

SAFETY DATA SHEET

Conforms to EU Directive 91/155/EEC, as amended by 2001/58/EC - Switzerland
English

1. Identification of the substance/preparation and company/undertaking

Product name Protein A Mag Sepharose™ Xtra, 5 x 1 ml

Catalogue Number 28-9670-62



9 0 2 8 9 6 7 0 6 2

Product type Liquid.

Company/undertaking identification

Supplier GE Healthcare UK Ltd
Amersham Place
Little Chalfont
Buckinghamshire HP7 9NA
England
+44 0870 606 1921

Emergency telephone number
Swedish Poisons Information Centre :
+46 (0)8 331 231

Person who prepared the MSDS: msdslifesciences@ge.com

Switzerland GE Healthcare Bio-Sciences GmbH
Industriestr. 30
CH-8112 Otelfingen 0848 8028 12

2. Hazards identification

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification R10

Physical/chemical hazards Flammable.

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

3. Composition/information on ingredients

Substance/preparation Preparation

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>	<u>EC number</u>	<u>Classification</u>
ethanol	64-17-5	14 - 19	200-578-6	F; R11
Mag Sepharose (highly cross-linked agarose with Magnetite)	9012-36-6 / 1317-61-9	-		Not classified.

See section 16 for the full text of the R-phrases declared above

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

4. First-aid measures

First-aid measures

Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Do not ingest. Get medical attention if symptoms appear.
Skin contact	Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention if irritation develops.
Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
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.

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



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5. Fire-fighting measures

Extinguishing media

Suitable	Use dry chemical, CO ₂ , water spray (fog) or foam.
Not suitable	Do not use water jet.
Special exposure hazards	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions	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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
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).
Large spill	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. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. 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. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
<u>Packaging materials</u>	
Recommended	Use original container.

8. Exposure controls/personal protection

Ingredient name

triiron tetraoxide

ethanol

Occupational exposure limits

SUVA (Switzerland, 1/2007).

TWA: 3 mg/m³ 8 hour(s). Form: respirable dust

SUVA (Switzerland, 1/2007). Notes: not temporary

STEL: 1920 mg/m³ 15 minute(s).

STEL: 1000 ppm 15 minute(s).

TWA: 960 mg/m³ 8 hour(s).

TWA: 500 ppm 8 hour(s).

Exposure controls

Occupational exposure controls Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Respiratory protection A respirator is not needed under normal and intended conditions of product use.



Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 1-4 hours (breakthrough time): butyl rubber, neoprene
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses with side-shields
Skin protection	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. Recommended: lab coat 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
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.

9. Physical and chemical properties

General information

Appearance

Physical state	Liquid. [and Suspension]
Colour	solution : Colourless. / Suspension : White.
Odour	Sweetish. Alcohol-like. [Slight]
Odour threshold	180 ppm

Important health, safety and environmental information

Flash point	Closed cup: 38 to 43°C (100.4 to 109.4°F)
Explosive properties	Not considered to be a product presenting a risk of explosion.
Solubility	Easily soluble in the following materials: cold water and hot water.

10. Stability and reactivity

Stability	The product is stable.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Materials to avoid	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	May cause skin irritation.
Eye contact	May cause eye irritation.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	TDLo Oral	Rat	4 mL/kg	-
	TDLo Oral	Rat	6000 mg/kg	-
	TDLo Oral	Rat	5250 mg/kg	-

Conclusion/Summary Not available.

Potential chronic health effects

Chronic effects	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Reproductive toxicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	No specific data.
Ingestion	No specific data.
Skin	No specific data.
Eyes	No specific data.



Target organs	Contains material which causes damage to the following organs: kidneys. Contains material which may cause damage to the following organs: blood, the reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
Other adverse effects	Adverse symptoms include the following: kidney abnormalities, liver abnormalities Adverse symptoms may include the following: central nervous system depression

12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
ethanol	-	Acute EC50 9.3 to 11.2 g/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute EC50 10600 to 11200 mg/L Fresh water	Daphnia - Water flea - Daphnia obtusa - Neonate	48 hours
	-	Acute EC50 >100 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute EC50 2000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 13 to 16 ml/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - 0.8 g	96 hours
	-	Acute LC50 5577000 to 6557000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 3715000 to 4432000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g	96 hours
	-	Acute LC50 42000 ug/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss	4 days
	-	Acute LC50 25500 ug/L Marine water	Crustaceans - Brine shrimp - Artemia franchiscana - LARVAE	48 hours
	-	Acute LC50 11000000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 to 10 cm	96 hours
	-	Acute LC50 10000000 to 11500000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 5680 to 7392 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	-	Acute LC50 6076000 to 7115000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6325000 to 7413000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 14200000 to 15100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days - 19.4 mm - 0.099 g	96 hours
	-	Acute LC50 13480000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1.1 to 3.1 cm	96 hours
	-	Chronic NOEC <6.3 g/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

Conclusion/Summary Not available.

Other ecological information

Biodegradability



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Product/ingredient name	Test	Result	Dose	Inoculum
ethanol	-	100 % - Readily - 20 days	-	-
Conclusion/Summary	Not available.			
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
ethanol	-	-	Readily	
Bioaccumulative potential	LogP_{ow}	BCF	Potential	
ethanol	-	0.66	low	
Other adverse effects	No known significant effects or critical hazards.			

13. Disposal considerations

Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
European waste catalogue (EWC)	07 07 99 07 07 99 wastes not otherwise specified
Hazardous waste	Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

14. Transport information

International transport regulations

Not classified.

Remarks

IATA Special Provision A 58 - Aqueous solutions containing 24% or less alcohol by volume is not subject to these regulations.

15. Regulatory information

EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Risk phrases	R10- Flammable.
Product use	Industrial applications.
Europe inventory	All components are listed or exempted.

Other EU regulations

National regulations

VOC content	VOC (w/w): 16.5%
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16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Switzerland	R11- Highly flammable. R10- Flammable.
Full text of classifications referred to in sections 2 and 3 - Switzerland	F - Highly flammable



Indicates information that has changed from previously issued version.

History

Date of printing	16 June 2010	Date of previous issue	No previous validation
Date of issue	21 May 2010	Version	1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

