

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY**Chemical Identity**

7-chloro-1,3-dihydro-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one.

CAS RN : 439-14-5**Product Type:** Benzodiazepine derivative**Supplier** Manufacturer:

FOR EMERGENCY (24 hours/day): Tel:

2. COMPOSITION / INFORMATION ON INGREDIENTS**Common Name**

Diazepam

Synonyms/Trade Name(s)

1-methyl-5-phenyl-7-chloro-1,3-dihydro-2H-1,4-benzodiazepin-2-one; Paranten; 7-Chloro-1,3-Dihydro-1-Methyl-5-Phenyl-2H-1,4-Benzodiazepin-2-One; 7-chloro-1-methyl-2-oxo-5-phenyl-3H-1,4-benzodiazepine; 7-chloro-1-methyl-3H-1,4-benzodiazepin-2(1H)-one; 7-chloro-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one; 7-chloro-1-methyl-5-phenyl-3H-1,4-benzodiazepin-2(1H)-one; alboral; aliseum; alupram; amiprol; ansiolin; Antenex; apaurin; Apo-Diazepam; apozepam; assival; atensine; atilen; diacepan; bialzepam; diapam; Diazepam; Diazemuls; diazepam; diazetard; dienpax; Dipam; dipezona; calmocitene; calmpose; cercine; ceregulart; condition; domalium; Ducene; duksen; Duxen; E-PAM; eridan; evacalm; faustan; freudal; frustan; gihitan; kiatrium; LA-III; lembrol; levium; liberetas; methyl diazepinone; morosan; neurolytril; NOAN; pacitran; paxate; Paxel; plidan; quetinit; quiatril; quievita; relaminal; relanium; Relax; renborin; ro 5-2807; S.A. R.L.; saromet; sedipam; sedapam; seduksen; seduxen; serenack; serenamin; serenzin; setonil; sibazon; Solis; sonacon; stesolid; stesolin; Tensium; tensopam; T-quil; tranimul; tranqdyn; tranquase; tranquirit; tranquo-tablinen; umbrium; unisedil; usempax ap; Valeo; valitran; Valium; Valium R; Valrelease; vatan; Vazepam; velium; Vival; Vivol; wy-3467; Zipan

Information on Ingredients**Dangerous Substances:**

7-chloro-1,3-dihydro-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one.

CAS RN

439-14-5

% (w/w)

Pure material

Symbols

Xn , N

Risk PhrasesR61; R22; **R68** , R52/53

3. HAZARDS IDENTIFICATION**To Humans**

May cause harm to the unborn child.
Harmful if swallowed.
Possible risk of irreversible effects.

Physical-chemical Hazards

When heated to decomposition, emits flammable and toxic fumes.
Potential build-up of static electricity.

To the Environment

Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

4. FIRST AID MEASURES**Symptoms**

Common effects:

Drowsiness, over sedation, dizziness, light-headedness; mental/respiratory depression, fatigue, apathy, constipation, irritability.

Less common effects:

Diarrhea, indigestion, changes in libido, tremor, visual disturbances such as blurred vision, urinary retention or incontinence, slurred speech or dysarthria, changes in salivation, depression of mood and affect, disorientation or confusion, lethargy and ataxia, jaundice ,amnesia , hypotension.

First Aid**Inhalation**

Remove to fresh air. If breathing is difficult, give oxygen. If not breathing applies artificial respiration. Obtain medical attention.

Skin

Flush with copious amounts of water for at least 15 minutes. Remove contaminating clothing. Obtain medical attention.

Eye

Check for and remove contact lenses. Flush with copious amounts of water for at least 15 minutes separating eyelids. Obtain medical attention immediately.

Ingestion

Do NOT induces vomiting. If victim is conscious, have him drink three cups of water. Refer for medical attention as necessary. Do not administer liquids to unconscious persons. If victim is unconscious, perform resuscitation and then immediately transfer to medical personnel.

Advice to Physicians

Persons developing hypersensitivity reactions must receive immediate medical attention.
Avoid exposure of pregnant or breastfeeding woman.

