Safety Data Sheet
Tretinoin Cream USP, 0.1%
Strength: 0.1 % **Pack Size:** 20 grams, **NDC** 72578-153-09 **Revision No.:** 00
45 grams, **NDC** 72578-153-08

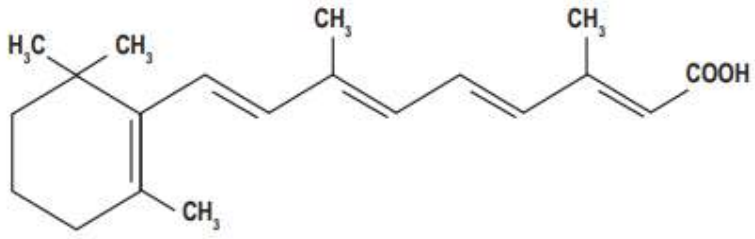
Emergency Overview

Tretinoin cream USP, 0.1% is used for the topical treatment of acne vulgaris. Tretinoin cream, USP contains tretinoin, 0.1% by weight, in a hydrophilic cream vehicle of butylated hydroxytoluene, isopropyl myristate, polyoxyl 40 stearate, purified water, sorbic acid, stearic acid, stearyl alcohol and xanthan gum.

Section 1: Identification

Product Name: **Tretinoin Cream USP, 0.1%**

Chemical Name: Chemically tretinoin is all-trans-retinoic acid and has the following structure:



Description: Tretinoin cream USP, 0.1% is used for the topical treatment of acne vulgaris. Tretinoin cream, USP contains tretinoin, 0.1% by weight, in a hydrophilic cream vehicle of butylated hydroxytoluene, isopropyl myristate, polyoxyl 40 stearate, purified water, sorbic acid, stearic acid, stearyl alcohol and xanthan gum.

Dosage forms and strengths: Tretinoin cream should be applied once a day, before retiring, to the skin where acne lesions appear, using enough to cover the entire affected area lightly.
Application may cause a transitory feeling of warmth or slight stinging. In cases where it has been necessary to temporarily discontinue therapy or to reduce the frequency of application, therapy may be resumed or frequency of application increased when the patients become able to tolerate the treatment.

Manufacturer / supplier identification

Company **M/S. ZYDUS LIFESCIENCES LIMITED**
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SARKHEJ-BAVLA NATIONAL HIGHWAY NO. 8A,
CHANGODAR, TAL - SANAND,
DIST. AHMEDABAD - 382210,
GUJARAT, INDIA
Contact for information Tel.+91 2717-616430 Fax: +91 2717-616430
Emergency Telephone No Tel.+91 2717-616401

Recommended use / Therapeutic: Category For the treatment of acne vulgaris.

Restriction on Use/: Contraindications

Refer to the product insert and/or prescribing information for restrictions on use and contraindications.

Section 2: Hazard (s) Identification

Dose and Administration:

Tretinoin cream should be applied once a day, before retiring, to the skin where acne lesions appear, using enough to cover the entire affected area lightly.

Application may cause a transitory feeling of warmth or slight stinging. In cases where it has been necessary to temporarily discontinue therapy or to reduce the frequency of application, therapy may be resumed or frequency of application increased when the patients become able to tolerate the treatment.

Alterations of vehicle, drug concentration or dose frequency should be closely monitored by careful observation of the clinical therapeutic response and skin tolerance.

During the early weeks of therapy, an apparent exacerbation of inflammatory lesions may occur. This is due to the action of the medication on deep, previously unseen lesions and should not be considered a reason to discontinue therapy.

Therapeutic results should be noticed after 2 weeks to 3 weeks but more than 6 weeks of therapy may be required before definite beneficial effects are seen.

Once the acne lesions have responded satisfactorily, it may be possible to maintain the improvement with less frequent applications or other dosage forms.

Patients treated with tretinoin acne treatment may use cosmetics, but the area to be treated should be cleansed thoroughly before the medication is applied.

Adverse effects:

The skin of certain sensitive individuals may become excessively red edematous, blistered or crusted. If these effects occur, the medication should either be discontinued until the integrity of the skin is restored or the medication should be adjusted to a level the patient can tolerate. True contact allergy to topical tretinoin is rarely encountered. Temporary hyper- or hypopigmentation has been reported with repeated application of tretinoin. Some individuals have been reported to have heightened susceptibility sunlight while under treatment with tretinoin. To date, all adverse effects of tretinoin have been reversible upon discontinuance of therapy.

Section 3: Composition / information on ingredients

Substances: Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Composition		
Chemical Name	**Identifiers**	**%**
Butylated hydroxytoluene	**CAS**:128-37-0 **EINECS**:204-881-4	<= 0.1%
Isopropyl myristate	**CAS**:110-27-0 **EINECS**:203-751-4	7% TO 13%
Polyoxyl 40 stearate	**CAS**:9004-99-3	3% TO 7%
Purified water	**CAS**:7732-18-5 **EINECS**:231-791-2	40% TO 70%
Sorbic acid	**CAS**:22500-92-1	0.1% TO 1%
Stearic acid	**CAS**:57-11-4 **EINECS**:200-313-4	10% TO 30%
Stearyl alcohol	**CAS:**112-92-5 **EINECS**:204-017-6	1% TO 5%
Tretinoin	**CAS**:302-79-4 **EINECS**:206-129-0	0.025% TO 0.1%
Xanthan gum	**CAS**:11138-66-2 **EINECS**:234-394-2	0.1% TO 1%

Section 4: First -aid measures

Eye Contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact For accidental and non-therapeutic exposures, immediately flush skin with large amounts of water. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention. If skin irritation occurs: Get medical advice/attention. Wash clothing separately before reuse.

