

1-PHENYL-3-METHYL-5-PYRAZALONE

Company Information

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Product Identification

【Product Name】

Edaravone

【Synonyms】

1,2-Dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one

1-Phenyl-3-methyl-2-pyrazolin-5-one

3-Methyl-1-phenylpyrazolin-5(4H)-one

5-Methyl-2-phenyl-1H-pyrazol-3-one

【Synonyms】

3-Methyl-1-phenyl-2-pyrazolin-5-one

5-Methyl-2-phenyl-1H-pyrazol-3-one

N-Demethylantipyrine

【CAS】

[19735-89-8](#)

【CAS】

[89-25-8](#)

【Formula】

C₁₀H₁₀N₂O

【Molecular Weight】

174.2

【EINECS】

201-891-0

【EINECS】

243-261-8

【RTECS】

UQ9625000

【RTECS Class】

Tumorigen; Drug; Mutagen; Reproductive Effector; Primary Irritant

【Merck】

12,6809

【Beilstein/Gmelin】

140723

【Beilstein/Gmelin】

609575

【Beilstein Reference】

4-24-00-00071

Physical and Chemical Properties

【Appearance】

White to off-white crystals or powder.

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White to off-white powder or crystals.

【Solubility in water】

3 g/L

【Solubility in water】

Slightly soluble

【Melting Point】

126

【Melting Point】

127 - 128

【Boiling Point】

276

【Boiling Point】

287

【Vapor Pressure】

<0.01

【Vapor Pressure】

0.005 (25 C)

【Density】

1.120 g/cm³ (20 C)

【Density】

1.26 g/cm³ (20 C)

【pKa/pKb】

13.21 (pKb)

【pKa/pKb】

11.68 (pKb)

【Partition Coefficient】

.44

【Heat Of Vaporization】

51.5 kJ/mol

【Heat Of Vaporization】

57.6 kJ/mol

【Usage】

Intermediate for dyes & drugs, sensitive reagent for detection of cyanide.

【Refractive Index】

0.00014 (25 C)

【Refractive Index】

1.637

First Aid Measures

【Ingestion】

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

【Ingestion】

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

【Inhalation】

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.

【Inhalation】

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

【Skin】

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

【Skin】

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

【Eyes】

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

【Eyes】

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Handling and Storage

【Storage】

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

【Storage】

Store in an explosion proof refrigerator.

【Handling】

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Store protected from light.

Hazards Identification

【Ingestion】

May cause irritation of the digestive tract.

【Ingestion】

Moderately toxic.

【Inhalation】

May cause respiratory tract irritation.

【Inhalation】

Causes irritation.

【Skin】

Causes irritation.

【Skin】

May cause skin irritation.

【Eyes】

Causes irritation.

【Eyes】

Causes mild eye irritation.

【EC Safety Phrase】

S 22 24/25

Exposure Controls/Personal Protection

【Personal Protection】

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure.

【Respirators】

Where the neat test chemical is weighed and diluted, wear a NIOSH-approved half face respirator equipped with an organic vapor/acid gas cartridge (specific for organic vapors, HCl, acid gas and SO₂) with a dust/mist filter.

【Respirators】

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

【Poison Class】

4

Fire Fighting Measures

【Flash Point】

121

【Flash Point】

155

【Fire Fighting】

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher.

【Fire Fighting】

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Extinguishing media: Use agent most appropriate to extinguish fire. In case of fire, use carbon dioxide, dry chemical powder or appropriate foam.

【Fire Potential】

This material is probably combustible.

Accidental Release Measures

【Small spills/leaks】

Clean up spills immediately, using the appropriate protective equipment. Avoid generating dusty conditions. Provide ventilation. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

【Small spills/leaks】

Should a spill occur while you are handling this chemical, FIRST REMOVE ALL SOURCES OF IGNITION, then you should dampen the solid spill material with ethanol and transfer the dampened material to a suitable container. Use absorbent paper dampened with ethanol to pick up any remaining material. Seal the absorbent paper, and any of your clothes, which may be contaminated, in a vapor-tight plastic bag for eventual disposal. Solvent wash all contaminated surfaces with ethanol followed by washing with a soap and water solution. Do not reenter the contaminated area until the Safety Officer (or other responsible person) has verified that the area has been properly cleaned.

Stability and Reactivity

【Disposal Code】

3

【Stability】

Stable under normal temperatures and pressures.

【Incompatibilities】

Strong oxidizing agents.

【Decomposition】

Carbon monoxide, oxides of nitrogen, carbon dioxide.

Transport Information

【HS Code】

2933 19 90