

Captiva[®] Protein A Affinity Resin, Revision 1

Material Safety Data Sheet

Section 1 – Product Identification

Supplier: Repligen Corporation
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Product Name: Captiva[®] Protein A Affinity Resin
Synonyms: Immobilized Protein A, IPA-600
Catalog No(s): CA-PRI

Section 2 – Composition / Information on Ingredients

Component	CAS	% (volume)	OSHA exposure limit
Ethanol	64-17-5	17.5-18.5%	TWA: 1000 ppm 8 hour (s)
Cross linked agarose	9012-36-6	50%	Not established

Section 3 – Hazards Identification

Emergency Overview: COMBUSTIBLE LIQUID
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION
CAN CAUSE TARGET ORGAN DAMAGE

OSHA: HAZARDOUS MATERIAL

HMIS:	Health Hazard:	2	Temporary or minor injury may occur
	Flammability:	2	Will not ignite at room temperature
	Reactivity:	0	Stable
NFPA:	Health Hazard:	2	Intense or continued but not chronic exposure could cause temporary I incapacitation or possible residual injury
	Fire:	2	Flash point between 38°C/100°F and 93°C/200°F
	Instability:	0	Normally stable. Not reactive with water
EU Risk/Safety Phrases	R10		Flammable
	R22		Harmful if swallowed
	S16		Keep away from sources of ignition – No smoking
	S20		When using do not eat or drink

Section 4 – First Aid Measures

If swallowed: Get medical attention.
In case of eye contact: Flush eyes with clean water for at least 15 minutes.
Remove contact lenses. Seek medical attention.
In case of skin contact: Flush skin with water. Remove contaminated clothing
If inhaled: Move to fresh air. Get medical attention

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Section 5 – Fire Fighting Measures

COMBUSTIBLE LIQUID

WARNING: Containers may burst or explode if heated. Move containers away from heat or fire (if this can be done without risk)

Flash point (closed cup)

100°F (37.8°C)

Fire Extinguishing media

Dry chemical, CO₂ or foam. Do not use water jet.

Section 6 – Steps to be Taken in the Event of a Spill or Discharge

Personal Protection:

Wear lab coat, gloves and eye protection. Avoid contact with spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Eliminate any sparks, flames or ignition sources from the spill area. Do not allow spilled material to enter soil, waterways or drains. Do not allow spilled material to accumulate in confined areas.

Control spillage with non-flammable absorbent materials such as sand, earth or vermiculite. Contact licensed waste disposal contractor for proper disposal.

Disposal Procedure:

Do not dispose of in drains. Follow all applicable federal, state, and local environmental regulations.

Section 7 – Handling and Storage

General Precautions:

Use appropriate personal protective equipment, and observe good laboratory hygiene (see section 8).

Ventilation:

Keep and use only in a well ventilated area

Respiratory Protection:

Not required if ventilation is adequate. Wear a suitable respirator if ventilation is inadequate

Eye/skin Protection:

Standard safe laboratory practices recommended.

Storage:

Keep container tightly closed. Keep away from flames, sparks or other ignition sources.

Special precautions:

Store at 2-8°C/36-46°F for maximum shelf life (does not impact safety) Dissipate static electricity by grounding all containers prior to transfer

Section 8 – Exposure Controls/Personal Protection

General

Keep away from heat, sparks and flame. Avoid exposure. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling

Personal protective equipment

Standard laboratory practices recommended. Personal protective equipment should be selected to provide adequate protection based upon the procedures being performed. Wear laboratory coat, gloves and safety glasses when handling. Respiratory protection not required if ventilation is adequate.

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Clean any exposed skin after handling, before leaving the working area, and before eating, smoking or using the lavatory. Clean any contaminated clothing before re-use.

Exposure limits (Ethanol) ACGIH TLV (United States).
IDLH: 3300 ppm
NIOSH REL (United States, 12/2001).
TWA: 1900mg/m³10 hour(s).; TWA: 1000 ppm 10 hour(s).
OSHA PEL (United States, 11/2006).
TWA: 1900 mg/m³8 hour(s); TWA: 1000 ppm 8 hour(s).

