

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Harmful compound, minimize exposure. Irritating to skin, eyes, and the respiratory system. This compound is a skin sensitizer. Reproductive Effects; may damage fertility or the unborn child. POSSIBLE MUTAGEN. MINIMIZE EXPOSURE. Light sensitive material.	

Section I. Chemical Product and Company Identification

Chemical Name	Dexamethasone		
Catalog Number	D1961	Supplier	TCI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Pregna-1,4-diene-3,20-dione, 9-fluoro-11,17,21-trihydroxy-16-methyl-, (11 β ,16 α)- (CA INDEX NAME); Corsonone		
Chemical Formula	C ₂₂ H ₂₉ FO ₅		
CAS Number	50-02-2	In case of Emergency Call Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)	

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Dexamethasone	50-02-2	Min. 99.0 (HPLC)	This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen.	Rat LD ₅₀ (oral) >3 gm/kg Rat LD ₅₀ (intraperitoneal) 54 mg/kg Rat LD ₅₀ (subcutaneous) 14 mg/kg

Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Skin contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY : Reproductive Effects. Rat TDLo Oral 880 ug/kg, female 7-17 days of pregnancy TOXIC Effects: Effects on Embryo or Fetus - Extra embryonic structures Effects on Embryo or Fetus - Fetotoxicity Specific Developmental Abnormalities - Musculoskeletal system Rat TDLo Parenteral 1500 ug/kg, female 16 days of pregnancy TOXIC Effects: Effects on Embryo or Fetus - Other effects to embryo Effects on Newborn - Growth statistics Effects on Newborn - Physical Rat TDLo Subcutaneous 11 mg/kg, female 7-17 days of pregnancy Specific Developmental Abnormalities - Craniofacial Specific Developmental Abnormalities - Body wall Specific Developmental Abnormalities - Cardiovascular Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), halogenated compounds. WARNING: Highly toxic HF gas is produced during combustion.		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Harmful material. Irritating material. Possibility mutagenic material. Reproductive effecting material. Skin sensitizing material. Light sensitive material. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.
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Section VII. Handling and Storage

Handling and Storage Information	HARMFUL. IRRITANT. POSSIBLE MUTAGEN. REPRODUCTIVE EFFECTOR. SKIN SENSITIZER. LIGHT SENSITIVE. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust.
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Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
	
Exposure Limits	This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Solid. (White, crystal ~ powder.)	Solubility	Soluble in ethanol, ether, acetone, chloroform. Insoluble in water.
Specific Gravity	Not available.		
Molecular Weight	392.46	Partition Coefficient	Log P _{ow} : 1.83
Boiling Point	Not available.	Vapor Pressure	Not applicable.
Melting Point	264°C (507.2°F)	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Odorless.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Reactive with strong oxidizing agents.

Section XI. Toxicological Information

RTECS Number	TU3980000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Rat LD ₅₀ (oral) >3 gm/kg Rat LD ₅₀ (intraperitoneal) 54 mg/kg Rat LD ₅₀ (subcutaneous) 14 mg/kg

Chronic Toxic Effects	<p>CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY: Reproductive Effects. Rat TDLo Oral 880 ug/kg, female 7-17 days of pregnancy TOXIC Effects: Effects on Embryo or Fetus - Extra embryonic structures Effects on Embryo or Fetus - Fetotoxicity Specific Developmental Abnormalities - Musculoskeletal system Rat TDLo Parenteral 1500 ug/kg, female 16 days of pregnancy TOXIC Effects: Effects on Embryo or Fetus - Other effects to embryo Effects on Newborn - Growth statistics Effects on Newborn - Physical Rat TDLo Subcutaneous 11 mg/kg, female 7-17 days of pregnancy Specific Developmental Abnormalities - Craniofacial Specific Developmental Abnormalities - Body wall Specific Developmental Abnormalities - Cardiovascular Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.</p>
Acute Toxic Effects	<p>Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Skin contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p>

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	<p>Dexamethasone's production and use as a glucocorticoid, an anti-inflammatory diagnostic aid, a treatment for leukemias and lymphomas of the central nervous system, treatment for primary bovine ketosis, an anti-inflammatory agent in cattle, horses, dogs, and cats, treatment of physiological parturient udder edema in cattle (in combination with Naquasone), and treatment of acute arthritic lameness in cattle and horses may result in its release to the environment through various waste streams. If released to air, an estimated vapor pressure of 8.9X10⁻¹⁴ mm Hg at 25 deg C indicates dexamethasone will exist solely in the particulate phase in the atmosphere. Particulate-phase dexamethasone will be removed from the atmosphere by wet or dry deposition. Dexamethasone contains chromophores that absorb at wavelengths >290 nm and therefore may be susceptible to direct photolysis by sunlight. If released to soil, dexamethasone is expected to have moderate mobility based upon an estimated Koc of 240. Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant of 7.2X10⁻⁸ atm-cu m/mole. Biodegradation data for dexamethasone in soil were not available. If released into water, dexamethasone is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Biodegradation data for dexamethasone in water were not available. Volatilization from water surfaces is not expected to be an important fate process based upon this compound's estimated Henry's Law constant. An estimated BCF of 14 suggests the potential for bioconcentration in aquatic organisms is low. Hydrolysis is not expected to be an important environmental fate process since this compound lacks functional groups that hydrolyze under environmental conditions. Occupational exposure to dexamethasone may occur through dermal contact with this compound at workplaces where dexamethasone is produced or used. Exposure to dexamethasone among the general population may be limited to those administered the drug (Decadron, Dexone), a glucocorticoid.</p>

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not applicable.
Proper Shipping Name	Not applicable.
Packing Group (PG)	Not applicable.
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	On NDSL
EINECS Number (EEC)	200-003-9
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R46- May cause heritable genetic damage. R47- May cause birth defects.
Japanese Regulatory Data	Not available.

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Emergency phone number (800) 424-9300

Section XVI. Other Information

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Notice to Reader

TCl laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.

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