

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

### 1.1 Product identifier

<b>Product name</b>	Syntilo 9954
<b>UFI:</b>	925-E089-D00Q-PRKF
<b>Product code</b>	458285-FR01
<b>SDS #</b>	458285
<b>Product type</b>	Liquid.

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

Identified uses
Handling and dilution of metal working fluid concentrates-Industrial
Use of lubricants in high energy open processes-Industrial
Use of lubricants in high energy open processes-Professional

<b>Use of the substance/ mixture</b>	Metalworking fluid - soluble. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
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### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Castrol Holdings Europe B.V., d'Arcyweg 76, 3198NA Europoort Rotterdam
	Castrol CEE sp z.o.o, Ul. Grzybowska 62, 00 844 Warszawa
	+48 (0)800 121 4817
<b>E-mail address</b>	MSDSadvice@bp.com

### 1.4 Emergency telephone number

<b>EMERGENCY TELEPHONE NUMBER</b>	112 Carechem: +44 (0) 1235 239 670 (24/7)
<b>Czech Republic Poison Center</b>	Toxikologické informační středisko Na Bojišti 1 120 00 Prague 2 Tel: + 420 224 919 293 (24 hours)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	Mixture
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#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
Repr. 1B, H360FD  
Aquatic Chronic 3, H412

**Additional information** CLP: Not classified as hazardous when diluted below 9%

See Section 16 for the full text of the H statements declared above.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

### 2.2 Label elements

<b>UFI:</b>	925-E089-D00Q-PRKF
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## SECTION 2: Hazards identification

**Hazard pictograms**



**Signal word**

Danger

**Hazard statements**

H315 - Causes skin irritation.  
 H319 - Causes serious eye irritation.  
 H360FD - May damage fertility. May damage the unborn child.  
 H412 - Harmful to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

P201 - Obtain special instructions before use.  
 P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.  
 P273 - Avoid release to the environment.  
 P264 - Wash hands thoroughly after handling.

**Response**

P308 + P313 - IF exposed or concerned: Get medical attention.  
 P362 + P364 - Take off contaminated clothing and wash it before reuse.  
 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.  
 P337 + P313 - If eye irritation persists: Get medical attention.

**Storage**

Not applicable.

**Disposal**

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients**

disodium tetraborate decahydrate

**Supplemental label elements**

Not applicable.

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Restricted to professional users.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings**

Not applicable.

**Tactile warning of danger**

Not applicable.

**2.3 Other hazards**

**Results of PBT and vPvB assessment**

Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification**

Defatting to the skin.  
 This product contains complex ionic mixtures within the fluid matrix which are an intrinsic part of the product and cannot be separated from the fluid matrix. Toxicology testing has shown the ionic-mixture containing products exhibit skin and eye irritation properties that are notably attenuated when compared to the individual acid and base components.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures**

**Product definition**

Mixture

Corrosion inhibitors and additives in aqueous solution.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
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### SECTION 3: Composition/information on ingredients

2,2',2''-nitriilotriethanol	REACH #: 01-2119486482-31 EC: 203-049-8 CAS: 102-71-6	≥10 - ≤25	Not classified.	-	[2]
octanoic acid	REACH #: 01-2119552491-41 EC: 204-677-5 CAS: 124-07-2 Index: 607-708-00-4	≤10	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412	-	[1]
disodium tetraborate decahydrate	REACH #: 01-2119490790-32 EC: 215-540-4 CAS: 1303-96-4 Index: 005-011-01-1	≤5	Eye Irrit. 2, H319 Repr. 1B, H360FD	-	[1]
3,5,5-trimethylhexanoic acid	REACH #: 01-2119517580-45 EC: 221-975-0 CAS: 3302-10-1	≤5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318	ATE [Oral] = 500 mg/kg	[1]
2-aminoethanol	REACH #: 01-2119486455-28 EC: 205-483-3 CAS: 141-43-5 Index: 603-030-00-8	≤3	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l STOT SE 3, H335: C ≥ 5%	[1] [2]
1,2-ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis(2-chloroethane)	REACH #: Polymer CAS: 31075-24-8	<0.25	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg ATE [Inhalation (vapours)] = 11 mg/l M [Acute] = 10 M [Chronic] = 10	[1]

See Section 16 for the full text of the H statements declared above.

