



MATERIAL SAFETY DATA SHEET ACC. TO GHS

TIANJIN JINJIN PHARMACEUTICAL CO., LTD

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SECTION 1-IDENTIFICATION

Product Name: Hydrocortisone

CAS#: 50-23-7

Synonym: Hydrocortisone; 4-Pregnene-11-beta,17-alpha,21-triol 3,20-dione

Chemical Name: Pregn-4-ene-3,20-dione, 11,17,21-trihydroxy-(11.beta.)-

SECTION 2- HAZARDS IDENTIFICATION

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED].

The substance may be toxic to the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage.

SECTION 3- COMPOSITION/INFROMATION ON INGREDIENT

<u>Components</u>	<u>CAS Number</u>	<u>Percent by weight</u>
Hydrocortisone	50-23-7	97%-102%(HPLC)

SECTION 4-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. Cold water may be used. WARM water MUST be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

SECTION 5- FIRE FIGHTING MEASURES

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of heat.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of



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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.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

SECTION 6- ACCIDENTAL RELEASE MEASURES

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

SECTION 7- HANDLING AND STORAGE

Precautions: Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as acids, alkalis.

Storage: Light Sensitive. Store in a light-resistant container. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

SECTION 8- 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: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Solid. (Solid crystalline powder.)

Odor: Odorless.

Taste: Bitter.

Molecular Weight: 362.47 g/mole

Color: White. Off-white.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: 218°C (424.4°F)

Critical Temperature: Not available.



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Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, acetone.

Solubility: Soluble in methanol, acetone. Very slightly soluble in cold water, hot water.

SECTION 10- STABILITY AND REACTIVITY

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with acids, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

SECTION 11- TOXICOLOGICAL INFORMATION

Routes of Entry: Absorbed through skin. Eye contact.

Toxicity to Animals: Acute oral toxicity (LD50): 5000 mg/kg [Rat].

Chronic Effects on Humans: DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. May cause damage to the following organs: the reproductive system.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant, permeator) and eye contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Mutagenesis: negative in Ames Assay and Rat Primary Hepatocyte UDS Assay. Teratogenicity: Corticosteroids are generally teratogenic in laboratory animals when administered systemically in doses substantially greater than those usually employed in humans. As there are no well controlled studies in women, the safety of their use in pregnant women has not been absolutely established. Carcinogenicity: negative in in vivo tests. Not listed as a carcinogen by IARC

Special Remarks on other Toxic Effects on Humans: May affect metabolism and genetic material. Can cause adverse reproductive effects and birth defects.

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than



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the product itself.

Special Remarks on the Products of Biodegradation: Not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of by incineration in accordance with applicable international, national, state, and/or local waste disposal regulations.

SECTION 14 TRANSPORT INFORMATION

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

SECTION 15 REGULATORY INFORMATION

Federal and State Regulations: TSCA 8(b) inventory: Hydrocortisone

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

DSCL (EEC): R20/22- Harmful by inhalation and if swallowed. R33- Danger of cumulative effects. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

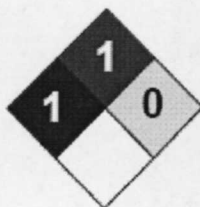
Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

SECTION 16 OTHER INFORMATION



Health	1
Fire	1
Reactivity	0
Personal Protection	E