

Doc No: 931-HK139 Rev: B Date of Release: 23-Aug-2016

## 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

- a) GHS Product Identifier : ONE STEP AEC SOLUTION
- b) Other means of identification : Not available
- c) Product code : HK139-50K, HK139-50KE, HK139-06K
- d) Recommended use of the chemical and restrictions on use : Restricted for professional users.
- e) Supplier's details (including name, address, phone number etc.) : BioGenex Laboratories, Inc  
49026 Millmont Drive  
Fremont, CA 94538
- f) Emergency phone number : BioGenex: (01) (510) 275-0550  
Chemtrec Assistance: (800) 424-9300 (U.S. and Canada only)  
(01) (703) 527-3887 (all other countries)

## 2. HAZARD IDENTIFICATION

- a) GHS classification of the substance/mixture and any national or regional information: **Classification according to Regulation (EC) No 1272/2008**

Flammable liquids (Category 3), H226

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Eye irritation (Category 2), H319

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360D

- b) GHS label elements, including precautionary statements :

LABELING:



C

SIGNAL WORD : DANGER

H226 - Flammable liquid and vapor.

H312 + H332 Harmful in contact with skin or if inhaled

319 : Causes serious eye irritation

H350 : May cause cancer.

H360D : May damage the unborn child.

P201 : Obtain special instructions before use.

P280 : Wear protective gloves/ protective clothing.

P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention..

P370+P378 - In case of fire: Use a dry chemical fire extinguisher for extinction.

c) Other hazards which do not result in the classification or are not covered by the GHS: Restricted to professional users.

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

- a) Chemical identity : Mixture
- b) Common name, synonyms, etc : NDA
- c) CAS number and other unique identifiers

Chemical Name	Synonyms	CAS No.	Percent	Einecs#
N,N-Dimethylformamide	N,N-dimethylmethanamide	000068-12-2	≤ 15	200-679-5
3-Amino-9-ethylcarbazole	AEC	000132-32-1	≤ 0.5	NDA

No additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment.

### 4. FIRST AID MEASURES

Get medical aid immediately.

**EYES:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Do NOT allow victim to rub or keep eyes closed.

**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:** Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Call a poison control center.

**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

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:** Use an extinguishing agent suitable for the surrounding fire.

**Special precautions for fire-fighters :** 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

**Special protective equipment for firefighters :** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide protection for chemical incidents.

## 6. ACCIDENTAL RELEASE MEASURES

a) Personal precautions, protective equipment and emergency procedures:

Wear appropriate protective equipment as specified in Section 8.

b) Environmental precautions:

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

c) Methods and materials for containment and cleaning up.

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).

## 7. HANDLING AND STORAGE

a) Precautions for safe handling:

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Transfer methods should avoid static sparks. Use explosion proof ventilation.

b) Conditions for safe storage, including any incompatibilities:

Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source..

### Personal Protective Equipment

**Eyes:** Wear safety goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** None required where adequate ventilation conditions exist.

**Exposure Limits & NFPA Safety Ratings (Health-Fire-Reactivity)**

CAS No.	OSHA PEL	ACGIH TLV	NIOSH	NFPA (H-F-R)
000068-12-2	TWA 10 ppm, 30 mg/m <sup>3</sup>	10 ppm, 30 mg/m <sup>3</sup>	TWA 10 ppm, 30 mg/m <sup>3</sup>	1-2-0
000132-32-1	NDA	NDA	NDA	NDA

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- a. **Appearance** : Brown Liquid
- b. **Odor** : Odorless
- c. **Odor Threshold** : NDA
- d. **pH** : NDA
- e. **Melting Point/Freezing Point (°C)**: NDA
- f. **Boiling point (°C)**: NDA
- g. **Flash Point (°C)** : NDA
- h. **Evaporation Rate** : NDA
- i. **Flammability** : NDA
- j. **Upper/Lower Flammability or Explosive Limits** : NDA
- k. **Vapor Pressure** : NDA
- l. **Vapor Density (Air = 1)** : NDA
- m. **Relative Density** : NDA
- n. **Water Solubility** : Soluble in water
- o. **Partition Coefficient n-octanol/water** : NDA
- p. **Autoignition Temperature (°C)**: NDA
- q. **Decomposition Temperature(°C)** : NDA
- r. **Viscosity** : NDA
- s. **Explosive Properties** : NDA
- t. **Oxidizing Properties** : NDA

**10. STABILITY AND REACTIVITY**

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Heat, sources of ignition, Moisture

Incompatible with : Incompatible with the following materials: oxidizing materials, acids and alkalis.

HAZARDOUS POLYMERISATION : None.