**Type**

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**Eye contact**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

**Skin contact**

Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.

**Inhalation**

If inhaled, remove to fresh air. Get medical attention immediately. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Ingestion**

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Wash out mouth with water if person is conscious. Get medical attention immediately.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

#### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

**Potential acute health effects**

**Inhalation**

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion**

Irritating to mouth, throat and stomach.

**Skin contact**

Causes skin irritation. Defatting to the skin.

**Eye contact**

Causes serious eye irritation.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

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## SECTION 4: First aid measures

<b>Inhalation</b>	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
<b>Ingestion</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.

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

<b>Notes to physician</b>	Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Use foam or all-purpose dry chemical to extinguish.
<b>Unsuitable extinguishing media</b>	Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

### 5.2 Special hazards arising from the substance or mixture

<b>Hazards from the substance or mixture</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide) metal oxide/oxides nitrogen oxides (NO, NO <sub>2</sub> etc.)

### 5.3 Advice for firefighters

<b>Special precautions for fire-fighters</b>	No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### 6.3 Methods and material for containment and cleaning up

<b>Small spill</b>	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

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## SECTION 6: Accidental release measures

### 6.4 Reference to other sections

See Section 1 for emergency contact information.  
 See Section 5 for firefighting measures.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 12 for environmental precautions.  
 See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid contact of spilt material and runoff with soil and surface waterways. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous. Avoid prolonged or repeated contact with skin. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid and as a result may induce allergic skin reactions. Evaporation of water from soluble cutting fluids during use may lead to an increase in concentration which may result in the development of skin conditions due to irritation and defatting. It is important to monitor fluid strength on a regular basis with a refractometer and maintain it at the recommended concentration. Lubricants from other sources and other contaminants should be minimised. Swarf and other debris should be removed.

#### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 5 to 40°C (41 to 104°F). Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Protect from freezing. Store locked up. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### Czech Republic - Storage code

IV

### 7.3 Specific end use(s)

#### Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
2,2',2''-nitrioltriethanol	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic). Absorbed through skin.</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2023 TWA: 0.81 ppm 8 hours. Issued/Revised: 11/2023 STEL: 10 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 11/2023 STEL: 1.61 ppm 15 minutes. Issued/Revised: 11/2023
2-aminoethanol	<b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic).</b> TWA: 2.5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2023 TWA: 1 ppm 8 hours. Issued/Revised: 11/2023 STEL: 7.6 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 11/2023 STEL: 3 ppm 15 minutes. Issued/Revised: 11/2023

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**SECTION 8: Exposure controls/personal protection**

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

**Recommended monitoring procedures**

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Biological exposure indices**

**Product/ingredient name**

**Exposure indices**

No exposure indices known.

**Derived No Effect Level**

Product/ingredient name	Type	Exposure	Value	Population	Effects	
3,5,5-trimethylhexanoic acid	DNEL	Long term Inhalation	-	4.4 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	-	10 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	-	10 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	-	1.25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	-	1.1 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	-	5 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	-	5 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Dermal	-	0.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	-	0.6 mg/kg bw/day	General population	Systemic

**Predicted No Effect Concentration**

Product/ingredient name	Compartment Detail	Value	Method Detail
3,5,5-trimethylhexanoic acid	Fresh water	0.068 mg/l	-
	Marine water	0.007 mg/l	-
	Sewage Treatment Plant	23 mg/l	-
	Fresh water sediment	1.08 mg/kg dwt	-
	Marine water sediment	0.108 mg/kg dwt	-
	Soil	0.176 mg/kg dwt	-

**8.2 Exposure controls**

**Appropriate engineering controls**

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

**Individual protection measures**

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**

**SECTION 8: Exposure controls/personal protection**

In case of insufficient ventilation, wear suitable respiratory equipment.  
 For protection against metal working fluids, respiratory protection that is classified as “resistant to oil” (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m3), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m3). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.  
 The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Safety glasses with side shields.

- [Eye/face protection](#)
- [Skin protection](#)
- [Hand protection](#)

**General Information:**

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Wear suitable gloves.  
 Recommended: Nitrile gloves.

