SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-O-55051
Product Name	1,8-Dinitropyrene
CAS No.	42397-65-9
Category	Nitrosamine
Synonyms	1,8-Dinitropyrene
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Not available

2.2 Label Elements

Signal Word: Warning

Not available

Hazard Statement(s)

Code	Statement
H351	Not available
H341	Not available

Precautionary Statement(s)

Code	Statement
P203	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P318	Not available
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : 1,8-Dinitropyrene
CAS Number : 42397-65-9
Molecular Formula : C16H8N2O4
Molecular Weight : 292.25
Parent Chemical : Pyrene
Synonyms : 1,8-Dinitropyrene
Concentration : Not available

SECTION 4: First aid measures

Not available

SECTION 5: Firefighting measures

Not available

SECTION 6: Accidental release measures

Not available

SECTION-7: Handling and storage

Not available

SECTION 8: Exposure controls / personal protection

Not available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available

Test	Result
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

Not available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: /GENOTOXICITY/ ...The mutagenic ... effects of benzene (B), nitrobenzene (NB), phenol (P), 2-nitrophenol (2-NP), 2,4-dinitrophenol (2,4-DNP), pyrene (Py), 1-nitropyrene (1-NPy), 1,3-dinitropyrene (1,3-DNPy), 1,6-dinitropyrene (1,6-DNPy), and 1,8-dinitropyrene (1,8-DNPy) ... were evaluated with umuC test in presence and in absence of metabolic activation with S9 mix. Then ... both cytokinesis-blocked micronucleus (CBMN) assay, in combination with fluorescent in situ hybridization (FISH) of human pan-centromeric DNA probes on human lymphocytes /were used/ in order to evaluate the genotoxic effects. Analysis of all results shows that nitro polycyclic aromatic hydrocarbons (PAHs) are definitely environmental genotoxic/mutagenic hazards and confirms that environmental aromatic nitration reactions lead to an increase in genotoxicity and mutagenicity properties. Particularly 1-NPy and 1,8-DNPy can be considered as human potential carcinogens... /GENOTOXICITY/ The mutagenicity, metabolism, DNA adduction and induction of unscheduled DNA synthesis (UDS) of 1-nitropyrene and 1,8-dinitropyrene were investigated in the human hepatoma cell line HepG2. Previous results had demonstrated that 1-nitropyrene was both mutagenic at the hgprt locus and induced UDS in these cells. In /this/ study ... the dinitropyrenes, although highly mutagenic in Salmonella typhimurium, /were/ not mutagenic and /did/ not induce UDS in the HepG2...
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: /GENOTOXICITY/ ...The mutagenic ... effects of benzene (B), nitrobenzene (NB), phenol (P), 2-nitrophenol (2-NP), 2,4-dinitrophenol (2,4-DNP), pyrene (Py), 1-nitropyrene (1-NPy), 1,3-dinitropyrene (1,3-DNPy), 1,6-dinitropyrene (1,6-DNPy), and 1,8-dinitropyrene (1,8-DNPy) ... were evaluated with umuC test in presence and in absence of metabolic activation with S9 mix. Then ... both cytokinesis-blocked micronucleus (CBMN) assay, in combination with fluorescent in situ hybridization (FISH) of human pan-centromeric DNA probes on human lymphocytes /were used/ in order to evaluate the genotoxic effects. Analysis of all results shows that nitro polycyclic aromatic hydrocarbons (PAHs) are definitely environmental genotoxic/mutagenic hazards and confirms that environmental aromatic nitration reactions lead to an increase in genotoxicity and mutagenicity properties. Particularly 1-NPy and 1,8-DNPy can be considered as human potential carcinogens... /GENOTOXICITY/ The mutagenicity, metabolism, DNA adduction and induction of unscheduled DNA synthesis (UDS) of 1-nitropyrene and 1,8-dinitropyrene were investigated in the human hepatoma cell line HepG2. Previous results had demonstrated that 1-nitropyrene was both mutagenic at the hgprt locus and induced UDS in these cells. In /this/ study ... the dinitropyrenes, although highly mutagenic in Salmonella typhimurium, /were/ not mutagenic and /did/ not induce UDS in the HepG2...
- Carcinogenicity: There is sufficient evidence for the carcinogenicity in experimental animals of 1,8-dinitropyrene. No data were available from studies in humans on the carcinogenicity of 1,8-dinitropyrene. Overall evaluation: 1,8-Dinitropyrene is possibly carcinogenic to humans (Group 2B). 1,8-Dinitropyrene is reasonably anticipated to be a human carcinogen based on sufficient evidence of malignant tumor formation in multiple species of experimental animals, at multiple sites, and by multiple routes of exposure.
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: /LABORATORY ANIMALS: Chronic Exposure or Carcinogenicity/ 1-Nitropyrene (1-NP), 1,6-dinitropyrene (1,6-DNP) and 1,8-dinitropyrene (1,8-DNP) ... were injected subcutaneously into the back of F344 rats. No tumor was induced by experimental day 650 in rats treated with 40 or 4 mg of 1-NP. On the other hand, 1,6-DNP at a total dose of 4 mg was demonstrated to induce sarcomas at the injection site in all 10 rats. 1,8-DNP at total doses of 0.4 and 0.04 mg also induced sarcomas in 10 and 9 out of 10 rats, respectively, by day 320. Our previous finding that 1-NP was carcinogenic was possibly due to contamination of the preparation with dinitropyrenes. /LABORATORY ANIMALS: Chronic Exposure or Carcinogenicity/ Dinitropyrene induced carcinoma of the pituitary gland in an oral study of short-term duration in rats /strain not given/.

- Aspiration hazard: No data available.

Likely routes of exposure
- 1,8-Dinitropyrene is reasonably anticipated to be a human carcinogen based on sufficient evidence of malignant tumor formation in multiple species of experimental animals, at multiple sites, and by multiple routes of exposure.

Symptoms related to the physical, chemical and toxicological characteristics
- /GENOTOXICITY/ ...The mutagenic ... effects of benzene (B), nitrobenzene (NB), phenol (P), 2-nitrophenol (2-NP), 2,4-dinitrophenol (2,4-DNP), pyrene (Py), 1-nitropyrene (1-NPy), 1,3-dinitropyrene (1,3-DNPy), 1,6-dinitropyrene (1,6-DNPy), and 1,8-dinitropyrene (1,8-DNPy) ... were evaluated with umuC test in presence and in absence of metabolic activation with S9 mix. Then ... both cytokinesis-blocked micronucleus (CBMN) assay, in combination with fluorescent in situ hybridization (FISH) of human pan-centromeric DNA probes on human lymphocytes /were used/ in order to evaluate the genotoxic effects. Analysis of all results shows that nitro polycyclic aromatic hydrocarbons (PAHs) are definitely environmental genotoxic/mutagenic hazards and confirms that environmental aromatic nitration reactions lead to an increase in genotoxicity and mutagenicity properties. Particularly 1-NPy and 1,8-DNPy can be considered as human potential carcinogens...

SECTION 12: Ecological information

Not available

SECTION 13: Disposal considerations

Not available

SECTION 14: Transport information

Not available

SECTION 15: Regulatory information

Not available

SECTION 16: Other information

Not available

DISCLAIMER

This MSDS is system-generated. Please verify and confirm all data, statements, and values with the Support Team before use or distribution.