Section 9 – Physical and Chemical Properties

Appearance: Colorless Liquid with white suspended solids. Solids may settle during storage.

Flash Point: 100°F (37.8°C)

Odor: Alcohol

% Volatile: 19% (w/w)

VOC: 190 g/L

Section 10 – Stability and Reactivity

Stability: Stable under normal and use

Hazardous polymerization: Will not occur

Warnings: Keep away from oxidizing materials. Flammable. Keep away from open flames, sparks and heat.

Section 11 – Toxicological Information

Ethanol:	Result	Species	Dose
	LD50 Intra-arterial	Rat	11 mg/kg
	LD50 Intraperitoneal	Rat	3600 ug/kg
	LD50 Intravenous	Rat	1440 mg/kg
	LD50 Oral	Rat	7060 mg/kg
	TDLo Intracerebral	Rat	106 ug/kg
	TDLo Intravenous	Rat	0.5 g/kg
	TDLo Oral	Rat	6000 mg/kg
	TDLo Oral	Rat	5000 mg/kg
	TDLo Intraperitoneal	Rat	3000 mg/kg
	TDLo Intraperitoneal	Rat	500 mg/kg

Chronic effects: Contains material that can cause target organ damage

Carcinogenicity: None known

Mutagenicity: None known

Teratogenicity: None known

Developmental effects: None known

Fertility effects: None known

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Target organs Blood, kidneys, reproductive system, liver, respiratory tract, skin, CNS, eye.
Cross Linked Agarose: None known

Section 12 – Ecological Information

Aquatic Ecotoxicity (Ethanol):	Test	Result	Species	Exposure
	Intoxication	Acute EC50 >100mg/L	Daphnia	48 hours
	Intoxication	Acute EC50 9.3 mg/L	Daphnia	48 hours
	Physiology	Acute EC50 2 mg/L	Daphnia	48 hours
	Mortality	Acute LC50 13000mg/L	Fish	96 hours
	Mortality	Acute LC50 >100mg/L	Daphnia	96 hours
	Mortality	Acute LC50 >100mg/L	Fish	96 hours

Cross linked agarose No known hazards

Section 13 – Disposal Considerations

Dispose of in accordance with all applicable federal, state, and local environmental regulations. Do not allow spilled material to enter soil, waterways or drains
See sections 6, 7 and 8

Section 14 – Transport Information

IATA Not classified: IATA Special Provision A58- Aqueous solutions containing 24% or less alcohol by volume not subject to these regulations.
DOT Road Transport Non Hazardous.
Not subject to the requirements of 49CFR per section 173.150(e).

Section 15 – Regulatory Information

US Federal Regulations: United States inventory (TSCA 8b): All components are listed or exempted
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ethanol
SARA 311/312 MSDS distribution -chemical inventory- hazard identification:
Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.

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Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

TSCA 8b: All components are listed or exempted

State Regulations:

None of the components of the product are listed in any of the following state regulations:

Connecticut Carcinogen Reporting, Connecticut Hazardous Material Survey, Florida substances, Illinois Chemical Safety Act, Illinois Toxic Substances Disclosure to Employee Act, Louisiana Reporting, Louisiana Spill, Massachusetts Spill, Massachusetts Substances, Michigan Critical Material, Minnesota Hazardous Substances, New Jersey Hazardous Substances, New Jersey Spill, New Jersey Toxic Catastrophe Prevention Act, New York Acutely Hazardous Substances, New York Toxic Chemical Release Reporting, Pennsylvania RTK Hazardous Substances, Rhode Island Hazardous Substances.

EU Risk Phrases:

R10	Flammable
R22	Harmful if swallowed
S16	Keep away from sources of ignition – No smoking
S20	When using do not eat or drink

International:

Australia inventory (AJCS): All components are listed or exempted.
China inventory (JECSC): All components are listed or exempted.
Korea inventory (KECI): All components are listed or exempted.
Philippines inventory (PJCCS): All components are listed or exempted.
Japan inventory (ENCs): All components are listed or exempted.

Section 16 – Other Information

The material published in this Material Safety Data Sheet has been compiled from our experience and data presented in various publicly available publications. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions.

Repligen makes no warranty or representation about the accuracy or completeness nor fitness for purpose of the information contained herein.