**Breakthrough time:**

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.  
 Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.  
 It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

**Glove Thickness:**

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.  
 Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers’ technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

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## SECTION 8: Exposure controls/personal protection

• Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

### Skin and body

Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

### Refer to standards:

Respiratory protection: EN 529  
 Gloves: EN 420, EN 374  
 Eye protection: EN 166  
 Filtering half-mask: EN 149  
 Filtering half-mask with valve: EN 405  
 Half-mask: EN 140 plus filter  
 Full-face mask: EN 136 plus filter  
 Particulate filters: EN 143  
 Gas/combined filters: EN 14387

### Environmental exposure controls

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

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	Liquid.
<b>Colour</b>	Yellow. [Light]
<b>Odour</b>	Unfragranced
<b>Odour threshold</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	>100°C (>212°F)
<b>Flammability</b>	Not available.
<b>Lower and upper explosion limit</b>	Not available.
<b>Flash point</b>	Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]

### Auto-ignition temperature

Ingredient name	°C	°F	Method
2,2'-nitrioltriethanol	324	615.2	
octanoic acid	>300	>572	
2-aminoethanol	410	770	

### Decomposition temperature

Not available.

### pH

8.5 [Conc. (% w/w): 3%]

### Kinematic viscosity

Kinematic: 200 mm<sup>2</sup>/s (200 cSt) at 40°C

### Solubility

Media	Result
water	Soluble

### Partition coefficient n-octanol/water (log value)

Not applicable.

### Vapour pressure

## SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20 °C		Vapour pressure at 50 °C			
	mm Hg	kPa	Method	mm Hg	kPa	Method
Water	17.5	2.3				
2,2',2''-nitrioltriethanol	<0.0075	<0.001				
octanoic acid	0	0				
3,5,5-trimethylhexanoic acid	0.00345	0.00046				
2-aminoethanol	0.4	0.053				

**Density and/or Relative density** >1000 kg/m<sup>3</sup> (>1 g/cm<sup>3</sup>) at 15 °C

**Relative vapour density** Not available.

**Particle characteristics**

**Median particle size** Not applicable.

**9.2 Other information**

**Evaporation rate** Not available.

**Explosive properties** Not available.

**Oxidising properties** Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

**10.2 Chemical stability** The product is stable.

**10.3 Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions will not occur.  
Under normal conditions of storage and use, hazardous polymerisation will not occur.

**10.4 Conditions to avoid** High temperatures

**10.5 Incompatible materials** Reactive or incompatible with the following materials: oxidising materials.  
Slightly reactive or incompatible with the following materials: acids.

**10.6 Hazardous decomposition products** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity**

Product/ingredient name	Result / Route	Test authority / Number	Species	Dose	Exposure	Remarks
3,5,5-trimethylhexanoic acid	LD50 Dermal	- -	Rat	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	1160 mg/kg	-	-
2-aminoethanol	LC50 Inhalation Vapour	- -	Rat	1487 mg/m <sup>3</sup>	6 hours	-
	LD50 Dermal	OECD 402	Rat	2504 mg/kg	-	-
1,2-ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis (2-chloroethane)	LD50 Oral	OECD 401	Rat	1089 mg/kg	-	-
	LC50 Inhalation Vapour	- -	Rat	2.9 mg/l	4 hours	-
	LD50 Dermal	OECD 402	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	1951 mg/kg	-	-

**SECTION 11: Toxicological information**

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Syntilo 9954	8356.7	36788.1	N/A	367.9	N/A
3,5,5-trimethylhexanoic acid	500	N/A	N/A	N/A	N/A
2-aminoethanol	500	1100	N/A	11	N/A
1,2-ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis(2-chloroethane)	500	N/A	N/A	11	N/A

Irritation/Corrosion

Product/ingredient name	Test authority / Test number	Species	Route / Result	Test concentration	Remarks
3,5,5-trimethylhexanoic acid	OECD 405	Rabbit	Eyes - Severe irritant	-	-
	OECD 404	Rabbit	Skin - Irritant	-	-
2-aminoethanol	OECD -	Rabbit	Eyes - Corrosive	-	-
	OECD 404	Rabbit	Skin - Corrosive	-	-
1,2-ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis(2-chloroethane)	-	Unspecified	Eyes - Moderate irritant	-	-
	-	Unspecified	Skin - Slightly irritating to the skin.	-	-

