises”

PROC 5 “Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)”

PROC 7 “Industrial spraying”

PROC 8a “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities”

PROC 8b “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities”

PROC 9 “Transfer of substance or preparation into small containers (dedicated filling line, including weighing)”

PROC 10 “Roller application or brushing”

PROC 13 “Treatment of articles by dipping and pouring”

PROC 15 “Use as laboratory reagent”

PROC 16 “Using material as fuel sources, limited exposure to unburned product to be expected”

PROC 19 “Hand-mixing with intimate contact and only PPE available”

PROC 25 “Other hot work operations with metals”

ERC 4 “Industrial use of processing aids”

ERC 6b “Industrial use of reactive processing aids”

4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	0.25 - 1.25 h/d
4.2 Frequency of use for which the ES ensures control of risk	Not restricted
4.3 Amount of use for which the ES ensures control of risk	100 - 750 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable

5.2 Concentration of substance in use	100%
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20 m^3
Ventilation rate:	not specified
Concentration of substance in preparation	3 % - 15 %
Temperature:	not restricted
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Not addressed. Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures,

	Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	It is recommended that rainwater, sanitary sewage and industrial waste water can be separated from the sewerage and disposed by the sewage disposal apparatus. Neutralize before introducing into open waters (Regular control of the pH value during introduction into open waters). Remainders on application devices with much water. Diluted before discharge when necessary.

8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)

The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product.

Discharges of sulphamic acid from production sites to sewage treatment plants (STP)/waste water treatment plants and receiving waters are well controlled. Taking into account the existing EU Directives for pH-control for surface water and national regulations to control the pH of waster waters and surface waters is concluded that STPs and surface waters are sufficiently protected with regard to pH changes.

9. Prediction of exposure resulting from the conditions described above

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

Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.

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

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

1. Exposure scenario title	**ES 4: Consumer use of cleaning and maintenance products**
2. Identified uses covered in the Exposure Scenario	
(ES 4 just covers the dispersive use processes of these end products) Identified Use 1 “Kitchen cleaner, dishwash product” Identified Use 2 “Floor and sanitary cleaner” Identified Use 11 “Surface disinfectant” Identified Use 12 “Laundry aid, laundry detergent”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 20 “Health services” SU 21 “Consumer uses: Private households (=general public=consumers)” SU 23 “Electricity, steam, gas water supply and sewage treatment” PC 8 “Biocidal products (e.g. Disinfectants, pest control)” PC 35 “Washing and cleaning products (including solvent based products)” ERC 8a “Wide dispersive indoor use of processing aids in open systems” ERC 8b “Wide dispersive indoor use of reactive substances in open systems”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	Duration of use: not specified
4.2 Frequency of use for which the ES ensures control of risk	Frequency of use: 1 event / week
4.3 Amount of use for which the ES ensures control of risk	100 - 1000 t/y use within entire EU
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	< 8%
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20m^3
Inhalation rate:	1.37 m^3 / hour
Temperature:	Unless otherwise stated assumes use at ambient temperatures
Contact area:	1000 cm^3
Other operational conditions:	Covers use under typical household ventilation.
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	Not applicable for this Exposure Scenario
7.1.2 Consumer related measures:	Clean contaminated protective gloves with flowing water before taking off. Handling permissible only after instruction on the dangers. Keep away from children.
Personal protective equipment (PPE)	Direct contact with cleaning agents is not advised. Gloves can be used, e.g. butyl rubber or nitrile rubber protective index 6, EN 372
7.2 Environment related measures	Not specified.
8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	

The wastes should be disposed of in according to local regulations. The soiled packaging should be disposed of in the same way as the product.

9. Prediction of exposure resulting from the conditions described above

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

Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.

