

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

AdipoRed™ Assay Reagent

Version 4.0

Revision Date 26.04.2024

Print Date 14.12.2024

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

Product name : AdipoRed™ Assay Reagent

Material number : PT-7009

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

Use of the Substance/Mixture : For research use only.

Recommended restrictions on use : NOT FOR USE IN GMP MANUFACTURING, NOR HUMAN OR ANIMAL IN VIVO OR DIAGNOSTIC USE.

1.3 Details of the supplier of the safety data sheet

Company : **Lonza Ltd**
Muenchensteinerstrasse 38
CH-4002 Basel, Switzerland
Business Telephone: +41 61 316 81 11

Lonza Verviers Sprl
Parc Industriel de Petit-Rechain
BE-4800 Verviers, Belgium
Business Telephone: +32 8732 1611

Lonza Cologne GmbH
Nattermannallee 1
DE-50829 Köln, Germany
Business Telephone: + 49 221 99 1990

E-mail address / Responsible/issuing person : sds@lonza.com

1.4 Emergency telephone numberEmergency telephone number : Lonza Ltd, CH-4002 Basel, Switzerland
Telephone: +41 61 313 94 94 (24h)**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

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

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

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

Hazardous components which must be listed on the label:

Dimethyl sulfoxide

AdipoRed™ Assay Reagent

2.3 Other hazards

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Remarks : No hazardous ingredients

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
- In case of skin contact : After contact with skin, wash immediately with plenty of soap and water.
Get medical attention if irritation develops and persists.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : Do not induce vomiting without medical advice.
Immediately give large quantities of water to drink.
Call a physician immediately.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry powder
Water spray
Foam

AdipoRed™ Assay Reagent

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Carbon oxides (COx)
Sulphur oxides (SOx)

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use water spray to cool unopened containers.

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

Personal precautions : Use respirator when performing operations involving potential exposure to vapour of the product.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
Do not flush into surface water or sanitary sewer system.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.

Advice on protection against fire and explosion : Take precautionary measures against static discharges. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Temperature class : T3

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Store at room temperature.

7.3 Specific end use(s)

Specific use(s) : No information available.

AdipoRed™ Assay Reagent

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Countries not listed may have their own country specific values.

Occupational Exposure Limits

Switzerland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Dimethyl sulfoxide	67-68-5	STEL	100 ppm 320 mg/m ³	CH SUVA
		TWA	50 ppm 160 mg/m ³	CH SUVA

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Dimethyl sulfoxide	Workers	Inhalation	Long-term systemic effects	394 mg/m ³
	Workers	Skin contact	Long-term systemic effects	400 mg/kg
	Consumers	Skin contact	Long-term systemic effects	200 mg/kg
	Consumers	Oral	Long-term systemic effects	100 mg/kg
	Consumers	Inhalation	Long-term systemic effects	70 mg/m ³
	Workers	Inhalation	Long-term systemic effects	484 mg/m ³
	Workers	Inhalation	Long-term local effects	265 mg/m ³
	Workers	Dermal	Long-term systemic effects	200 mg/kg
	Consumers	Inhalation	Long-term systemic effects	120 mg/m ³
	Consumers	Inhalation	Long-term local effects	47 mg/m ³
	Consumers	Dermal	Long-term systemic effects	100 mg/kg
	Consumers	Oral	Long-term systemic effects	60 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Dimethyl sulfoxide	Fresh water	17 mg/l
	Oral	700 mg/kg
	Sewage treatment plant	11 mg/l
	Soil	3,02 mg/kg
	Sediment	13,4 mg/kg
	Marine water	1,7 mg/l

8.2 Exposure controls

Engineering measures

Use only in area provided with appropriate exhaust ventilation.

Personal protective equipment

Eye protection : Tightly fitting safety goggles

AdipoRed™ Assay Reagent

Hand protection	
Material	: Nitrile rubber
Rate of permeability	: > 480 min
Remarks	: Wear suitable gloves.
Skin and body protection	: Choose body protection according to the amount and concentration of the dangerous substance at the work place. No special protective equipment required.
Respiratory protection	: In the case of vapour formation use a respirator with an approved filter.
	Respirator with a vapour filter (EN 141) Respirator with ABEK filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: red
Odour	: odourless
Melting point/freezing point	: 18,4 °C Information refers to the main component.
Initial boiling point and boiling range	: 189 °C Information refers to the main component.
Flammability	: No data available
Upper explosion limit / Upper flammability limit	: 42 %(V) Information refers to the main component.
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: 89 °C Method: closed cup Information refers to the main component.
Auto-ignition temperature	: No data available
Decomposition temperature	
Decomposition temperature	: No data available
pH	: Not applicable
Viscosity	
Viscosity, kinematic	: No data available
Solubility(ies)	
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available

AdipoRed™ Assay Reagent

Vapour pressure	:	No data available
Relative density	:	No data available
Density	:	No data available
Relative vapour density	:	No data available
Particle characteristics	:	No data available

9.2 Other information

Explosives	:	Not explosive
------------	---	---------------

SECTION 10: Stability and reactivity**10.1 Reactivity**

Stable under recommended storage conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	None known.
---------------------	---	-------------