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS COMBUSITION PRODUCTS: Thermal decomposition products may include carbon monoxide, carbon dioxide, and hydrocarbons

**11. TOXICOLOGICAL INFORMATION**

a) Information on the likely routes of exposure: Eyes, Oral, Dermal, Inhalation

b) Symptoms related to the physical, chemical and toxicological characteristics:

**INHALATION:** May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, chemical pneumonia, shock, unconsciousness, and death

**INGESTION:** May cause perforation of the digestive tract and severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death

**SKIN CONTACT:** Repeated or prolonged contact can cause redness, irritation, and scaling of the skin (dermatitis). Normal care and personal hygiene should prevent skin effects.

**EYE CONTACT:** Eye irritation may occur with exposure to concentrated vapors or contact with product.

**TARGET ORGANS:** Central nervous system, Respiratory system

c) Delayed and immediate effects and also chronic effects from short and long term exposure

NDA

d) Numerical measures of toxicity (such as acute toxicity estimates)

**Toxicity Data**

CAS#RTECS	LD50	CARCINOGENICITY ACGIH	IARC	NIOSH	NTP	OSHA	Other		
000068-12-2	LQ2100000 IPR-CAT: 500 mg/kg IVN-DOG: 470 mg/kg IVN-GPG: 1.05 gm/kg SKN-HUM: 100%/24H MLD IHL-MUS: 9.4 gm/m <sup>3</sup> /2H IMS-MUS: 3.9 gm/kg IPR-MUS: 650 mg/kg IVN-MUS: 2.5 gm/kg ORL-MUS: 3.7 gm/kg SCU-MUS: 4.5 gm/kg IPR-RAT: 1.4 gm/kg IVN-RAT: 2 gm/kg ORL-RAT: 2.8 gm/kg SCU-RAT: 3.8 gm/kg UNR-RAT: > 3 gm/kg EYE-RBT: 20 mg/24H Open EYE-RBT: 100 mg Rinse SEV IPR-RBT: 1 gm/kg IVN-RBT: 1.8 gm/kg SKN-RBT: 10 mg/24H OPEN SKN-RBT: 4.7 gm/kg	BJIMAG 13,51,56 ARZNAD 15,618,65 ARZNAD 15,618,65 BJIMAG 13,51,56 TPKVAL 1,54,61 (LC50) ARZNAD 15,618,65 CNCRA6 30,9,63 ARZNAD 15,618,65 GISAAA 23(5),31,58 ARZNAD 15,618,65 BJIMAG 13,51,56 ZEKBAI 69,103,67 ZEKBAI 69,103,67 ARZNAD 15,618,65 ARZNAD 18,645,68 JIHTAB 30,63,48 DCTODJ 9,147,86 BJIMAG 13,51,56 ARZNAD 15,618,65 JIHTAB 30,63,48 AIHAAP 30,470,69	A2 <sup>1</sup>	2B <sup>7</sup>	Occu <sup>3,a</sup>	Susp <sup>4</sup>	P-S <sup>5</sup>	See Notes	
000132-32-1	FE3590000 IPR-MUS: 150 mg/kg	NTIS** AD691-490	NDA	NDA	NDA	NDA	NDA	NDA	None

**Note:**

1. ACGIH: A2-suspected human carcinogen
2. IARC: Group 3 carcinogen
3. NIOSH: Occupational carcinogen
4. NTP: Suspect carcinogen
5. OSHA: Possible Select carcinogen
6. This product is or contains chemical(s) known to the state of California to cause cancer (California Proposition 65 carcinogen).
7. This product is listed as ANILINE.

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

- a) Ecotoxicity (aquatic and terrestrial, where available): No data available.  
b) Persistence and degradability : No data available.  
c) Bioaccumulative potential

Component	LogPow	BCF	Potential
N,N-Dimethylformamide	-1.01	0.3 to 1.2	low

- d) Mobility in the soil : No data available.  
e) Other adverse effects : Not a PBT or vPvB

## 13. DISPOSAL INFORMATION

**Methods of disposal :** Waste generationshould be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste :** The classification of the product may meet the criteria for a hazardous waste.

## 14. TRANSPORT INFORMATION

US DOT: Not Regulated

UN proper shipping name

ADR/RID: CHEMICAL KIT

TRANSPORT HAZARD CLASS

ADR/RID: 9                      IMDG: 9                      IATA: 9

Packaging group

ADR/RID: III                      IMDG: III                      IATA: III

IATA: Not Regulated

RID/ADR: Not Regulated

Canadian TDG: Not Regulated

## 15. REGULATORY INFORMATION

EU Regulation (EC) No. 1907/2006)

Annex XIV - List of substances subject to authorisation

None of the components are listed.

## 16. Other information including information on preparation and revision of the SDS

Key abbreviations:

N/A : Not Applicable  
NDA : No data available

## Notice to reader

Each BioGenex SDS was developed to be used only with the corresponding BioGenex product. The information above is believed to be accurate and represents the best information currently available. We make, however, **NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY,**

**EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE.** Users should make their own investigations to determine the suitability of the information for their particular purposes. BioGenex SDS's are not for resale.