Sensitiser

Product/ingredient name	Route	Test authority / Test number	Species	Result	Remarks
3,5,5-trimethylhexanoic acid	skin	OECD 406	Guinea pig	Not sensitising	-
2-aminoethanol	skin	OECD 406	Guinea pig	Not sensitising	-
1,2-ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis(2-chloroethane)	skin	-	Unspecified	Not sensitising	-

GERM CELL MUTAGENICITY

Product/ingredient name	Test authority / Test number	Cell	Type	Result	Remarks	
3,5,5-trimethylhexanoic acid	471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	-
	473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	-
	476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	-
2-aminoethanol	OECD 471	-	Experiment: In vitro	Subject: Bacteria	Negative	-
	OECD 473	-	Experiment: In vitro	Subject: Mammalian-Animal	Negative	-
	OECD 476	-	Experiment:	Subject:	Negative	-

**SECTION 11: Toxicological information**

In vitro Mammalian-Animal

**Carcinogenicity**

Not available.

**Reproductive toxicity**

Product/ ingredient name	Test authority / Test number	Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
2,5,5-trimethylhexanoic acid	OECD 443	Rat	Oral	-	Negative	Positive	Negative	-
2-aminoethanol	OECD 416	Rat	Oral	-	Negative	Negative	Negative	Based on studies with similar substances.

**Aspiration hazard**

Product/ingredient name	Result
Not available.	

**Conclusion/Summary** Not classified. Based on available data, the classification criteria are not met.

**Conclusion/Summary** Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

**Potential acute health effects**

**Inhalation** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion** Irritating to mouth, throat and stomach.

**Skin contact** Causes skin irritation. Defatting to the skin.

**Eye contact** Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking

**Eye contact** Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Inhalation** Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

**Ingestion** Ingestion of large quantities may cause nausea and diarrhoea.

**Skin contact** Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

**Eye contact** Potential risk of transient stinging or redness if accidental eye contact occurs.

**Potential chronic health effects**

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Developmental effects** May damage the unborn child.

**Fertility effects** May damage fertility.

**11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties**

Not available.

**11.2.2 Other information**

Not available.

<b>Product name</b> Syntilo 9954	<b>Product code</b> 458285-FR01	<b>Page:</b> 11/25
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<b>Date of previous issue</b> 15 October 2024.	<b>Language</b> ENGLISH	

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Test authority / Test number	Species	Type / Result	Exposure	Effects	Remarks
3,5,5-trimethylhexanoic acid	OECD 201	Algae	Acute EC50 81 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 68 mg/l	48 hours	-	-
	OECD 209	Micro-organism	Acute EC50 470 mg/l	3 hours	-	-
	OECD 203	Fish	Acute LC50 123 mg/l	96 hours	-	-
	OECD 201	Algae	Chronic NOEC 10 mg/l	72 hours	-	-
2-aminoethanol	OECD 202	Daphnia	Acute EC50 27.04 mg/l	48 hours	-	-
	OECD 201	Algae	Acute ErC50 2.8 mg/l	72 hours	-	-
	OECD 203	Fish	Acute LC50 >100 mg/l	96 hours	-	-
1,2-ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis (2-chloroethane)	-	Algae	Chronic ECr10 0.7 mg/l	72 hours	-	-
	OECD 211	Daphnia	Chronic NOEC 0.85 mg/l	21 days	-	-
	OECD 210	Fish	Chronic NOEC 1.24 mg/l	41 days	-	-
	-	Daphnia	Acute EC50 0.37 mg/l	48 hours	-	-
	-	Fish	Acute LC50 0.047 mg/l	96 hours	-	-
	-	Algae	Acute NOEC 0.0019 mg/l	120 hours	-	-
	-	Daphnia	Acute NOEC 0.08 mg/l	48 hours	-	-
	-	Fish	Acute NOEL 0.037 mg/l	96 hours	-	-

**Environmental hazards** Harmful to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

Expected to be biodegradable.

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
3,5,5-trimethylhexanoic acid	OECD 301A	96 % - Readily - 21 days	-
2-aminoethanol	OECD 301A	>90 % - Readily - 21 days	-

**12.3 Bioaccumulative potential**

Not available.

