



Material Safety Data Sheet

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SECTION 1 PRODUCT AND COMPANY INFORMATION

Trade Name: Rat Detection Antibody for ELISA
Catalogue Number(s): E1083
A component in EZML-82K , Mouse Leptin ELISA Kit

Chemical Name: Aqueous solutions containing tetrasodium ethylenediaminetetraacetate, sodium azide, polyoxyethylene(10) octylphenyl ether, conjugated leptin, IgG, bovine serum albumin, and phosphate buffered saline.

Other trade names and synonyms: None

Manufacturer/Distributor: Millipore Corporation (Corporate Headquarters) Millipore S.A.S. (European Headquarters)

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SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Component	EINECS or ELINCS No.	CAS No.	Content (weight percent)	Symbol letters*	R Phrases**
Tetrasodium ethylenediaminetetraacetate	Unlisted	10378-23-1	1%	Xi	R36/37/38
Sodium azide	247-852-1	26628-22-8	0.08%	T+ N	R28, R32 R50/53
Polyoxyethylene(10) octylphenyl ether	Unlisted	9002-93-1	<0.1%	Xn	R 22 R41 R52/53

* Symbol letters and categories of danger: **T+** = Very toxic, **T** = Toxic, **C** = Corrosive, **Xn** = Harmful, **Xi** = Irritant, **E** = Explosive, **F+** = Extremely flammable, **F** = Very flammable, **N** = Dangerous for the environment, **O** = Oxidising.

** The full text of each phrase is listed in Section 16.

- This product also contain conjugated leptin, IgG, bovine serum albumin, sodium and potassium hydrogen phosphates, sodium chloride and water that are not dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard (29 CFR 1910.1200).
- Bovine serum albumin and other blood derived materials should be regarded as potentially infectious.

SECTION 3 HAZARD IDENTIFICATION / EMERGENCY OVERVIEW

Appearance: Clear liquid

Classification: This product is unclassified according to Directive 1999/45/EC.

Adverse human health effects

Contact with Eyes: Possible mild eye irritant

Ingestion: Possible neurological toxin with hypotensive, visual, and acute cerebral effects.

Inhalation (Short Term): Possible respiratory tract and mucous membrane irritant, with symptoms similar to those by ingestion.

Inhalation (Long Term): Prolonged or repeated exposure to sodium azide solution aerosols may result in permanent neurological damage, collapse, or death.

Skin Contact: Possible skin irritant. Sodium ethylenediaminetetraacetate and sodium azide may be absorbed through the skin with systemic toxicity. Sensitive individuals may experience an allergic reaction to the polypeptide component of this product.

Target Organs: Tetrasodium ethylenediaminetetraacetate: blood, kidneys, lungs, liver, mucous membranes.
Sodium azide: Central nervous system, lungs, cardiovascular system, eyes, skin.

Medical conditions aggravated by exposure: Exposure to sodium azide will exacerbate existing hypotensive conditions. Sensitive individuals may experience an allergic reaction to the polypeptide component of this product.

Adverse environmental effects: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Adverse physiochemical effects: Sodium azide may react with lead and copper plumbing to form highly explosive metal azides.

SECTION 4 FIRST AID MEASURES

- Contact with Eyes:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. If irritation persists, seek immediate medical attention.
- Ingestion:** If swallowed, summon medical assistance, and then wash out mouth with water provided person is conscious. Do not induce vomiting unless directed to do so by a health care provider.
- Inhalation:** Sodium azide solution aerosols are poisonous. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Skin Contact:** In case of contact, immediately wash skin with soap and copious amounts of water. If irritation or redness occurs, seek medical attention

SECTION 5 FIRE FIGHTING MEASURES

- Flash Ignition Temperature:** None; Not considered to be a fire hazard.
- Autoignition Temperature (ASTM D1929):** None
- Suitable extinguishing media:** Select extinguishing media best suited to the surrounding fire.
- Unsuitable extinguishing media:** None reported.
- Special protective equipment for firefighters:** In a fire, large quantities of sodium azide solution may generate significant quantities of hazardous aerosols. Self contained breath apparatus is required.
- Special exposure hazards:** Approach first from upwind direction to avoid hazardous aerosols.

