siTOOLs Biotech

SAFETY DATA SHEET

siPOOL - complex pools of synthetic small interfering RNAs

Product code	si-S001 si-Gxxx si-Cxxx si-Lxxx	**Version**	2.0
Revision date	12 August 2026	**Supersedes**	31 January 2017
Regulatory basis	REACH Annex II / Regulation (EU) 2020/878	**Language**	English

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

1.1 Product identifier

Product name: siPOOL

Product description: A complex pool of approximately 30 pre-defined synthetic, double-stranded small interfering RNAs targeting one gene, supplied in aqueous buffer.

Product code: si-S001, si-Gxxx, si-Cxxx, si-Lxxx; catalogue identifiers may vary by target gene, species and pack size.

UFI: Not applicable. The mixture is not classified for physical or human-health hazards under Regulation (EC) No 1272/2008 based on currently available formulation information.

1.2 Relevant identified uses and uses advised against

Identified use: Laboratory research reagent for in vitro gene-silencing experiments using RNA interference, including experiments in cultured cells.

Use restriction: For research use only.

Uses advised against: Human or animal diagnostic or therapeutic procedures; administration to humans; consumer or household use; and use outside appropriately controlled research laboratories.

1.3 Details of the supplier of the safety data sheet

Supplier: siTOOLs Biotech GmbH

Address: Lochhamer Str. 29A, Rückgebäude, D-82152 Planegg/Martinsried, Germany

Telephone: +49 89 12501 4800

Email: info@sitools.de

Website: https://www.sitoolsbiotech.com

1.4 Emergency telephone number

Supplier emergency contact: +49 89 12501 4800 - available during normal business hours only (CET/CEST; German and English).

Outside supplier business hours, contact the local emergency services or the appropriate national poison information centre. A poison-centre number should be added only after confirming the applicable service arrangements and authorisation for company SDS use.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008 (CLP), based on currently available information and the supplied concentrations of its components.

2.2 Label elements

Hazard pictograms: None required.

Signal word: None required.

Hazard statements: None required.

Precautionary statements: None required under CLP. Follow good laboratory practice.

Supplemental information: For research use only. Not intended for human or animal diagnostic or therapeutic procedures.

2.3 Other hazards

PBT/vPvB assessment: Based on available information, the mixture does not contain substances known to meet the PBT or vPvB criteria at 0.1% or more. Manufacturer verification against the current formulation is required before issue.

Endocrine-disrupting properties: No components are known to have endocrine-disrupting properties at 0.1% or more based on currently available information. Manufacturer verification is required before issue.

Other hazards: The reagent is biologically active when deliberately introduced into cells using a transfection method and can cause sequence-specific gene silencing. This property is not a CLP hazard classification. Avoid unintended exposure and contamination.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable; the product is a mixture.

3.2 Mixtures

Composition: Approximately 30 pre-defined synthetic, double-stranded siRNA oligonucleotides in 10 mM Tris buffer, approximately pH 8.0.

Hazardous components requiring disclosure: None identified at concentrations requiring disclosure under REACH Annex II, based on available formulation information. The final issue must be checked against the current formulation, raw-material SDSs and current CLP classifications.

The exact oligonucleotide sequences vary by target and are proprietary product identifiers rather than components classified as hazardous under CLP.

SECTION 4: First aid measures

4.1 Description of first aid measures

General: No special measures are normally required. Remove contaminated clothing and obtain medical advice if symptoms develop or persist. Show this safety data sheet to medical personnel.

Inhalation: Exposure by inhalation is not expected during normal pipetting. If mist or aerosol is inhaled, move the person to fresh air. Seek medical advice if symptoms occur.

Skin contact: Wash with water and soap. Remove contaminated clothing. Seek medical advice if irritation develops or persists.

Eye contact: Rinse cautiously with clean water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical advice if irritation persists.

Ingestion: Rinse mouth with water. Do not induce vomiting. Seek medical advice if unwell or if a significant amount has been swallowed.

4.2 Most important symptoms and effects, both acute and delayed

No specific symptoms are known. Temporary mechanical or mild irritation of the eyes, skin or respiratory tract may occur in susceptible persons.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No specific antidote is known.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide as appropriate for the surrounding fire.

Unsuitable media: None known for the product itself.

5.2 Special hazards arising from the substance or mixture

The supplied aqueous mixture is not flammable. Thermal decomposition or combustion of dried residues and packaging may generate carbon oxides, nitrogen oxides, phosphorus oxides and other irritating fumes.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing appropriate to the surrounding fire. Prevent contaminated firewater from entering drains when practicable.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin. Avoid generating aerosols. Wear laboratory gloves, protective clothing and eye protection as appropriate. Restrict access to the spill area until cleaned.

6.2 Environmental precautions

Avoid uncontrolled release to drains, surface water and soil. The product is supplied in small laboratory quantities.