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Octanoic acid	3.05	-	Low
3,5,5-trimethylhexanoic acid	3.2	-	Low
2-aminoethanol	-2.3	-	Low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Liquid. Soluble in water.

**12.5 Results of PBT and vPvB assessment**

<b>Product name</b> Syntilo 9954	<b>Product code</b> 458285-FR01	<b>Page:</b> 12/25
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## SECTION 12: Ecological information

Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

**12.6 Endocrine disrupting properties** Not available.

**12.7 Other adverse effects** No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

##### Methods of disposal

Undiluted fluid Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.  
 Diluted Fluid The spent diluted fluid comprises a relatively stable emulsion. Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques (e.g. emulsion splitting, coagulation and filtration) approved by the local authority. Spent fluid should never be disposed of down the drain. The aqueous phase should not be discharged into sewage systems unless provided for by local regulations; the non-aqueous phase should be disposed of as undiluted fluid. Note that separated aqueous solutions or effluents may contain metal salts as well as traces of oil and must be checked for conformity in these respects against consents given by the authorities before disposal. Further treatment may be required.

##### Hazardous waste

Yes.

##### European waste catalogue (EWC)

Waste code	Waste designation
12 01 10*	synthetic machining oils
12 01 09*	machining emulsions and solutions free of halogens

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

#### Packaging

##### Methods of disposal

Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Waste code	European waste catalogue (EWC)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

#### Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

#### References

Commission 2014/955/EU  
 Directive 2008/98/EC

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**Product name** Syntilo 9954

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**Language** ENGLISH

**Date of previous issue** 15 October 2024.

**(Czech Republic)**

**SECTION 14: Transport information**

**14.6 Special precautions for user** Not available.

**14.7 Maritime transport in bulk according to IMO instruments** Not available.

**SECTION 15: Regulatory information**

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
disodium tetraborate, anhydrous	Toxic to reproduction	Recommended	ED/69/2013	7/1/2015

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Syntilo 9954	95-100	3
		30
disodium tetraborate decahydrate	1-5	30

**Labelling** Restricted to professional users.

**Other regulations**

**REACH Status** The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

**United States inventory (TSCA 8b)** All components are active or exempted.

**Australia inventory (AIC)** All components are listed or exempted.

**Canada inventory** All components are listed or exempted.

**China inventory (IECSC)** All components are listed or exempted.

**Japan inventory (CSCL)** All components are listed or exempted.

**Korea inventory (KECI)** All components are listed or exempted.

**Philippines inventory (PICCS)** All components are listed or exempted.

**Taiwan Chemical Substances Inventory (TCSI)** All components are listed or exempted.

**Explosive precursors** Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

EU - Water framework directive - Priority substances

None of the components are listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**15.2 Chemical safety assessment** A Chemical Safety Assessment has been carried out for one or more of the substances within this mixture. A Chemical Safety Assessment has not been carried out for the mixture itself.

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**SECTION 16: Other information**

**Abbreviations and acronyms**

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 CAS = Chemical Abstracts Service  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 CSA = Chemical Safety Assessment  
 CSR = Chemical Safety Report  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EINECS = European Inventory of Existing Commercial chemical Substances  
 ES = Exposure Scenario  
 EUH statement = CLP-specific Hazard statement  
 EWC = European Waste Catalogue  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 OECD = Organisation for Economic Co-operation and Development  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SADT = Self-Accelerating Decomposition Temperature  
 SVHC = Substances of Very High Concern  
 STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
 STOT-SE = Specific Target Organ Toxicity - Single Exposure  
 TWA = Time weighted average  
 UN = United Nations  
 UVCB = Complex hydrocarbon substance  
 VOC = Volatile Organic Compound  
 vPvB = Very Persistent and Very Bioaccumulative  
 Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4/ RRN 01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Skin Irrit. 2, H315	Expert judgment
Eye Irrit. 2, H319	Expert judgment
Repr. 1B, H360FD	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements	H statement	Justification
	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H315	Causes skin irritation.
	H318	Causes serious eye damage.
	H319	Causes serious eye irritation.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	H360FD	May damage fertility. May damage the unborn child.
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects.