SECTION 6 ACCIDENTAL RELEASE

- Personal precautions:** Area evacuation is not required. Eliminate unnecessary traffic in area of the spill. Wear chemically resistant boots, clothing and gloves (nitrile, neoprene) to prevent skin contact.
- Small spills:** Clean up spills immediately. Wear appropriate protective clothing and if necessary breathing apparatus. Contain spill and absorb with sand, earth, or vermiculite. Collect residues and place in labeled plastic containers. Avoid breathing vapors and contact with skin and eyes.
- Large spills:** In addition to Small Spill precautions, clear area of all unnecessary personnel and move upwind, if aerosol formation is possible..
- Environmental precautions:** May be discharged into sewer, or industrial waste water systems if allowed by local regulations. Otherwise, collect and dispose according to federal, state and local regulations. Sodium tetraborate may have adverse effects on aquatic life.
- Clean up measures:** Small spills may be adsorbed on paper towels, and stored in closed containers pending final disposition. Larger spill may be absorbed in sand, sawdust or vermiculite, and stored in closed containers pending final disposition (See section 13). Wash spill area with detergent and water to remove residual contamination. This water may be disposed to the sanitary sewer.

SECTION 7 HANDLING AND STORAGE

Handling:

Avoid contact with eyes and skin. Wear gloves.

Do not inhale aerosols or vapors.

May be harmful if swallowed.

Use personal protective equipment outlined in section 8.

Wash thoroughly after handling

Use with adequate ventilation

Storage

Store frozen at 2-80°C, unless directed otherwise by the product data sheet.

SECTION 8 EXPOSURE CONTROL AND PERSONAL PROTECTION

Specific Protection	Normal Handling Conditions	Emergency Response Conditions
Respiratory protection:	Not normally required for normal use.	If aerosols are present - air purifying respirator with organic cartridges
Ventilation:	General room ventilation	If aerosols are present, provide exhaust ventilation
Eye protection:	Safety glasses with side shields	Chemical splash goggles.
Skin protection:	Nitrile gloves and laboratory coat.	Chemically resistant jacket, pants, gloves, boots and head covering

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid
Odor:	None
Odor Threshold:	No data have been found
pH:	7.4
Melting Point:	-1 to -3°C
Boiling Point:	101 to 103°C
Flash Ignition Point:	None; Not considered to be a fire hazard.
Explosive Properties:	None; Not considered to be an explosive hazard.
Oxidizing Properties:	Not considered to have oxidising properties.
Vapor pressure, 20 °C:	<1 mm Hg
Solubility:	Miscible with water
Specific Gravity (Water = 1.0):	1.0 – 1.1
Vapor Density, 20 °C:	Not applicable
Viscosity, centipoise:	Not available
Partition coefficient (n-octanol/water):	Not available

SECTION 10 STABILITY AND REACTIVITY

- Chemical Stability:** Stable under normal temperatures and pressures. If boiled to dryness, the remaining sodium azide residue may rapidly decompose.
- Incompatible With:** Strong oxidizing acids.
- Hazardous Decomposition Products:** Oxides of carbon and nitrogen.
- Conditions to Avoid:** Elevated temperature, heating to dryness..
- Hazardous Polymerization:** Will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

- Inhalation:** May cause respiratory tract and mucous membrane irritation, with symptoms similar to those by ingestion.
- Ingestion:** May cause toxic neurological effects including hypotension, visual, and acute cerebral effects.
- Skin Contact:** May cause skin irritation or chronic dermatitis. Sodium azide may be absorbed through the skin with systemic toxicity. Sensitive individuals may experience an allergic reaction to the polypeptide component of this product.
- Eye Contact:** May cause mild eye irritation.
- Carcinogenicity:** None of the components of these products are listed as carcinogenic by ACGIH, IARC, NTP, OSHA or California proposition 65..
- Chronic Toxicity:** Chronic exposure to sodium azide may result in symptoms similar to acute ingestion.
- Toxicology Data:** Toxicological information for this product as a whole does not exist, below is data for the individual components.
- | | |
|--|------------------------|
| Compound: Tetrasodium ethylenediaminetetra-acetate | RTECS#: Not listed |
| LD ₅₀ , oral, rat: | 3,030 mg/kg |
| Teratogenic effects in laboratory animals appeared only a doses that proved to be toxic to the mother animals. | |
| Compound: Sodium Azide (100%) | RTECS#: VY8050000 |
| LD ₅₀ , oral, rat: | 27 mg/kg |
| LD ₅₀ , oral, mouse: | 27 mg/kg |
| LC ₅₀ , inhalation, rat: | 37 mg/m ³ |
| LC ₅₀ , inhalation, mouse: | 32.4 mg/m ³ |
| LD ₅₀ , skin, rat: | 50 mg/kg |
| LD ₅₀ , skin, rabbit: | 20 mg/kg |
| Sodium azide has been investigated as a Mutagen and Tumorigen | |
| Compound: Polyoxyethylene(10) octylphenyl ether (100%) | RTECS#: TR7400000 |
| LD ₅₀ , oral, rat: | 36.7 ml/kg |
| LD ₅₀ , oral, mouse: | >33 gm/kg |

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: - calculated for a 0.1% by weight aqueous sodium azide solution

EC₅₀ Water flea 115.0 mg/l (Static, 48 H)

EC₅₀ daphnia >100 mg/l (48 H)

Environmental Fate: No information was found.