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

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

1. Exposure scenario title	ES 5: Industrial use of sulphamic acid as foam cleaner in food process
2. Identified uses covered in the Exposure Scenario	
(ES 5 just covers the general use processes of this end product generated in the industrial sites) Identified Use 3 “Food process cleaner, foam cleaner”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 3 “Industrial uses: Uses of substance as such or in preparations at industrial sites” PC 35 “Washing and cleaning products (including solvent based products)” PROC 1 “Use in closed process, no likelihood of exposure” PROC 4 “Use in batch and other process (synthesis) where opportunity for exposure arises” PROC 7 “Industrial spraying” PROC 8a “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities” PROC 8b “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities” PROC 11 “Non industrial spraying” PROC 13 “Treatment of articles by dipping and pouring” ERC 4 “Industrial use of processing aids”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	Duration of use: < 8 h/day (all PROCs)
4.2 Frequency of use for which the ES ensures control of risk	Not restricted
4.3 Amount of use for which the ES ensures control of risk	305 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	Not specified
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20m^3
Ventilation rate:	not specified
Temperature:	not restricted
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating.

	Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes. Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	It is recommended that rainwater, sanitary sewage and industrial waste water can be separated from the sewerage and disposed by the sewage disposal apparatus. Neutralize before introducing into open waters (Regular control of the pH value during introduction into open waters). Remainders on application devices with much water. Diluted before discharge when necessary.
8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product. Discharges of sulphamic acid from production to sewage treatment plants (STP)/waste water treatment plants and receiving waters are well controlled.	
9. Prediction of exposure resulting from the conditions described above	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.	
10. Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

1. Exposure scenario title	**ES 6: Industrial use of sulphamic acid for manufacture of urea-formaldehyde resins**
2. Identified uses covered in the Exposure Scenario	
(ES 6 just cover the industrial use of this end product) Identified Use 8 “Coagulator for urea-formaldehyde resins”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 8 “Manufacture of bulk, large scale chemicals (including petroleum products)” PC 32 “Polymer preparations and compounds” PROC 4 “Use in batch and other process (synthesis) where opportunity for exposure arises” PROC 5 “Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)” PROC 8a “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities” PROC 8b “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities” PROC 15 “Use as laboratory reagent” ERC 1 “Production of chemicals” ERC2 “Formulation of preparations” ERC 6d “Production of resins/rubbers”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	Duration of use: < 8 h/day (all PROCs)
4.2 Frequency of use for which the ES ensures control of risk	Not restricted
4.3 Amount of use for which the ES ensures control of risk	780 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid/solid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	Not specified
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20 m^3
Ventilation rate:	not specified
Temperature:	< 60 °C
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating.

	Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes. Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the observance of the instructions - sanctioning for offence, Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	It is recommended that rainwater, sanitary sewage and industrial waste water can be separated from the sewerage and disposed by the sewage disposal apparatus. Neutralize before introducing into open waters (Regular control of the pH value during introduction into open waters). Remainders on application devices with much water. Diluted before discharge when necessary.
8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product. Discharges of sulphamic acid from production to sewage treatment plants (STP)/waste water treatment plants and receiving waters are well controlled.	
9. Prediction of exposure resulting from the conditions described above	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.	
10. Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

1. Exposure scenario title	**ES 7: Industrial use of sulphamic acid as nitrite remover in dye and pigment manufacture**
2. Identified uses covered in the Exposure Scenario	
(ES 7 just covers the industrial use process for this end product) Identified Use 9 “Nitrite remover in dye and pigment manufacture”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 3 “Industrial uses: Uses of substance as such or in preparations at industrial sites” PC 34 “Textile dyes, finishing and impregnating products” PROC 5 “Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)” ERC2 “Formulation of preparations” ERC 4 “Industrial use of processing aids”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	Duration of use: > 4 h/day (all PROCs)
4.2 Frequency of use for which the ES ensures control of risk	Not restricted
4.3 Amount of use for which the ES ensures control of risk	60 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	Not specified
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20m^3
Ventilation rate:	not specified
Temperature:	not restricted
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	

Product-related measures	High viscosity adjustment with aids to avoid splashes. Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	It is recommended that rainwater, sanitary sewage and industrial waste water can be separated from the sewerage and disposed by the sewage disposal apparatus. Neutralize before introducing into open waters (Regular control of the pH value during introduction into open waters). Remainders on application devices with much water. Diluted before discharge when necessary.
8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product. Discharges of sulphamic acid from production to sewage treatment plants (STP)/waste water treatment plants and receiving waters are well controlled.	
9. Prediction of exposure resulting from the conditions described above	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.	
10. Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