**SECTION 16: Other information**

<b>Full text of classifications [CLP/GHS]</b>	Acute Tox. 4	ACUTE TOXICITY - Category 4
	Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
	Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
	Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
	Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
	Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
	Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
	Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
	Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
	Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
	STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**History**

<b>Date of issue/ Date of revision</b>	30/07/2025.
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<b>Prepared by</b>	Product Stewardship

Indicates information that has changed from previously issued version.

**Notice to reader**

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

## Annex to the extended Safety Data Sheet (eSDS)

Industrial

### Identification of the substance or mixture

<b>Product definition</b>	Mixture
<b>Code</b>	458285-FR01
<b>Product name</b>	Syntilo 9954

### Section 1: Title

<b>Short title of the exposure scenario</b>	Handling and dilution of metal working fluid concentrates - Industrial
<b>List of use descriptors</b>	<p><b>Identified use name:</b> Handling and dilution of metal working fluid concentrates-Industrial</p> <p><b>Process Category:</b> PROC01, PROC02, PROC08b, PROC05</p> <p><b>Sector of end use:</b> SU03</p> <p><b>Subsequent service life relevant for that use:</b> No.</p> <p><b>Environmental Release Category:</b> ERC02</p> <p><b>Specific Environmental Release Category:</b> ATIEL-ATC SPERC 2.Ei.v1</p>

<b>Processes and activities covered by the exposure scenario</b>	Handling and dilution of metal working fluid concentrates. Includes associated product storage, material transfers, sampling and maintenance activities.
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### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

<b>Physical state:</b>	Liquid, vapour pressure < 0.5 kPa
<b>Concentration of substance in product:</b>	Covers daily exposures up to 8 hours
<b>Frequency and duration of use:</b>	Covers daily exposures up to 8 hours
<b>Other conditions affecting workers exposure:</b>	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

#### Contributing scenarios: Operational conditions and risk management measures

General measures (Reproductive toxin):

Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation.

Drain down systems and clear transfer lines prior to breaking containment.

Clean/flush equipment, where possible, prior to maintenance.

Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely.

Ensure safe systems of work or equivalent arrangements are in place to manage risks.

Regularly inspect, test and maintain all control measures.

Consider the need for risk-based health surveillance.

General measures applicable to all activities:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

Filling of equipment from drums or containers:

Avoid carrying out activities involving exposure for more than 4 hours per day.

Process sampling:

Avoid carrying out activities involving exposure for more than 4 hours per day.

Equipment cleaning and maintenance:

**Syntilo 9954**

**Handling and dilution of metal working fluid concentrates - Industrial**

Drain down system prior to equipment break-in or maintenance. Avoid carrying out activities involving exposure for more than 4 hours per day. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage:  
Store substance within a closed system.

## Section 2.2: Control of environmental exposure

<b>Amounts used:</b>	3.02E+02 Tonnes/year
<b>EU tonnage of risk determining substance per year:</b>	3.02E+02 Tonnes/year
<b>Frequency and duration of use:</b>	
<b>Emission days</b>	300
<b>Environment factors not influenced by risk management:</b>	
<b>Local freshwater dilution factor</b>	10
<b>Local marine water dilution factor</b>	100
<b>Other conditions affecting environmental exposure:</b>	Water-based (oil in water emulsion) or straight oil (contains no water) process
<b>Release fraction to air (after typical onsite RMMs)</b>	5.00E-05
<b>Release fraction to soil from process (after typical onsite RMMs)</b>	0
<b>Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)</b>	No data available yet
<b>Technical conditions and measures at process level (source) to prevent release:</b>	Common practices vary across sites thus conservative process release estimates used.
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:</b>	Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and waste water to be discharged via a sewage treatment plant
<b>Organisational measures to prevent/limit release from site:</b>	Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
<b>Conditions and measures related to sewage treatment plant:</b>	
<b>Estimated substance removal from wastewater via on-site sewage treatment</b>	No data available yet
<b>Assumed domestic sewage treatment plant flow rate (m<sup>3</sup>/d)</b>	2.00E+3
<b>Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product:</b>	No data available yet
<b>Conditions and measures related to external treatment of waste for disposal:</b>	External treatment and disposal of waste should comply with applicable local and/or national regulations.
<b>Conditions and measures related to external recovery of waste:</b>	External recovery and recycling of waste should comply with applicable local and/or national regulations.