SECTION 13 DISPOSAL INFORMATION

European Union: When disposal is required, this product should be considered according to the European Waste catalogue (European commission decision of 03/05/01 modifying directives 94/3/CE and 75/442/CE) as part of the following category:

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16 10 01* aqueous liquid wastes containing dangerous substances

United States: Dilute aqueous solutions of sodium azide may meet the definition of a US Environmental Protection Agency RCRA D003 (Reactive) hazardous waste. Unused product should be disposed of in a manner consistent with federal, state and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

The transportation of these products is not regulated by IMDG (sea), ADR (road), RID (rail), ICAO/IATA (air), or USDOT as a dangerous goods or hazardous material.

SECTION 15 REGULATORY INFORMATION

Australia: Hazchem Code: Sodium Azide: 2X

Poisons Schedule Number: None Allocated

California: No Significant Risk Level: None of the chemicals in these products are known to Millipore Corporation to be listed.

Canada: WHMIS: These products have WHMIS classifications of D1A, D2B.

Section 15 – Regulatory Information (continued)

European Community:

Symbols: None

Category of danger: None

Risk phrases: None

Safety phrases: S1/2 Keep locked up and out of the reach of children.
 S28 After contact with skin, wash immediately with plenty of water
 S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

OECD/High Production Volume (HPV) chemicals: Sodium azide is listed as a Low Volume Production chemical.

WEEE and RoHS: The WEEE and RoHS Directives are not applicable to these products.

Japan:

Poisonous and Deleterious Substances Control Law: Sodium azide is listed as a Poisonous Substance under the Poisonous and Deleterious Substances Control Law

United States:

Toxic Substances Control Act: All of the components of this product are listed on the EPA Toxic Substances Control Act (TSCA) Inventory.

Occupational Exposure Limits

Component	Occupational Exposure Limits, mg/m ³	
Sodium Azide	The Netherlands MAC-TGG	0.1
	EU IOELV	0.1
		0.3[skin]
	Austria, MAK, Germany MAK, Switzerland MAK	0.2
	ACGIH: TLV	C0.29
	NIOSH REL:	0.30[skin]
	Belgium STEL, United Kingdom STEL	0.3 TWA
	Australia, Denmark, Finland, France VLE,	0.3 TWA
	Finland STEL	0.9 TWA
	Hydrazoic acid	NIOSH REL

SECTION 16 ADDITIONAL INFORMATION

Risk phrases referred to under Section 2:

R22	Harmful if swallowed.
R28	Very toxic if swallowed
R32	Contact with acids liberates very toxic gas
R36/37/38	Irritating to eyes, respiratory system and skin
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations Used

ACGIH	American Conference of Government Industrial Hygienists
ADR	European agreement on the international carriage of dangerous goods on road
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EPA	United States Environmental Protection Agency
IARC	International Agency for Research in Cancer.
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IOELV	EU Indicative Occupational Exposure Limit Value
IMDG	Regulations regarding the transportation of dangerous goods on ocean-going vessels issued by the International Maritime Organization.
LC ₅₀	Lethal Concentration 50% is the concentration of a chemical which kills 50% of a sample population
LD ₅₀	Lethal Dose 50% is the dose of a chemical which kills 50% of a sample population.
LDLo	Lowest observed lethal dose
MSFU	Manufacture, Formulation, Supply and Use (Section 13)
NIOSH	National Institute of Occupational Safety and Health (US)
NTP	National Toxicology Program (US)
OSHA	United States Occupational Safety and Health Administration
RID	International regulations concerning the international carriage of dangerous goods by rail.
RTECS	Registry of Toxic Effects of Chemical Substances (US)
WHMIS	Workplace Hazardous Materials Information System (Canada)

This safety data sheet has been prepared to comply with the requirements of European Union Directive 2001/58/EC and ANSI Z400.1-1998.

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