

MATERIAL SAFETY DATA SHEET

8-HYDROXY-2'-DEOXYGUANOSINE

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

MANUFACTURER'S NAME: ESA, Inc.
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INTERNATIONAL EMERGENCY PHONE: 1(352) 323-3500 (Call Collect)

CAS NUMBER: 88847-89-6

SUBSTANCE: 8-Hydroxy-2'-deoxyguanosine

TRADE NAMES/SYNONYMS: 2'-Deoxy-7, 8-dihydro-8-oxoguanosine

CHEMICAL FAMILY: DNA Adduct

CREATION DATE: 7/18/97

SECTION 2 - PHYSICAL / CHEMICAL CHARACTERISTICS

COMPONENT: 8-Hydroxy-2'-deoxyguanosine

CAS NUMBER: 88847-89-6

PERCENTAGE: >99%

OTHER CONTAMINANTS: NONE

PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Almost odorless, white powder

MOLECULAR WEIGHT: 283.2

MOLECULAR FORMULA: C₁₀H₁₃N₅O₅

MELTING POINT: 213-217°C

SPECIFIC GRAVITY: Not available

BOILING POINT: N/A

VAPOR DENSITY: N/A

WATER SOLUBILITY: Slightly soluble

ODOR THRESHOLD: Not available

EVAPORATION RATE: N/A

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SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

EMERGENCY OVERVIEW:

A white powder that is almost odorless. May cause skin and eye irritation. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure or repeated exposure. Handle material with suitable protection. Store away from oxidizers and sunlight. Keep in container tightly closed and in a well ventilated dry place at room temperature.

POTENTIAL HEALTH EFFECTS

INHALATION:

Short Term Effects: Single exposure to dust is not likely to be hazardous. Vapors are unlikely due to physical properties

Long Term Effects: No information is available on significant adverse effects.

SKIN CONTACT:

Short Term Effects: Frequent or prolonged contact may irritate the skin and cause skin rash (dermatitis).

Long Term Effects: Same effects as short term exposure.

SKIN ABSORPTION:

Short Term Effects: A single prolonged exposure is not likely to result in the materials being absorbed through skin in harmful amounts.

Long Term Effects: No information is available on significant adverse effects.

EYE CONTACT:

Short Term Effects: May cause pain and slight transient (temporary) irritation.

Long Term Effects: No information is available on significant adverse effects.

INGESTION:

Short Term Effects: Single dose oral toxicity is low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury.

Long Term Effects: No information is available on significant adverse effects.

CARCINOGEN STATUS:

OSHA: Not listed

NTP: Not listed

IARC: Not listed

FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD: Not available

OXIDIZER: Not applicable

EXTINGUISHING MEDIA: Water, dry chemical powder, carbon dioxide or foam.

FIREFIGHTING:

Firefighters should wear normal protective equipment (full bunker gear) and positive pressure self-contained breathing apparatus.

FLASH POINT: No data available

LOWER FLAMMABLE LIMIT: No data available

UPPER FLAMMABLE LIMIT: No data available

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SECTION 4 - REACTIVITY HAZARD DATA

STABILITY AND REACTIVITY

CHEMICAL STABILITY: This material is stable under normal and anticipated ambient storage and handling conditions

REACTIVITY: Stable under normal temperatures and pressures

CONDITIONS TO AVOID: Avoid contact with sunlight and heat

INCOMPATIBILITIES: Oxidizers

HAZARDOUS DECOMPOSITION: Carbon Monoxide and nitrogen oxides may be formed

POLYMERIZATION: Hazardous polymerization has not been reported to occur

SECTION 5 - HEALTH HAZARD DATA

EMERGENCY FIRST AID

INHALATION:

First Aid - Remove from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

SKIN CONTACT:

First Aid - Remove contaminated clothing and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). If irritation persists, consult a physician immediately.

EYE CONTACT:

First Aid - Remove any contact lenses at once. Wash eyes immediately with large amounts of water (at least 15-20 minutes), occasionally lifting upper and lower lids, until no evidence of chemical remains. If irritation persists, consult a physician immediately.

INGESTION:

First Aid - Rinse mouth, give plenty of water or milk to dilute the substance and induce vomiting. Consult a physician immediately.

TOXICOLOGY INFORMATION

RTECS NUMBER: Not listed

CARCINOGEN STATUS: Not listed

TOXICITY DATA: No data available

LOCAL EFFECTS: No data available

ACUTE TOXICITY LEVEL: No data available

IRRITATION DATA: No data available

MUTATION DATA: No data available

REPRODUCTIVE EFFECTS DATA: No data available

TUMORIGENIC DATA: No data available

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SECTION 6 - CONTROL AND PROTECTIVE MEASURES

EXPOSURE LIMITS:

No occupational exposure limits established by OSHA, ACGIH, or NIOSH.

VENTILATION:

Provide local exhaust ventilation system to meet published exposure limits.

EYE PROTECTION:

Employee must wear splash-proof or dust-resistant safety goggles to prevent eye contact with this substance.

EMERGENCY WASH FACILITIES:

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain within the immediate work area for emergency use.

CLOTHING:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

GLOVES:

Employee must wear appropriate protective gloves to prevent contact with this substance.

RESPIRATOR:

The following respirators are recommended based on information found in the physical data, toxicity and health effects sections. They are ranked in order from minimum to maximum respiratory protection.

The specific respirator selected must be based on contamination levels found in the work place, must be based on the specific operation, must not exceed the working limits of the respirator and must be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

Any dust and mist respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered air-purifying respirator with a dust and mist filter.

Any powered air-purifying respirator with a high-efficiency particulate filter.

Any type 'C' supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.

Any self-contained breathing apparatus.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

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SECTION 7 - PRECAUTIONS FOR SAFE HANDLING & USE/LEAK PROCEDURES

ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL SPILL:

Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill area with soap and water and ventilate the area. During cleanup, wear protective clothing, gloves and goggles. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

HANDLING AND STORAGE

Observe all federal, state and local regulations when storing this substance. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection. Store away from sunlight in well ventilated dry place at room temperature. Keep container tightly closed.

DISPOSAL INFORMATION

Observe all federal, state and local regulations when disposing of this substance. Burn in an adequate incinerator or bury in landfill in accordance with all applicable regulations.

SECTION 8 - TRANSPORTATION AND REGULATORY INFORMATION

TRANSPORTATION INFORMATION: Not a Hazardous Material for DOT shipping

REGULATORY INFORMATION:

TSCA STATUS:	Not listed
CERCLA:	Not listed
OSHA:	Not listed
EINECS Number:	Not listed

James Mayol, QA Manager

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, ESA, Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.