1. Exposure scenario title	**ES 8: Professional use of sulphamic acid as plasticizer in production of thermosetting plastics (e.g. phenolics)**
2. Identified uses covered in the Exposure Scenario	
(ES 8 just covers the industrial use process of Sulfamic acid as Plasticizer) Identified Use 17 “Plasticizer”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 22 “Professional uses: Public domain (administration, education, entertainment, services, craftsmen)” PC 32 “Polymer preparations and compounds” PROC 2 “Use in closed, continuous process with occasional controlled exposure” PROC 8a “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities” PROC 8b “Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities” PROC 10 “Roller application or brushing” PROC 11 “Non industrial spraying” PROC 16 “Using material as fuel sources, limited exposure to unburned product to be expected” PROC 17 “Lubrication at high energy conditions and in partly open process” PROC 20 “Heat and pressure transfer fluids in dispersive, professional use but closed systems” ERC 8a “Wide dispersive indoor use of processing aids in open systems” ERC 8d “Wide dispersive outdoor use of processing aids in open systems” ERC 9a “Wide dispersive indoor use of substances in closed systems” ERC 9b “Wide dispersive outdoor use of substances in closed systems”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	No data available
4.2 Frequency of use for which the ES ensures control of risk	Not specified
4.3 Amount of use for which the ES ensures control of risk	No data available
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid/solid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	Not specified
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20m^3
Ventilation rate:	not specified
Temperature:	< 60 °C
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution,

	Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes. Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	Do not discharge to water directly. Diluted when necessary. Remainders on application devices with much water. The waste gas should not be discharged to the air directly. No special information is available on onsite waste treatment. As the sulphamic acid may be recycled, reused or disposed by the manufacture or their downstream users, the discharge to wastes can be negligible. Recovery of sludge for agriculture or horticulture is forbidden.

8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)

The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product.

9. Prediction of exposure resulting from the conditions described above

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

Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.

10.	Guidance to DU to evaluate whether he works inside the boundaries set by the ES
	Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

1. Exposure scenario title	ES 9: Industrial use of sulphamic acid for synthesis of sweeteners
Identified uses covered in the Exposure Scenario	
(ES 9 just covers the industrial use of the sulphamic acid in synthesis of sweeteners) Identified Use 18: “Synthesis of sweeteners”	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 4 “Manufacture of food products” PC 19 “Intermediate” PROC 3 “Use in closed batch process (synthesis or formulation)” ERC 1 “Production of chemicals”	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	Not specified
4.2 Frequency of use for which the ES ensures control of risk	Not specified
4.3 Amount of use for which the ES ensures control of risk	1000 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Solid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	Not specified
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20 m^3
Ventilation rate:	not specified
Temperature:	< 60 °C
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container (avoidance of splashes)	Valid for all activities/all PROCs
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes. Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃

Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	Do not discharge to water directly. Diluted when necessary. Remainders on application devices with much water. The waste gas should not be discharged to the air directly. No special information is available on onsite waste treatment. As the sulphamic acid may be recycled, reused or disposed by the manufacture or their downstream users, the discharge to wastes can be negligible. Recovery of sludge for agriculture or horticulture is forbidden.

8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)

The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product.

9. Prediction of exposure resulting from the conditions described above

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

Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.