6.3 Methods and material for containment and cleaning up

Absorb with inert material or disposable laboratory wipes. Transfer waste to a suitable labelled container. Clean the surface with water and laboratory detergent or an institutionally approved nucleic-acid decontamination method. Avoid methods that create aerosols.

6.4 Reference to other sections

See Section 8 for personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use standard good laboratory practice. Avoid contact with eyes, skin and clothing; avoid ingestion and aerosol formation. Do not eat, drink or smoke in work areas. Wash hands after handling. Use nuclease-free equipment where product integrity is required.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature: Store at -20 °C in the original, tightly closed container unless the product label or lot-specific documentation states otherwise.

Additional conditions: Protect from heat and nuclease contamination. Aliquot where practical to minimise repeated freeze-thaw cycles. Keep separate from incompatible materials listed in Section 10.

7.3 Specific end use(s)

Laboratory research reagent for RNA interference experiments. Follow the applicable siPOOL transfection protocol and institutional laboratory procedures.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits: No EU or national occupational exposure limits have been identified for the mixture as supplied.

DNEL/PNEC: Not established for the mixture.

8.2 Exposure controls

Engineering controls: General laboratory ventilation is normally adequate. Use a suitable local control method if an operation could generate aerosols.

Eye/face protection: Safety glasses with side protection where splashing is possible, consistent with EN 166 or equivalent institutional requirements.

Hand protection: Disposable laboratory gloves, for example nitrile, selected in accordance with the task and institutional risk assessment. Replace contaminated or damaged gloves.

Skin/body protection: Laboratory coat or other protective clothing suitable for the task.

Respiratory protection: Not normally required during routine pipetting. Where aerosols may be generated, perform a task-specific risk assessment and use appropriate controls.

Hygiene measures: Wash hands after handling and before breaks. Keep work areas clean. Do not store food or beverages in laboratory areas.

Environmental exposure controls: Minimise release to the environment and dispose of waste according to Section 13.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Property	Result
Physical state	Liquid; aqueous solution
Colour	Not determined; typically colourless
Odour	No characteristic odour expected
Melting/freezing point	Not determined
Boiling point/range	Not determined
Flammability	Not flammable as supplied
Lower/upper explosion limit	Not applicable to the aqueous mixture
Flash point	Not applicable to the aqueous mixture
Auto-ignition temperature	Not applicable
Decomposition temperature	Not determined
pH	Approximately 8.0
Kinematic viscosity	Not determined
Solubility	Miscible with water
Partition coefficient (log Kow)	Not determined for the mixture
Vapour pressure	Not determined
Density/relative density	Not determined

Property	Result
Relative vapour density	Not applicable
Particle characteristics	Not applicable; product is supplied as a liquid

9.2 Other information

Information with regard to physical hazard classes: No additional information available; the product is not classified for physical hazards.

Other safety characteristics: No additional data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazardous reactivity is expected under normal laboratory handling and recommended storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions. Functional activity may decrease following nuclease contamination, prolonged heat exposure or repeated freeze-thaw cycles.

10.3 Possibility of hazardous reactions

No hazardous polymerisation or other hazardous reaction is known under normal conditions of use.

10.4 Conditions to avoid

Excessive heat, prolonged exposure to room temperature, direct sunlight, repeated freeze-thaw cycles and nuclease contamination.

10.5 Incompatible materials

Strong oxidising agents and materials or reagents that degrade nucleic acids. Compatibility with other experimental reagents should be assessed by the user.

10.6 Hazardous decomposition products

None expected under recommended use and storage. Thermal decomposition may generate carbon oxides, nitrogen oxides and phosphorus oxides.

SECTION 11: Toxicological information

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

Endpoint	Assessment
Acute toxicity	Not classified; no mixture-specific test data are available.
Skin corrosion/irritation	Not classified; temporary mild irritation cannot be excluded.
Serious eye damage/irritation	Not classified; temporary mild irritation cannot be excluded.
Respiratory/skin sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive toxicity	Not classified based on available information.
STOT - single exposure	Not classified based on available information.
STOT - repeated exposure	Not classified based on available information.
Aspiration hazard	Not classified; not expected for the supplied aqueous mixture.

11.2 Information on other hazards

Endocrine-disrupting properties: No components are known to have endocrine-disrupting properties at 0.1% or more, subject to manufacturer verification.

Other information: No toxicokinetic or mixture-specific toxicological studies are available. siPOOLs are biologically active when deliberately transfected into cells; this intended research effect is not evidence of toxicity from normal occupational handling.

SECTION 12: Ecological information

12.1 Toxicity

No mixture-specific aquatic toxicity data are available. The product is not classified as hazardous to the aquatic environment based on currently available information.