## Section 3: Exposure estimation and reference to its source

### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** Used ECETOC TRA model (May 2010 release).

### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## Section 4: Guidance to check compliance with the exposure scenario

**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. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see [www.ATIEL.org/REACH\\_GES](http://www.ATIEL.org/REACH_GES)

**Health**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Annex to the extended Safety Data Sheet (eSDS)

Industrial

### Identification of the substance or mixture

<b>Product definition</b>	Mixture
<b>Code</b>	458285-FR01
<b>Product name</b>	Syntilo 9954

### Section 1: Title

<b>Short title of the exposure scenario</b>	Use of lubricants in high energy open processes - Industrial
<b>List of use descriptors</b>	<p><b>Identified use name:</b> Use of lubricants in high energy open processes-Industrial</p> <p><b>Process Category:</b> PROC01, PROC02, PROC08b, PROC17</p> <p><b>Sector of end use:</b> SU03</p> <p><b>Subsequent service life relevant for that use:</b> No.</p> <p><b>Environmental Release Category:</b> ERC04</p> <p><b>Specific Environmental Release Category:</b> ATIEL-ATC SPERC 4.Fi.v1</p>

<b>Processes and activities covered by the exposure scenario</b>	Covers use of lubricants in high energy open processes, e.g. In high speed machinery such as metal rolling/forming or metal working fluids for machining and grinding. Includes associated product storage, material transfers, sampling and maintenance activities.
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### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

<b>Physical state:</b>	Liquid, vapour pressure < 0.5 kPa
<b>Concentration of substance in product:</b>	Covers use of substance/product up to 100 % (unless stated differently)
<b>Frequency and duration of use:</b>	Covers daily exposures up to 8 hours
<b>Other conditions affecting workers exposure:</b>	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

#### Contributing scenarios: Operational conditions and risk management measures

General measures (Reproductive toxin):

Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation.

Drain down systems and clear transfer lines prior to breaking containment.

Clean/flush equipment, where possible, prior to maintenance.

Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely.

Ensure safe systems of work or equivalent arrangements are in place to manage risks.

Regularly inspect, test and maintain all control measures.

Consider the need for risk-based health surveillance.

General measures applicable to all activities:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

Filling of equipment from drums or containers:

No specific measures identified.

Metal machining operations:

Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Operation and lubrication of high energy open equipment:  
Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

Automated metal rolling/forming Use in contained systems Operation is carried out at elevated temperature (> 20°C above ambient temperature):  
No other specific measures identified.

Semi-automated metal rolling/forming Open systems Operation is carried out at elevated temperature (> 20°C above ambient temperature):  
Provide extract ventilation to points where emissions occur.

Equipment cleaning and maintenance:  
Drain down system prior to equipment break-in or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Retain drain-downs in sealed storage pending disposal or for subsequent recycle.  
Storage:  
Store substance within a closed system.

## Section 2.2: Control of environmental exposure

### Amounts used:

**EU tonnage of risk determining substance per year:** 2.05E+02 Tonnes/year

### Frequency and duration of use:

**Emission days** 300

### Environment factors not influenced by risk management:

**Local freshwater dilution factor** 10

**Local marine water dilution factor** 100

### Other conditions affecting environmental exposure:

Water-based (oil in water emulsion) or straight oil (contains no water) process

**Release fraction to air (after typical onsite RMMs)** 5.00E-05

**Release fraction to soil from process (after typical onsite RMMs)** 0

**Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)** Not available.

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

Common practices vary across sites thus conservative process release estimates used.

### Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:

Prevent discharge of undissolved substance to or recover from onsite wastewater.

User sites are assumed to be provided with oil/water separators and waste water to be discharged via a sewage treatment plant

### Organisational measures to prevent/limit release from site:

Do not apply industrial sludge to natural soils.

Sewage sludge should be incinerated, contained or reclaimed.

**Assumed domestic sewage treatment plant flow rate (m<sup>3</sup>/d)** 2.00E+3

**Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product:** Not available.

### Conditions and measures related to external treatment of waste for disposal:

External treatment and disposal of waste should comply with applicable local and/or national regulations.

### Conditions and measures related to external recovery of waste:

External recovery and recycling of waste should comply with applicable local and/or national regulations.