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

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

1. Exposure scenario title	**ES 10: Industrial use of sulphamic acid as composite additive for hardening control of amino resins**
2. Identified uses covered in the Exposure Scenario	
(ES 10 just covers the industrial use of the Sulfamic acid as composite additive for hardening control of amino resins) Identified Use 20 "Composite additive for hardening control of amino resins"	
3. Description of activities/process(es) covered in the Exposure Scenario	
SU 3 "Industrial uses: Uses of substance as such or in preparations at industrial sites" PC 1 "Adhesives, sealants" PROC 5 "Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)" PROC 8a "Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities" PROC 8b "Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities" ERC2 "Formulation of preparations" ERC 6d "Production of resins/rubbers"	
4. Operational conditions	
4.1 Duration of use for which the ES ensures control of risk	> 4 h/d
4.2 Frequency of use for which the ES ensures control of risk	Not specified
4.3 Amount of use for which the ES ensures control of risk	15-100 t/y
5. Substance properties and use parameters	
5.1 Physical form of product in which the substance is contained	Liquid
5.1a Surface area per amount of article containing the substance (if applicable)	Not applicable
5.2 Concentration of substance in preparation	Not specified
5.3 Amount used per time or per activity for which the RMMs, in combination with other operational conditions of use ensure control of risk (if applicable)	Not specified
6. Other operational conditions determining exposure	
Room volume	≥ 20 m^3
Ventilation rate:	not specified
Temperature:	< 60 °C
Water flow rate:	not limited
Other operational conditions:	none
7. Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk related to the different target groups	
7.1.1 Occupational measures	
Data type	**Data field**
General measure	
Skin contact inadmissible - Touching forbidden	Not to be used without protective gloves and eye protection Immediately eliminate or neutralize spilled solution, Do not inhale aerosols, fumes
Additional instruction,	Clean contaminated protective gloves with flowing water before taking off. Clean or take off protective clothing immediately after contaminating. Examine protective gloves for damage before beginning the activity.
Pour only with small heads (20 cm or less) or let liquid flow on the rim of container	Valid for all activities/all PROCs

(avoidance of splashes)	
Product-related measures	
Product-related measures	High viscosity adjustment with aids to avoid splashes. Delivery only as barrel commodity and/or in the tank car (For all PROC).
Technical measures	Operation temperature: < 60 ℃
Organizational measures	
General measures	Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
Additional measures	Entrance to production/processing only for technical personnel, Delivery only to the specialized trade. Hold only the quantity necessary for the processing ready.
Local exhaust ventilation required plus good work practise	Local exhaust ventilation is recommended.
Personal protective equipment (PPE)	
	Hand protection: Gloves with 8-hour break-through security for longer application, e.g. butyl rubber or nitrile rubber protective index 6, EN 372. **Eye protection:** Eye protector or goggles (all activities/PROCs), e.g. EN 166. **Respiratory protection:** Respiratory protection equipment. **Body protection:** Exposure suit for some activities with significant exposure possibility. **Other measures:** Take a shower and change clothes after work. Handling permissible only after instruction on the dangers. Regular control of the effectiveness of the technical measures, Regular control of the application of the personal measures, (valid for all indicated activities/all above PROCs)
7.1.2 Consumer related measures:	Not applicable for this Exposure Scenario
7.2 Environment related measures	It is recommended that rainwater, sanitary sewage and industrial waste water can be separated from the sewerage and disposed by the sewage disposal apparatus. Neutralize before introducing into open waters (Regular control of the pH value during introduction into open waters). Remainders on application devices with much water. Diluted before discharge when necessary.
8. Waste related measures needed to ensure control of risk at the different life cycle stages of the substances (including preparations or articles at the end of service life)	
The wastes should be disposed of in according to local regulations. Avoid disposing into drainage systems and into the environment directly. The soiled packaging should be disposed of in the same way as the product. Discharges of sulphamic acid from production to sewage treatment plants (STP)/waste water treatment plants and receiving waters are well controlled.	
9. Prediction of exposure resulting from the conditions described above	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Predicted exposures are not expected to exceed the applicable exposure limits (DNEL as provided above) when the operational conditions/risk management measures described above are implemented. Environmental exposure can be excluded taken into account the risk reduction measures which are already being applied.	
10. Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

Appendix: Abbreviations used in this exposure scenario document

AC	Article category
DNEL	Derived no effect level
DU	Downstream user
ECETOC TRA	Targeted Risk Assessment Tool provided by ECETOC (European Centre for Ecotoxicology and Toxicology of Chemicals)
ERC	Environmental release category
ES	Exposure scenario
OC	Operational conditions
PC	Product category
PEC	Predicted environmental concentration
PNEC	Predicted no effect concentration
PROC	Process category
RMM	Risk management measures
SU	Sector of use