

## MATERIAL SAFETY DATA SHEET

---

### MANUFACTURER

Genemed Biotechnologies, Inc.  
458 Carlton Ct.  
South San Francisco, CA 94080  
TEL: 650-952-0110  
FAX: 650-952-1060  
www.genemed.com

---

### PRODUCT IDENTIFICATION

**PRODUCT:**            **AEC Substrate (Single Solution)**  
**CATALOG #:**       **10-0005, 10-0047**

---

### HAZARDOUS COMPONENT INFORMATION

AEC SUBSTRATE (SINGLE SOLUTION)

**HAZARDOUS COMPONENT**  
9-ETHYLCARBAZOL-3-AMINE

THE PROVIDED INFORMATION IS BELIEVED TO BE CORRECT, BUT DOES NOT CLAIM TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. TRAINED PERSONNEL AND GOOD LABORATORY PRACTICES SHOULD COMPLEMENT USE OF THIS PRODUCT. GENEMED BIOTECHNOLOGIES, INC. SHALL NOT BE HELD LIABLE FOR ANY DAMAGES RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

# MATERIAL SAFETY DATA SHEET

## SECTION 1 CHEMICAL IDENTIFICATION

NAME: AEC Substrate (Single Solution)

## SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

SYNONYMS: AEC  
9-ETHYLCARBAZOL-3-AMINE

FORMULA:  $C_{14}H_{14}N_2$   
MOLECULAR WEIGHT: 210,27 G/MOL

CAS-NO.	EC-NO.	INDEX-NO.	CLASSIFICATION	CONCENTRATION
132-32-1	205-057-7	612-280-00-7	T, CARC.CAT.2, R45	--

## SECTION 3 HAZARDS IDENTIFICATION

RISK ADVICE TO MAN AND THE ENVIRONMENT  
MAY CAUSE CANCER.

## SECTION 4 FIRST AID MEASURES

### GENERAL ADVICE

CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

### IF INHALED

IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION CONSULT A PHYSICIAN.

### IN CASE OF SKIN CONTACT

WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.

### IN CASE OF EYE CONTACT

RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

### IF SWALLOWED

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.

## SECTION 5 FIRE FIGHTING MEASURES

### SUITABLE EXTINGUISHING MEDIA

USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING DUST. ENSURE ADEQUATE VENTILATION.

EVACUATE PERSONNEL TO SAFE AREAS.

### ENVIRONMENTAL PRECAUTIONS

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

**METHODS FOR CLEANING UP**

PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

**SECTION 7 HANDLING AND STORAGE**

**HANDLING**

AVOID FORMATION OF DUST AND AEROSOLS. AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. NORMAL MEASURES FOR PREVENTIVE FIRE PROTECTION.

**STORAGE**

STORE IN COOL PLACE. KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.

RECOMMENDED STORAGE TEMPERATURE: 2 - 8°C

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATORY PROTECTION**

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

**HAND PROTECTION**

THE SELECTED PROTECTIVE GLOVES HAVE TO SATISFY THE SPECIFICATIONS OF EU DIRECTIVE 89/686/EEC AND THE STANDARD EN 374 DERIVED FROM IT. HANDLE WITH GLOVES.

**EYE PROTECTION**

FACE SHIELD AND SAFETY GLASSES

**SKIN AND BODY PROTECTION**

CHOOSE BODY PROTECTION ACCORDING TO THE AMOUNT AND CONCENTRATION OF THE DANGEROUS SUBSTANCE AT THE WORK PLACE.

**HYGIENE MEASURES**

AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE**

FORM: POWDER

**SAFETY DATA**

PH: NO DATA AVAILABLE

MELTING POINT: 98 - 100°C

BOILING POINT: NO DATA AVAILABLE

FLASH POINT: NO DATA AVAILABLE

IGNITION TEMPERATURE: NO DATA AVAILABLE

LOWER EXPLOSION LIMIT: NO DATA AVAILABLE

UPPER EXPLOSION LIMIT: NO DATA AVAILABLE

WATER SOLUBILITY: NO DATA AVAILABLE

**SECTION 10****STABILITY AND REACTIVITY**

## STORAGE STABILITY

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

## MATERIALS TO AVOID

STRONG OXIDIZING AGENTS, ACIDS

## HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, NITROGEN OXIDES (NOX)

**SECTION 11****TOXICOLOGICAL INFORMATION**

## ACUTE TOXICITY

LD50 ORAL - RAT - 144 MG/KG

LD50 INTRAPERITONEAL - MOUSE - 150 MG/KG

## IRRITATION AND CORROSION

MODERATE EYE IRRITATION

## SENSITISATION

NOT APPLICABLE

## CHRONIC EXPOSURE

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.

## SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

## POTENTIAL HEALTH EFFECTS

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION.

SKIN: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION.

EYES: MAY CAUSE EYE IRRITATION.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

TARGET ORGANS: LIVER, NERVES., KIDNEY, BLADDER, BRAIN., HEART

**SECTION 12****ECOLOGICAL INFORMATION**

## ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

NOT APPLICABLE

## ECOTOXICITY EFFECTS

NOT APPLICABLE

## FURTHER INFORMATION ON ECOLOGY

NOT APPLICABLE

**SECTION 13****DISPOSAL CONSIDERATIONS**

## PRODUCT

OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

## CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

**SECTION 14****TRANSPORT INFORMATION**

## ADR/RID

UN-NUMBER: 2811 CLASS: 6.1 PACKING GROUP: III  
PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S.

## IMDG

UN-NUMBER: 2811 CLASS: 6.1 PACKING GROUP: III EMS-NO: F-A, S-A  
PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S.  
MARINE POLLUTANT: NO

## IATA

UN-NUMBER: 2811 CLASS: 6.1 PACKING GROUP: III  
PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC N.O.S.

**SECTION 15****REGULATORY INFORMATION**

## LABELLING ACCORDING TO EC DIRECTIVES

## EC LABEL

## HAZARD SYMBOLS

T TOXIC

## R-PHRASE(S)

R45 MAY CAUSE CANCER.

## S-PHRASE(S)

S53 AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

S45 IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE  
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

RESTRICTED TO PROFESSIONAL USERS.

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. GENEMED BIOTECHNOLOGIES SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

**Genemed Biotechnologies, Inc.**  
**458 Carlton Ct.**  
**South San Francisco, CA 94080**  
**TEL: 650-952-0110**  
**FAX: 650-952-1060**