

## Safety Data Sheet

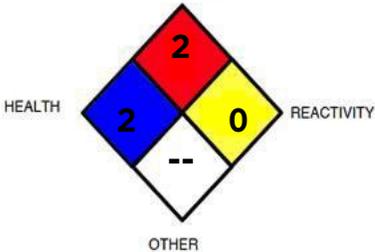
### Section 1: Product & Company Identification

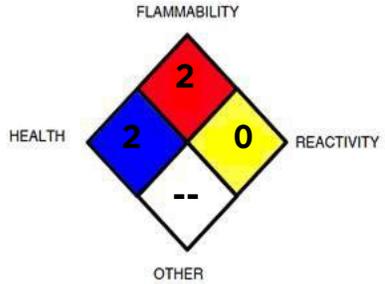
<b>Product Name:</b>	Heparin Agarose 4B
<b>Product #:</b>	H-2719
<b>Synonyms:</b>	-
<b>Supplier:</b>	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego CA 92131 Tele# + 858-452-9925 Fax# + 858-452-9926
<b>Emergency Tele#:</b>	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

### Section 2: Composition / Information on Ingredients

Component	CAS#	EC #	% Composition
Ethanol	61-17-5	200-578-6	≤ 20

### Section 3: Hazards Identification

<b>Symbols</b>	
<b>HMIS Classification</b>	<p>FLAMMABILITY</p>  <p>HEALTH      REACTIVITY</p> <p>OTHER</p>

<b>NFPA Classification</b>	
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## Section 4: First Aid Measures

<b>General Overview:</b>	Consult a physician if symptoms are severe or persistent. Provide this data sheet to medical personnel. If product is spilled or leaked, evacuate area.
<b>Inhalation:</b>	If inhaled, move person to fresh air and monitor breathing. If not breathing, give artificial ventilation. Consult a physician if symptoms are severe or persistent.
<b>Skin:</b>	Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.
<b>Eyes:</b>	Flush eyes with water or eye wash solution as a precaution for 15 minutes. Consult a physician if symptoms are severe or persistent.
<b>Ingestion:</b>	Only induce vomiting if recommended by medical personnel. If subject is unconscious, do not give anything by mouth. If conscious, rinse mouth with water. Consult a physician if symptoms are severe or persistent.
	See section 11 for more detailed information on health effects & symptoms.

## SECTION 5: Fire Fighting Measures

<b>Flammability of the product:</b>	Water spray, alcohol-resistant foam, dry chemical, and carbon dioxide extinguishers are suitable.
<b>Extinguishing Media:</b>	No known unsuitable extinguishing media.
<b>Hazardous thermal (de)composition products:</b>	Combustible. Forms explosive mixture with air at elevated temperatures. May develop hazardous gases upon combustion.
<b>Special Fire Fighting Procedures:</b>	Wear protective gear, such as self-contained breathing apparatus, if necessary.
<b>Flash Point:</b>	No data available

## Section 6: Accidental Release Measures

<b>Personal Precautions:</b>	Provide suitable ventilation. Use any necessary personal protective equipment. Avoid contact with skin and eyes and avoid creation and inhalation of vapor or dust. Keep all unnecessary personnel away.
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<b>Environmental Precautions:</b>	Prevent product from entering public sewers and waterways.
<b>Methods for Clean-up:</b>	Use inert absorbent material to absorb any spilled or leaked product. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling & Storage

<b>Storage:</b>	Store upright in closed container in arid, ventilated environment. Recommended storage temperature: 2 - 8°C
<b>Handling:</b>	Provide suitable ventilation. Wear any necessary personal protective equipment. Keep away from open flames, hot surfaces, and sources of ignition. Use spark-proof tools and explosion-proof equipment.

## SECTION 8: Exposure controls / Personal Protection

<b>Respiratory Protection:</b>	 <p>Use only approved respirators and components which comply with CDC and NIOSH (US) or CEN (EU) regulations. Required only when vapors or aerosols are created.</p>
<b>Skin and Body:</b>	  <p>Use gloves when handling product. Inspect gloves before use to ensure suitability for use. Remove without exposing skin to the gloves outer surface. Discard used gloves according to all pertinent laws and/or current good practices (cGXP). Wash hands with soap and water.</p> <p>Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentration and amount of substance to be handled.</p>
<b>Eyes:</b>	