5. FIRE-FIGHTING MEASURES

**MATERIAL SAFETY DATA
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<u>Extinguishing Media</u> <i>Small Fire</i> Water spray, dry chemical powder, carbon dioxide, foam. <i>Large Fire</i> As for small fire <u>Unsuitable Extinguishing Media</u> <u>Other</u>	<u>Hazards</u> Emits toxic fumes under fire conditions. <u>Protective Equipment</u> Self-contained breathing equipment. Protective clothing.
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6. ACCIDENTAL RELEASE MEASURES**Small Spillage**

Evacuate area. Wipe up spill and place in sealed container and hold for disposal. Ventilate the area and wash spill site after material has been removed. Observe all federal, State and Local regulation concerning the disposal of this product.

Personal Precautions

Avoid all contact with dust/fumes/mists/vapors. Remove contaminated clothing. Avoid raising dust.

Environmental Precautions

Prevent from leaking into drains

Large Spillage

As for small spillage.

Personal Protection

Approved respirator, full face P3.
Chemically resistant gloves.
Safety goggles.
Protective clothing.

7. HANDLING AND STORAGE**Handling**

Avoid raising dust.
Wear fresh clothes daily.
Wash thoroughly after handling.
Avoid contact with skin and eyes. Ground mechanical equipment in contact with dry material. Do not permit eating/drinking/smoking near the material.

Handling Temperatures**Storage**

Store in a tightly closed container.
Store in a cool, dry place.
Store per label.

Incompatible Materials

Storage Temperature between 15 and 30 °C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Technical Measures

Ventilation: adequate.
 Local dust Collec. system: recommended.

Exposure Controls

Type	Value	Unit
OEL/TWA	No data available	
TLV/STEL		

Use adequate dust control.
 Avoid prolonged or repeated exposure.

Personal Protection

Respiratory: approved respirator, full face P3.
 Hand: chemically compatible gloves.

Eye: safety goggles.
 Skin: appropriate protective clothing.
 Lab. use in glove boxes.
 Use only in a chemical fume hood.

9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL VALUES)

Appearance (20°C) Crystalline powder
 Odor Practically odorless
 Color White-yellowish
 pH
 Boiling point/range N/A
 Melting point/range 132°C
 Flash point (CC) N/A
 Auto-ignition point
 Explosive limits
 (Vol. % in air)
 Oxidizing properties
 Others

Vapor pressure (25°C) 2.78E-008 mm Hg
 Relative density (20°C) N/A
 Solubility
 -In water (20°C) : Insoluble
 -In other solvents:
 Partition coefficient
 n-octanol/water Log Po/w : 2.82
 Relative vapor density N/A
 (air = 1)
 Viscosity (20°C) N/A
 Specific conductivity
 Molecular formula $C_{16}H_{13}ClN_2O$
 Relative molecular mass 284.7

Notes: N/A = Not Applicable; U = Unknown

10. STABILITY AND REACTIVITY
Stability

Stable.

Hazardous Decomposition Products

When heated to decomposition, emits toxic

<p>Hazardous polymerization will not occur.</p> <p><u>Conditions to avoid</u> Heat, light.</p> <p><u>Materials to avoid</u> Strong oxidizing agents, strong bases, mineral acids.</p>	<p>fumes of nitrogen oxides, hydrogen chloride and carbon oxides.</p> <p><u>Other Information</u></p>
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11. TOXICOLOGICAL INFORMATION

<p><u>Acute Toxicity</u></p> <p>LD50 (oral rat) : 249 mg/kg (reported also 710) (oral mouse) : 48 mg/kg (reported also 278) (oral mammal): 500 mg/kg</p>	<p><u>Acute Effects</u> : Harmful if swallowed.</p> <p>Possible eye, skin, gastrointestinal and/or respiratory tract irritation.</p> <p><u>Target Organs</u>: Central nervous system</p>
<p><u>Chronic / Specific Effects:</u></p> <p><u>Teratogenicity:</u> Rat (oral) 100 mg/kg decrease in number of pregnancies and survival offspring ; skeletal defects Mouse (oral) 140 mg/kg , 11-13 D Preg. : cleft palates in the fetuses</p> <p><u>Carcinogenicity:</u> Mouse (oral) 42 gm/kg/80W-C: equivocal tumorigenic agent. Rat (oral) 75 mg/kg/day, and mice (oral) 104 : no increase in tumor.</p> <p><u>Mutagenicity:</u> mutagenic in the Salmonella typhimurium test , in the Ames test and genotoxic in mouse bone marrow micronucleus test.</p>	
<p><u>Other Toxicological Effects on Humans</u></p> <p>-Pregnancy Category: D. Can cause fetal harm to pregnant women. The drug crossed the placenta. There is a some evidence of teratogenicity in humans, increasing the risk of congenital malformations during the first trimester of pregnancy.</p> <p>TDLo (oral women) 22.8 mg/kg: reproductive effects on newborn. -</p> <p>IARC Group 3 : Not classifiable as to its carcinogenicity to human .</p>	