### Section 3: Exposure estimation and reference to its source

#### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** Used ECETOC TRA model (May 2010 release).

#### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

### Section 4: Guidance to check compliance with the exposure scenario

<b>Environment</b>	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. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a>
<b>Health</b>	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Annex to the extended Safety Data Sheet (eSDS)

Professional

### Identification of the substance or mixture

<b>Product definition</b>	Mixture
<b>Code</b>	458285-FR01
<b>Product name</b>	Syntilo 9954

### Section 1: Title

<b>Short title of the exposure scenario</b>	Use of lubricants in high energy open processes - Professional
<b>List of use descriptors</b>	<p><b>Identified use name:</b> Use of lubricants in high energy open processes-Professional</p> <p><b>Process Category:</b> PROC01, PROC02, PROC08a, PROC17</p> <p><b>Sector of end use:</b> SU22</p> <p><b>Subsequent service life relevant for that use:</b> No.</p> <p><b>Environmental Release Category:</b> ERC08a</p> <p><b>Specific Environmental Release Category:</b> ATIEL-ATC SpERC 8.7c.v1</p>

<b>Processes and activities covered by the exposure scenario</b>	Covers use of lubricants in high energy open processes, e.g. In high speed machinery such as metal rolling/forming or metal working fluids for machining and grinding. Includes associated product storage, material transfers, sampling and maintenance activities.
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### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

<b>Physical state:</b>	Liquid, vapour pressure < 0.5 kPa
<b>Concentration of substance in product:</b>	Covers use of substance/product up to 100 % (unless stated differently)
<b>Frequency and duration of use:</b>	Covers daily exposures up to 8 hours
<b>Other conditions affecting workers exposure:</b>	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

#### Contributing scenarios: Operational conditions and risk management measures

General measures (Reproductive toxin):

Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation.

Drain down systems and clear transfer lines prior to breaking containment.

Clean/flush equipment, where possible, prior to maintenance.

Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely.

Ensure safe systems of work or equivalent arrangements are in place to manage risks.

Regularly inspect, test and maintain all control measures.

Consider the need for risk-based health surveillance.

General measures applicable to all activities:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

Filling of equipment from drums or containers:

Avoid carrying out activities involving exposure for more than 1 hour per day.

Metal machining operations:

Provide extract ventilation to points where emissions occur.

Syntilo 9954

*Use of lubricants in high energy open processes - Professional*

Operation and lubrication of high energy open equipment:  
 Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 4 hours per day. Wear a respirator conforming to EN140 with type A filter or better. Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Equipment cleaning and maintenance:  
 Drain down system prior to equipment break-in or maintenance. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Avoid carrying out activities involving exposure for more than 4 hours per day. Wear a respirator conforming to EN140 with type A filter or better. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage:  
 Store substance within a closed system.

## Section 2.2: Control of environmental exposure

### Amounts used:

**EU tonnage of risk determining substance per year:** 2.05E+02 Tonnes/year

### Frequency and duration of use:

**Emission days** 365

### Environment factors not influenced by risk management:

**Local freshwater dilution factor** 10

**Local marine water dilution factor** 100

### Other conditions affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

**Release fraction to air (after typical onsite RMMs)** 5.00E-05

**Release fraction to soil from process (after typical onsite RMMs)** 1E-03

**Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)** Not available.

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

Common practices vary across sites thus conservative process release estimates used.

### Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:

Prevent discharge of undissolved substance to or recover from onsite wastewater.

### Organisational measures to prevent/limit release from site:

Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

**Assumed domestic sewage treatment plant flow rate (m3/d)** 2.00E+3

**Maximum allowable site tonnage ( $M_{safe}$ ) based on release following total wastewater treatment removal as product:** Not available.

### Conditions and measures related to external treatment of waste for disposal:

External treatment and disposal of waste should comply with applicable local and/or national regulations.

### Conditions and measures related to external recovery of waste:

External recovery and recycling of waste should comply with applicable local and/or national regulations.

## Section 3: Exposure estimation and reference to its source

### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** Used ECETOC TRA model (May 2010 release).

### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## Section 4: Guidance to check compliance with the exposure scenario

<b>Environment</b>	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. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a>
<b>Health</b>	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.