12.2 Persistence and degradability

No validated mixture data are available. RNA oligonucleotides are susceptible to enzymatic degradation, but environmental degradation rates for the supplied mixture have not been determined.

12.3 Bioaccumulative potential

No mixture-specific data are available. Significant bioaccumulation is not expected from the nature and low supplied quantity of the product, but this has not been experimentally verified.

12.4 Mobility in soil

No data available. The product is an aqueous solution and may disperse in water.

12.5 Results of PBT and vPvB assessment

Based on available information, the mixture does not contain substances known to meet the PBT or vPvB criteria at 0.1% or more, subject to manufacturer verification.

12.6 Endocrine-disrupting properties

No components are known to have endocrine-disrupting properties at 0.1% or more, subject to manufacturer verification.

12.7 Other adverse effects

No other adverse environmental effects are known. Avoid unnecessary release to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product waste: Dispose through an authorised laboratory-waste route in accordance with applicable local, regional and national requirements. Do not discharge unused product to drains.

Used product: The waste classification may change if the product has contacted cell cultures, biological materials, transfection reagents or other hazardous substances. Classify and dispose of the combined waste according to the actual contamination and institutional procedures.

Packaging: Dispose of empty containers in accordance with local requirements. Containers that retain product or experimental contamination should be treated as laboratory waste.

SECTION 14: Transport information

Transport item	Status
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not classified as a marine pollutant or environmentally hazardous substance for transport
14.6 Special precautions for user	Maintain recommended temperature where needed for product quality; transport classification is unaffected
14.7 Maritime transport in bulk according to IMO instruments	Not applicable; product is not intended for transport in bulk

The product is not regulated as dangerous goods under ADR/RID, ADN, IMDG Code or ICAO-TI/IATA DGR based on the supplied formulation.

SECTION 15: Regulatory information

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

REACH: Regulation (EC) No 1907/2006, as amended. This document follows the Annex II format as amended by Commission Regulation (EU) 2020/878.

CLP: Regulation (EC) No 1272/2008, as amended. The mixture is not classified as hazardous based on currently available information.

SDS supply status: On the available classification and formulation information, a safety data sheet is not known to be mandatory under Article 31(1) REACH; this SDS is supplied voluntarily to support safe laboratory handling. Reassess if the formulation, classification or regulatory-list status changes.

REACH Candidate List / Annex XIV / Annex XVII: No component is known to trigger SDS disclosure, authorisation or restriction requirements at its concentration in the supplied mixture. This statement must be verified against the current formulation and current regulatory lists before issue.

IVDR: The product is for research use only and is not intended for in vitro diagnostic examination. Regulation (EU) 2017/746 does not apply pursuant to Article 1(3)(a), provided the intended purpose and product claims remain research-only.

Poison-centre notification / UFI: Not expected to apply because the mixture is not classified for human-health or physical hazards, subject to confirmation of the final CLP classification.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture and is not required for the mixture as such.

SECTION 16: Other information

Version: 2.0

Revision date: 12 August 2026

Supersedes: Version dated 31 January 2017

Principal changes: Updated to the REACH Annex II format established by Commission Regulation (EU) 2020/878; removed references to repealed Directives 67/548/EEC and 1999/45/EC; updated supplier address; expanded all mandatory subsections; updated CLP, transport and research-use-only regulatory statements; and replaced unsupported definitive toxicological/ecological claims with evidence-qualified assessments.

Classification method: Expert assessment of the supplied formulation and component information; no mixture-specific hazard testing was identified.

Abbreviations: ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR: Agreement concerning the International Carriage of Dangerous Goods by Road; CLP: Classification, Labelling and Packaging; DNEL: derived no-effect level; IATA: International Air Transport Association; ICAO-TI: ICAO Technical Instructions; IMDG: International Maritime Dangerous Goods; PBT: persistent, bioaccumulative and toxic; PNEC: predicted no-effect concentration; REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals; RID: Regulations concerning the International Carriage of Dangerous Goods by Rail; RUO: research use only; SDS: safety data sheet; STOT: specific target organ toxicity; UFI: unique formula identifier; vPvB: very persistent and very bioaccumulative.

Key references: Regulation (EC) No 1907/2006 (REACH), as amended; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 (CLP), as amended; Regulation (EU) 2017/746 (IVDR), Article 1(3)(a); ECHA Guidance on the compilation of safety data sheets; legacy siPOOL SDS dated 31 January 2017; current siPOOL product information and transfection protocol.

Training advice: Users should be trained in good laboratory practice, chemical hygiene, appropriate personal protective equipment, spill response and disposal of laboratory and biological waste.

> **Disclaimer:** The information is based on data available at the date of preparation and is intended to describe the product for health, safety and environmental purposes. It is not a product specification or warranty. Users are responsible for determining the suitability of the product and controls for their specific procedures and for compliance with applicable laws.

End of Safety Data Sheet