Notes: IPR = Intraperit. ; IVN = Intravenous; ORL = Oral; SCU = Subcutaneous

12. ECOLOGICAL INFORMATION

<p><u>Ecotoxicity</u></p> <p>Fish (rainbow trout) LC₅₀ (96 h): 84 mg/l</p>	<p><u>Persistence</u></p>
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Daphnia (magna) Microorganisms Algae	(NOEC) (96h) : 50 mg/l EC ₅₀ (24 h): 4.3 mg/l NOEC >100 mg/l EC ₅₀ (72 h):	<u>Degradation:</u> - Biotic (21D): 0% : Not biodegradable - Abiotic: <u>Bioaccumulation:</u> Not expected to bioaccumulate (Log Po/w < 3) (Half-Life Elimination in Human : 3-48h.)
<u>Sewage Treatment</u> <u>Other Information</u>		

13. DISPOSAL CONSIDERATIONS

Disposal

Dispose of waste (product/packaging) in accordance with all applicable local laws.

Classification

14. TRANSPORT INFORMATION

<u>ADR / RID</u>		<u>IMDG</u>	<u>IATA / ICAO</u>	<u>DOT</u>
Name Diazepam Class 9 Code/PG M7/III Symbol Orange placard	Ship.name Class UN nr/PG Symbol <div> <div>9</div> <div>3077</div> </div> Marine pollut. Max.Qty/Pkg: - Passenger - Cargo only	Diazepam 9 3077/III Yes: P	Diazepam 9 3077/III No Limit (I.613)	Diazepam 9 3077/III
<u>Remarks</u> Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Diazepam) Estimated NFPA: H: 3 F: 0 R: 0				

15. REGULATORY INFORMATION

<u>EC Supply Labeling</u> Product name: Diazepam Hazard: Xn, Harmful	<u>Risk Phrases</u> R63: May cause harm to the unborn child. R22: Harmful if swallowed.	<u>Safety Phrases</u> S22: Do not breathe dust. S07/08: Keep container tightly closed and dry.
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<p>N, Dangerous for the environment.</p> <p>US Supply Labeling Haz.Chem. under OSHA yes HMIS Rating: Health 3 Flammability 0 Reactivity 0 Protect. Equipment E</p>	<p>R52/53: Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.</p> <p>.</p>	<p>S24/25: Avoid contact with skin and eyes. S61: Avoid release to the environment. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S60 : This material and its container must be disposed of as hazardous waste .</p>
<p>International Inventory Status EINECS (EC)* 207-122-5 TSCA (USA) Not listed AICS (AUSTR) Not listed MITI (JAP) NDSL (CANAD) Not listed</p> <p style="text-align: right;">* MSDS according to directive 91/155/EEC.</p>		

16. OTHER INFORMATION

<u>Uses and Restrictions</u>	Pharmaceutical uses.
<u>Application</u>	Sedative-hypnotic
<u>Training advice</u>	Before handling/using the product, one must read carefully the present MSDS
<u>Update</u>	Date of last version: Subtitles and/or text modified from last version are marked with (*).

NOTICE

The information contained herein is applicable solely to the chemical substance when used in manufacturing, and does not relate to other use of the substance described. Its use is intended by

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persons having technical skill, and at their own discretion and risk. The information has been developed from sources considered reliable, but has not been independently verified. Therefore, the manufacturer cannot guarantee the accuracy of the information from these sources, nor should the statements contained herein be considered an official expression.

No representation of warranty, expressed or implied, including the warranties of salability or fitness for a particular use, is made with respect to the information contained herein.

ATTENTION: This product is sold for manufacturing purposes only.