10.4 Conditions to avoid

Conditions to avoid	:	Temperature 89 °C Keep away from heat and sources of ignition.
---------------------	---	---

10.5 Incompatible materials

Materials to avoid	:	Strong oxidizing agents Strong reducing agents Halogens Copper
--------------------	---	---

10.6 Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Acute oral toxicity	:	Remarks: No data available
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	Remarks: No data available

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

AdipoRed™ Assay Reagent

Remarks: No data available

Respiratory or skin sensitisation

Remarks: No data available

Germ cell mutagenicity

Genotoxicity in vitro : Remarks: No data available

Carcinogenicity

Remarks: No data available

Reproductive toxicity

Effects on fertility : Remarks: No data available

STOT - single exposure

Remarks: No data available

STOT - repeated exposure

Remarks: No data available

Aspiration toxicity

Remarks: No data available

11.2 Information on other hazards

Endocrine disrupting properties

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Remarks: No data is available on the product itself.

The following toxicological data refer to:

Dimethyl sulfoxide (CAS-No.: 67-68-5)

Acute toxicity

Acute oral toxicity : LD50 (Rat): 14 500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 40250 ppm
Exposure time: 4 h
Test atmosphere: dust/mist

LC50 (Rat): 5 330 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

AdipoRed™ Assay Reagent

Acute dermal toxicity : LD50 (Rat, male and female): 40 000 mg/kg

Skin corrosion/irritation

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Mild skin irritation
GLP: yes
Assessment: No skin irritation

Serious eye damage/eye irritation

Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 405
Result: Mild eye irritation
Assessment: No eye irritation

Respiratory or skin sensitisation

Test Type: Maximisation Test
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406
Result: not sensitizing

Germ cell mutagenicity

Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

: Test Type: Chromosome aberration test in vitro
Species: Chinese hamster ovary cells
Metabolic activation: yes
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Rat
Application Route: ip
Dose: 200, 1000 and 5000 mg/kg/d
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Carcinogenicity

Remarks: No data available

Reproductive toxicity

Effects on fertility : Species: Rat
Application Route: Oral
General Toxicity - Parent: NOAEL: 1 000 mg/kg body weight

AdipoRed™ Assay Reagent

General Toxicity F1: NOAEL: 1 000 mg/kg body weight
 Early Embryonic Development: NOAEL: 1 000 mg/kg body weight

Effects on foetal development : Species: Rat
 Application Route: Oral
 Method: OECD Test Guideline 414
 Result: No adverse effects

STOT - single exposure

Remarks: No data available

Exposure routes: inhalation (vapour)
 Target Organs: Respiratory system

STOT - repeated exposure

Remarks: No data available

Repeated dose toxicity

Species: Rat
 NOAEC: 47,5 mg/m³
 Application Route: Inhalation
 Target Organs: Liver, Lungs

Further information

Remarks: Can be absorbed through skin.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms :
 Remarks: No data available

12.2 Persistence and degradability

Biodegradability : Result: no data available

12.3 Bioaccumulative potential

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil

Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

AdipoRed™ Assay Reagent

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 Endocrine disrupting properties

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Additional ecological information : No data is available on the product itself.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations. Contact waste disposal services.

Contaminated packaging : Dispose of as unused product. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

IATA Not dangerous goods

14.1 UN number : Not applicable
 14.2 Proper shipping name : Not applicable
 14.3 Transport hazard class(es) : Not applicable
 14.4 Packing group : Not applicable
 14.5 Environmental hazards : no

IMDG Not dangerous goods

14.1 UN number : Not applicable
 14.2 Proper shipping name : Not applicable
 14.3 Transport hazard class(es) : Not applicable
 14.4 Packing group : Not applicable
 14.5 Environmental hazards : Marine pollutant: no

ADR : Not dangerous goods

14.1 UN number : Not applicable
 14.2 Proper shipping name : Not applicable
 14.3 Transport hazard class(es) : Not applicable
 14.4 Packing group : Not applicable
 14.5 Environmental hazards : no

AdipoRed™ Assay Reagent

RID : Not dangerous goods

14.1 UN number : Not applicable
 14.2 Proper shipping name : Not applicable
 14.3 Transport hazard class(es) : Not applicable
 14.4 Packing group : Not applicable
 14.5 Environmental hazards : no

DOT

14.1 UN number : NA 1993
 14.2 Proper shipping name : Combustible liquid, n.o.s.
 (Dimethyl sulfoxide)
 14.3 Transport hazard class(es) : CBL
 14.4 Packing group : III
 Labels : NONE
 Emergency Response Guidebook : 128
 Number
 14.5 Environmental hazards : no

TDG : Not dangerous goods

14.1 UN number : Not applicable
 14.2 Proper shipping name : Not applicable
 14.3 Transport hazard class(es) : Not applicable
 14.4 Packing group : Not applicable
 14.5 Environmental hazards : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

AdipoRed™ Assay Reagent

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Water hazard class (Germany) : WGK 1 slightly hazardous to water
Code Number: 5 050
Remarks: 11 2017

15.2 Chemical safety assessment

not required

AdipoRed™ Assay Reagent

SECTION 16: Other information**Full text of other abbreviations**

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE - Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR – Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide – National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL - Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG – Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Further information

Date format : dd.mm.yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

99 / EN