

MATERIAL SAFETY DATA SHEET

Section 1 - Product Information

Product Name GOSSYPOL

Product Number **ST065835**

Supplier: TimTec LLC www.timtec.net info@timtec.net

Section 2 - Composition/Information on Ingredient

Substance Name CAS # SARA 313

GOSSYPOL 303-45-7 No

Formula C30H30O8

Synonyms 2,2'-Bis(1,6,7-trihydroxy-3-methyl-5-isopropyl-8-
aldehydonaphthalene) *

8-Formyl-1,6,7-trihydroxy-5-isopropyl-3-methyl-2,2

'-bisnaphthalene * Gossypol * Tash 1

RTECS Number: DU3100000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful.

Harmful if swallowed. Limited evidence of a carcinogenic effect.

Possible mutagen. Target organ(s): Male reproductive system.

HMIS RATING

HEALTH: 0*

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

STORAGE

Store at 2-8°C

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Section 9 - Physical/Chemical Properties

Appearance Physical State: Solid

Property Value At Temperature or Pressure

Molecular Weight 518.6 AMU

pH N/A

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density N/A

Bulk Density N/A

Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Surface Tension N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point N/A
Explosion Limits N/A
Flammability N/A
Autoignition Temp N/A
Refractive Index N/A
Optical Rotation N/A
Miscellaneous Data N/A
Solubility N/A
N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Absorption: May be harmful if absorbed through the skin.

Inhalation: May be harmful if inhaled.

Ingestion: Harmful if swallowed.

Multiple Routes: May cause irritation.

TARGET ORGAN(S) OR SYSTEM(S)

Male reproductive system.

SIGNS AND SYMPTOMS OF EXPOSURE

May be irritating to the gastrointestinal tract in experimental animals. Large doses caused edema of lungs, shortness of breath, and paralysis.

CONDITIONS AGGRAVATED BY EXPOSURE

The toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral Oral

Rat Rat

2315 mg/kg 2315 mg/kg

LD50 LD50

Oral Oral

Pig Pig

550 mg/kg 550 mg/kg

LD50 LD50

Remarks: Nutritional and Gross Metabolic:Weight loss or decreased weight gain. Gastrointestinal:Hypermotility, diarrhea. Behavioral:Muscle weakness. Nutritional and Gross Metabolic:Weight loss or decreased weight gain. Gastrointestinal:Hypermotility, diarrhea. Behavioral:Muscle weakness.

CHRONIC EXPOSURE - MUTAGEN

Species: Human Human
Dose: 10 MG/L 10 MG/L
Cell Type: HeLa cell HeLa cell
Mutation test: DNA inhibition DNA inhibition
Species: Hamster Hamster
Dose: 50 MG/L 50 MG/L
Exposure Time: 48H 48H
Cell Type: lymphocyte lymphocyte
Mutation test: Other mutation test systems Other mutation test systems
Species: Man Man
Dose: 9 UG/PLATE 9 UG/PLATE
Cell Type: lymphocyte lymphocyte
Mutation test: Cytogenetic analysis Cytogenetic analysis
Species: Man Man
Dose: 1 UG/PLATE 1 UG/PLATE
Cell Type: lymphocyte lymphocyte
Mutation test: Sister chromatid exchange Sister chromatid exchange
Species: Hamster Hamster
Dose: 10 MG/L 10 MG/L
Cell Type: ovary ovary
Mutation test: DNA inhibition DNA inhibition
Species: Hamster Hamster
Dose: 50 MG/L 50 MG/L
Cell Type: ovary ovary
Mutation test: Other mutation test systems Other mutation test systems
Species: Hamster Hamster
Dose: 10 MG/L 10 MG/L
Exposure Time: 48H 48H

Cell Type: ovary ovary
Mutation test: Other mutation test systems Other mutation test systems

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Man Man
Dose: 17 MG/KG 17 MG/KG
Route of Application: Oral Oral
Exposure Time: (60D MALE) (60D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).
Species: Rat Rat

Dose: 700 MG/KG 700 MG/KG
Route of Application: Oral Oral
Exposure Time: (35D MALE) (35D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
Species: Rat Rat
Dose: 1050 MG/KG 1050 MG/KG
Route of Application: Oral Oral
Exposure Time: (35D MALE) (35D MALE)
Result: Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
Species: Monkey Monkey
Dose: 4500 MG/KG 4500 MG/KG
Route of Application: Oral Oral
Exposure Time: (90D MALE) (90D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
Species: Hamster Hamster
Dose: 525 MG/KG 525 MG/KG
Route of Application: Oral Oral
Exposure Time: (35D MALE) (35D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
Species: Hamster Hamster
Dose: 700 MG/KG 700 MG/KG
Route of Application: Oral Oral
Exposure Time: (70D MALE) (70D MALE)

Result: Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental

regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn

Indication of Danger: Harmful.

R: 22-40

Risk Statements: Harmful if swallowed. Limited evidence of a carcinogenic effect.

S: 22-36

Safety Statements: Do not breathe dust. Wear suitable protective clothing.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.

Risk Statements: Harmful if swallowed. Limited evidence of a carcinogenic effect.

Safety Statements: Do not breathe dust. Wear suitable protective clothing.

US Statements: Possible mutagen. Target organ(s): Male reproductive system.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. A+ Scientific., shall not be held liable for any damage resulting from handling or from contact with the above product.