	 <p>Use only government-approved safety glasses with side-shields.</p>
<b>Ventilation/Engineering Measures:</b>	Follow good industrial hygiene and safety practices when handling product.
<b>Hygiene:</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Other:</b>	<p>Ethanol; CAS-No.: 64-17-5</p> <p>TWA: 1,000.000000 ppm. Basis: USA. ACGIH Threshold Limit Values (TLV). Remarks: Upper Respiratory Tract irritation, Confirmed animal carcinogen with unknown relevance to humans.</p> <p>TWA: 1,000 ppm, 1,900 mg/m<sup>3</sup>. Basis: USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000.</p> <p>TWA: 1,000 ppm, 1,900 mg/m<sup>3</sup>. Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. Remarks: The value in mg/m<sup>3</sup> is approximate.</p> <p>TWA: 1,000.000000 ppm, 1,900.000000 mg/m<sup>3</sup>. Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. Remarks: The value in mg/m<sup>3</sup> is approximate.</p> <p>TWA: 1,000.000000 ppm, 1,900.000000 mg/m<sup>3</sup>. Basis: USA. NIOSH Recommended Exposure Limits.</p> <p>STEL: 1,000.000000 ppm. Basis: USA. ACGIH Threshold Limit Values (TLV). Remarks: Upper Respiratory Tract irritation. Confirmed animal carcinogen with unknown relevance to humans.</p>

## SECTION 9: Physical and Chemical Properties

<b>Appearance &amp; Odor:</b>	Liquid suspension
<b>Formula</b>	N/A
<b>Molecular Wt.</b>	N/A
<b>Melting Pt.</b>	No data available
<b>Boiling Pt.</b>	No data available
<b>Density:</b>	No data available
<b>Vapor Pressure:</b>	No data available
<b>Evaporation Rate:</b>	No data available

<b>Vapor Density:</b>	No data available
<b>Solubility:</b>	No data available
<b>Flash Point:</b>	No data available
<b>Autoignition Temp:</b>	No data available

## SECTION 10: Stability and Reactivity

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Hazardous decomposition products:</b>	Flammable gases may be formed when in contact with transition-metal oxides, strong acids and their salts, ethylene oxide, chromyl chloride, diatomic halogens, strong agents, alkali oxides, and alkali and alkaline earth metals.
<b>Materials to Avoid:</b>	Strong oxidizing agents are incompatible with this product.
<b>Conditions to avoid:</b>	Avoid all possible sources of ignition (spark or flames).

## SECTION 11: Toxicological Information

<b>RTECS#:</b>	N/A
<b>ACUTE Toxicity:</b>	LD50 Oral = 6.2 g/kg (Ethanol, Rat) LD50 Inhalation = 95.6 mg/L (Ethanol, Rat, 4h)
<b>CHRONIC Toxicity:</b>	N/A
<b>Chronic Exposure:</b> <b>Carcinogen:</b> <b>Mutagen:</b> <b>Teratogen:</b> <b>Reproductive:</b>	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA. EPA: No classification on carcinogenic data is available from EPA

## SECTION 12: Ecological Information

<b>Ecotoxicity:</b>	Aquatic Toxicity: Species: Fathead Minnow ( <i>Pimephales promelas</i> ). Exposure: 96 hours. Result: LC50 14,200 mg/L Species: Water Flea ( <i>Ceriodaphnia dubia</i> ). Exposure: 48 hours. Result: LC50 5,012 mg/L Species: Water Flea ( <i>Daphnia magna</i> ). Exposure: 9 days. Result: NOEC 9.6 mg/L
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	Species: Fresh Water Algae ( <i>Chlorella vulgaris</i> ). Exposure: 72 hours. Result: EC50 275 mg/L
<b>Mobility:</b>	No data available
<b>Persistence and degradability:</b>	No data available
<b>Bioaccumulative potential:</b>	No data available
<b>Other adverse effects:</b>	No data available
<b>Corrosivity Characteristic:</b>	No data available
<b>General Notes:</b>	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

## SECTION 13: Disposal Considerations

<b>Residue Waste or Unused product:</b>	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult and adhere to local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
<b>Contaminated Packaging:</b>	Packaging should be disposed of in the same manner as unused product.

## SECTION 14: Transportation Information

<b>UN ID#:</b>	N/A
<b>ADR / RID (LAND):</b>	Not regulated
<b>DOT regulations:</b>	Not regulated
<b>IMDG/IMO (SEA):</b>	Not regulated
<b>IATA/DGR (AIR):</b>	Not regulated
<b>Special Provisions:</b>	N/A

## SECTION 15: Regulatory Information

<b>Health Phrases:</b>	WARNING H226 - Flammable liquid and vapor.
<b>Risk Phrases:</b>	P210 - Keep away from heat, hot surfaces, open flames, and other ignition sources. No smoking. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P280 - Wear protective gloves/clothing/eye protection/face protection. P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
<b>Safety Phrases:</b>	N/A
<b>EU Regulations:</b>	N/A

<b>US Regulations:</b>	<p>TSCA: Not listed California Proposition 65: No products were found</p> <p>Massachusetts State Right to Know: Ethanol (CAS 64-17-5) New Jersey State Right to Know: Ethanol (CAS 64-17-5) Pennsylvania State Right to Know: Ethanol (CAS 64-17-5)</p>
<b>U.S. Federal Regulations:</b>	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: Fire Hazard</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>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. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found. OSHA: No products were found.</p>
<b>WHMIS (Canada):</b>	N/A

## SECTION 16: Other Information

**LIABILITY STATEMENT:** *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*