
MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet (MSDS) has been written in accordance with the European Union Council Directive 98/24/EC of 7th April on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual directive within the meaning of Article 16(1) of the Directive 89/391/EEC).

Commission Directive 2001/58/EC of 27th July 2001 amending for the second-time Directive 91/155/EEC defining and laying down the detailed arrangements for the system of information relating to dangerous preparations in implementation of Article 14 of the European Parliament Directive 1999/45/EC and relating to dangerous substances in Implementation of Article 27 of Council Directive 67/548/EEC (safety data sheets). (Text with EEA relevance). Appropriate risk and safety phrases are cited in this MSDS.

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

1.1 Product identifiers

Product name: instaCELL® TNF- α potency assay kit

Product Number: SF320-01

TNF- α Solution

Recombinant Human TNF- α

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

The product is for research only and must not be used for diagnostic or therapeutic use.

1.3 Details of the supplier of the safety data sheet

acCELLerate GmbH

Osterfeldstraße 12-14

22529 Hamburg

Telephone: 040 33 464 73 00

Fax: 040 6337 0309

1.4 Emergency telephone number

Emergency Phone: 040 33 464 73 00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.H402

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients**3.1 Substances**

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment:

Eye/face protection

Sufficient eye protection should be worn.

Wear glasses with side protection.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with

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applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Depending on the risk, wear a tight protective clothing or a suitable chemical protection suit.

Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Control of environmental exposure

No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) Appearance Form: solid
- b) Odor: No data available
- c) Odor Threshold: No data available
- d) pH: No data available
- e) Melting point/freezing point: No data available
- f) Initial boiling point and boiling range: No data available
- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability or explosive limits: No data available
- k) Vapor pressure: No data available
- l) Vapor density: No data available
- m) Relative density: No data available
- n) Water solubility: No data available
- o) Partition coefficient: No data available
- p) Auto-ignition temperature: No data available
- q) Decomposition temperature: No data available
- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

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10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

MATERIAL SAFETY DATA SHEET**SECTION 12: Ecological information****12.1 Toxicity**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

UN number: 3334 Class: 9 Packing group: III

Proper shipping name: Aviation regulated liquid, n.o.s. (Ethylene dimethacrylate)

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

MATERIAL SAFETY DATA SHEET

For this product a chemical safety assessment was not carried out

SECTION 16 OTHER INFORMATION

THE INFORMATION PRESENTED IN THIS DOCUMENT IS BELIEVED TO BE CORRECT BASED UPON DATA AVAILABLE TO ACCELERATE. USERS SHOULD MAKE AN INDEPENDENT DECISION REGARDING THE ACCURACY OF THIS INFORMATION BASED ON THEIR NEEDS AND DATA AVAILABLE TO THEM. ALL SUBSTANCES AND MIXTURES MAY PRESENT UNKNOWN HAZARDS AND ALL NECESSARY SAFETY PRECAUTIONS SHOULD BE TAKEN. ACCELERATE ASSUMES NO LIABILITY RESULTING FROM USING OR COMING IN CONTACT WITH THIS SUBSTANCE.

In the event of an accident involving exposure of a person to the material contained in the samples, contact acCELLerate during normal German working hours. Refer to section 1 for full contact details.

The above information is correct to the best of our knowledge. All materials and mixtures may present unknown hazards and should be used with caution.

The user should make independent assessments and decisions regarding the completeness of the information based on all sources available.

acCELLerate shall not be held liable for any damage resulting from handling or contact with the above product.

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifiers**

Product name: instaCELL® TNF- α potency assay kit

Product Number: SF320-01

Actinomycin D solution

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

The product is for research only and must not be used for diagnostic or therapeutic use.

1.3 Details of the supplier of the safety data sheet

acCELLerate GmbH

Osterfeldstraße 12-14

22529 Hamburg

Telephone: 040 33 464 73 00

Fax: 040 6337 0309

1.4 Emergency telephone number

Emergency Phone: 040 33 464 73 00

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 2), H300

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360FD

2.2 GHS Label elements, including precautionary statements

Signal word Danger

MATERIAL SAFETY DATA SHEET**Hazard statement(s)**

H300 Fatal if swallowed.
H350 May cause cancer.
H360FD May damage fertility. May damage the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Not known

SECTION 3: Composition/information on ingredients**3.1 Mixture**

Synonyms: Actinomycin IV
Actinomycin C1
Dactinomycin
Formula: $C_{62}H_{86}N_{12}O_{16}$
Molecular weight: 1.255,42 g/mol
CAS-No.: 50-76-0
EC-No.: 200-063-6

SECTION 4: First aid measures**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

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Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

No data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

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No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

No data available

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment:

Eye/face protection

Sufficient eye protection should be worn.

Wear glasses with side protection.

MATERIAL SAFETY DATA SHEET**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Depending on the risk, wear a tight protective clothing or a suitable chemical protection suit.

Respiratory protection

In an emergency (e.g.: unintentional release of the substance) respiratory protection must be worn. Consider the maximum period for wear.

Respiratory protection: Gas filter A, Color code brown.

Use insulating device for concentrations above the usage limits for filter devices, for oxygen concentrations below 17% volume, or in circumstances which are unclear.

Control of environmental exposure

No special environmental precautions required.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

- a) Appearance Form: powder
- b) Odor: No data available
- c) Odor Threshold: No data available
- d) pH: No data available
- e) Melting point/freezing point: 251-253°C
- f) Initial boiling point and boiling range: No data available
- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability or explosive limits: No data available
- k) Vapor pressure: No data available
- l) Vapor density: No data available
- m) Relative density: No data available
- n) Water solubility: 40g/l at 10°C
- o) Partition coefficient: log Pow: -9,100
- p) Auto-ignition temperature: No data available

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- q) Decomposition temperature: >240°C
- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Strong oxidizing agents

10.4 Conditions to avoid

Heat. Keep away from direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral: 7,2mg/kg (Rat)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

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Respiratory or skin sensitization

Germ cell mutagenicity

DNA Damage

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

May damage the unborn child.

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

MATERIAL SAFETY DATA SHEET**12.6 Other adverse effects**

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

No data available

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 3462 IMDG: 3462 IATA: 3462

14.2 UN proper shipping name

ADR/RID: TOXINS EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (actinomycin D)

IMDG: TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (actinomycin D)

IATA: Toxins, extracted from living sources, solid, n.o.s. (actinomycin D)

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

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