

**BioGenex**

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 support@biogenex.com

**Material Safety Data Sheet**

Doc#: HK092 Rev. B  
 Release Date: 09 November, 2011

**1. CHEMICAL IDENTIFICATION/COMPANY**

Product Name: AEC Substrate Pack Catalog No.: HK092-5K  
 Manufacturer: BioGenex Laboratories, Inc.  
 49026 Milmont Drive, Fremont, CA 94538, USA  
 Information: Tel: +1 (800) 421-4149 Fax: +1 (510) 824-1490  
 Emergency Contact: BioGenex: +1 (800) 421-4149  
 Chemtrec Assistance: (800) 424-9300 (U.S. only)

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Part No.	Description of Component	Formula
HK121-5K	AEC Chromogen	Mixture
HK170-5K	H <sub>2</sub> O <sub>2</sub> Substrate/Acetate Buffer (AEC)	Mixture

**3. HAZARDS IDENTIFICATION**

Part No.	Chemical Name	Synonyms	CAS No.	Percent	Einecs#
HK121-5K	Proprietary ingredient A*			>90	
	Proprietary ingredient B*			<10	
	3-Amino-9-ethylcarbazole	AEC	132-32-1	<10	
HK170-5K	Proprietary ingredient A*			<50	

\* For proprietary ingredients, specific chemical identity is being withheld as a trade secret.

**EXPOSURE LIMITS**

CAS No.	OSHA PEL	ACGIH TLV	NIOSH	OTHER
132-32-1	NDA	NDA	NDA	None

**4. FIRST AID MEASURES**

HK121-5K, HK170-5K

Get medical aid immediately.

EYES: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.

SKIN: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

INGESTION: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person.

INHALATION: Move the victim to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively. No specific antidote exists.

**5. FIRE-FIGHTING MEASURES**



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FLASH POINT: NDA

FLAMMABLE LIMITS: NDA

FIRE AND EXPLOSION HAZARD: NDA

FIREFIGHTING MEDIA: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For larger fires, use water spray, fog or alcohol foam. Use agents suitable for type of surrounding fire.

FIREFIGHTING MEASURES: Firefighters should wear proper protective equipment and self-contained breathing apparatus (SCBA) with full facepiece operated in positive pressure mode. Move container from fire area if possible. Do not scatter spilled material with more water than needed for fire control. Dike fire control water for later disposal. Avoid breathing hazardous vapors; keep upwind.

Toxic fumes produced under fire conditions.

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### 6. ACCIDENTAL RELEASE MEASURES

HK121-5K, HK170-5K

Wear self-contained breathing apparatus (SCBA) and full protective clothing. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite and place in closed containers for disposal. Do not flush into a sewer. Remove all sources of ignition.

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### 7. HANDLING AND STORAGE

HK121-5K

HANDLING: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, sparks or open flames. Avoid prolonged and repeated exposure.

STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance.

Keep away from heat, sparks, and flame. Do not store in direct sunlight. Store refrigerated in a tightly closed container in a cool, well-ventilated area away from oxidizing materials, acids, and other incompatible substances.

HK170-5K

HANDLING: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, sparks or open flames.

STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance.

Keep away from heat, sparks, and flame. Store refrigerated in a tightly closed container in a cool, well-ventilated area away from oxidizing materials, acids, and other incompatible substances.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

HK121-5K, HK170-5K

VENTILATION: Provide local exhaust or process enclosure ventilation system to meet all federal, state, and local requirements.

RESPIRATOR: None required where adequate ventilation conditions exist.

EYE/SKIN PROTECTION: Wear safety goggles and appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged eye/skin contact with this substance.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

HK121-5K, HK170-5K

BOILING POINT: NDA

VAPOR PRESSURE(MM HG): NDA

VAPOR DENSITY(AIR=1): NDA

MELTING POINT: NDA

SPECIFIC GRAVITY: NDA

SOLUBILITY(H2O): NDA

APPEARANCE & ODOR: Faint amine odor



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## 10. STABILITY AND REACTIVITY

HK121-5K, HK170-5K

STABILITY: Stable under normal temperatures and pressures.

CONDITIONS TO AVOID: Ignition sources, strong oxidizing agents, reducing agents, steel, acids, halogens, nitrates.

DECOMPOSITION: Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides.

HAZARDOUS POLYMERIZATION: None reported.

## 11. TOXICOLOGICAL INFORMATION

HK121-5K

INHALATION: May cause respiratory tract irritation. May cause effects similar to those described for ingestion.

EYE CONTACT: Cause eye irritation, possible eye burns and corneal injury.

SKIN CONTACT: Cause skin irritation. May be absorbed through the skin. May cause nausea, vomiting, abdominal pains and possible liver damage.

INGESTION: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver damage. Causes stomach pain, epigastric cramps, and colic. May produce symptoms similar to antabuse in the presence of ethyl alcohol.

CHRONIC: Prolonged or repeated skin contact may cause dermatitis. Possible cancer hazard based on tests with laboratory animals.

TARGET ORGANS: Liver and kidneys have been indicated.

ROUTES OF ENTRY: None indicated

The toxicological properties have not been thoroughly investigated.

HK170-5K

INHALATION: May cause respiratory tract irritation. May cause effects similar to those described for ingestion.

EYE CONTACT: Cause eye irritation.

SKIN CONTACT: Cause skin irritation. May be absorbed through the skin. May cause nausea, vomiting, abdominal pains and possible liver damage.

INGESTION: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver damage. Causes stomach pain, epigastric cramps, and colic. May produce symptoms similar to antabuse in the presence of ethyl alcohol.

CHRONIC: Prolonged or repeated skin contact may cause dermatitis. Possible cancer hazard based on tests with laboratory animals.

TARGET ORGANS: Liver and kidneys have been indicated.

ROUTES OF ENTRY: None indicated

The toxicological properties have not been thoroughly investigated.

### Toxicity data

CAS#	RTECS	LD50		CARCINOGENICITY					
				ACGIH	IARC	NIOSH	NTP	OSHA	Other
132-32-1	FE3590000	IPR-MUS: 150 mg/kg	NTIS** AD691-490	NDA	NDA	NDA	NDA	NDA	None

Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. Consult the actual entry in RTECS for complete information.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Environmental Fate: No information available.

Physical/Chemical: No information available.

## 13. DISPOSAL CONSIDERATIONS

HK121-5K, HK170-5K

Dispose in accordance with all applicable federal, state, and local environmental regulations.

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### 14. TRANSPORT INFORMATION

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US DOT: No information available

IMO: No information available.

IATA: No information available.

RID/ADR: No information available.

Canadian TDG: No information available.

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### 15. REGULATORY INFORMATION

No information available.

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### 16. MISCELLANEOUS INFORMATION

No additional information available.

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N/A: Not Applicable    NDA: No Data Available

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