Inhalation Normal use of this product does not pose an inhalation hazard. However, should respiratory tract irritation develop, discontinue use and remove to fresh air. Get medical attention if irritation or other symptoms develop or persist.

Ingestion If swallowed, wash out mouth with water provided person is conscious. Seek medical attention.

Most important symptoms/effects, acute and delayed: No data available.

Indication of immediate medical attention and special treatment, if necessary Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Additional details are available on the product package insert or the Physicians' Desk Reference.

Section 5: Fire -fighting measures

Suitable extinguishing media:	**SMALL FIRES:** Dry chemical, CO2, water spray or regular foam. **LARGE FIRE:** Water spray, fog or regular foam.
Unsuitable extinguishing Media:	No information available.
Specific hazards arising from the chemical	
Unusual Fire and Explosion Hazards:	None known - product is not flammable or combustible.
Hazardous Combustion Products:	No data available.
Protective Equipment and Precautions for Firefighters:	Structural firefighters' protective clothing provide limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Section 6: Accidental Release Measures

Personal precautions	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Evacuate immediate area. Ventilate enclosed areas.
Environmental Precautions	Prevent spilled material from entering storm sewers or drains, waterways, and contact with soil.
Methods for Containment / Cleaning up:	Isolate hazard area. Prevent from entering drains and sewers. Cover with vermiculite or other suitable inert material, pick up and place in closed containers. Transport outdoors and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete. Refer to Section 13 for appropriate disposal procedures.

Section 7: Handling and Storage

Handling:	Use only in well ventilated areas (preferably in a chemical fume hood). Do not breathe dusts, vapors or mists. Do not get in eyes, on skin, or on clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Use good safety and industrial hygiene practices.
Storage:	Store at 20°C to 25°C (68°F to 77°F); excursions permitted to 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature].

Section 8: Exposure controls/personal protection

Exposure Limits/Guidelines				
	Result	ACGIH	Canada Quebec	NIOSH
Butylated hydroxytoluene (128-37-0)	STELs	Not established	10 mg/m3 STEV	Not established
	TWAs	2 mg/m3 TWA (inhalable fraction and vapor)	Not established	10 mg/m3 TWA
Stearic acid (57-11-4)	TWAs	10 mg/m3 TWA (inhalable particulate matter, listed under Stearates); 3 mg/m3 TWA (respirable particulate matter, listed under Stearates)	Not established	Not established

Exposure Control Notations

ACGIH
•Butylated hydroxytoluene (128-37-0): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen)

Exposure Limits Supplemental

ACGIH
•Stearic acid (57-11-4): TLV Basis - Critical Effects: (lower respiratory tract irritation (listed under Stearates))

•Butylated hydroxytoluene (128-37-0): TLV Basis - Critical Effects: (upper respiratory tract irritation)

Exposure controls

Engineering Measures/Controls: NO SPECIAL CONTROLS ARE REQUIRED UNDER CONDITIONS INTENDED USE. Local exhaust ventilation should be provided when handling bulk product.

Personal Protective Equipment
Pictograms:

Respiratory Protection:	Where risk assessment shows that air-purifying respirators are appropriate, a NIOSH (US) or CEN (EU) -certified air-purifying respirator equipped with HEPA and organic vapor cartridges may be permissible under certain circumstances were airborne concentrations are expected to exceed exposure limits, when adequate oxygen is present and as a backup to engineering controls. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release or any other circumstances where air purifying respirators may not provide adequate protection.
Eye/Face:	Wear protective eyewear (goggles, face shield, or safety glasses) when handling bulk product before closed in final packaging. Not required during normal clinical use.
Hands:	Wear protective gloves.
Skin/Body:	Wear protective gloves/protective clothing/eye protection/face protection. Not required during normal clinical use.
General Industrial Hygiene Consideration:	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke during work. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling.
Environmental Exposure Controls:	No special controls are required under conditions of intended use. In the event of a bulk spill, prevent

Section 9: Physical and chemical properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Light yellow cream.
Color	light yellow	Odor	Not relevant
Odor Threshold	Not relevant		
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	2.7 to 4.7
Specific Gravity/Relative Density	No data available	Water Solubility	No data available
Viscosity	30000 to 150000 Centipoise (cPs, cP) or mPas		

Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant		

Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	Not relevant		

Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable under normal temperatures and humidities.

Possibility of hazardous Reactions: Not data available.

Conditions to avoid: Extreme heat or cold. Do not freeze.

Incompatible materials: Strong oxidizing agents. Acids.

Hazardous decomposition Products: Not data available.

Section 11: Toxicological information

Information on toxicological effects

Components		
Isopropyl myristate (7% TO 13%	110-27-0	**Acute Toxicity:** Ingestion/Oral-Mouse LD50 • 49700 mg/kg
Stearyl alcohol (1% TO 5%)	112-92-5	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • >2000 mg/kg
Stearic acid (10% TO 30%)	57- 11-4	**Acute Toxicity**: Ingestion/Oral-Rat LD50 • 4600 mg/kg
Polyoxyl 40 stearate (3% TO 7%)	9004 - 99- 3	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 53 mL/kg
Butylated hydroxytoluene (<= 0.1%)	128-37-0	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 890 mg/kg
Tretinoin (0.025% TO 0.1%)	302-79-4	**Acute Toxicity**: Ingestion/Oral-Mouse LD50 • 1100 mg/kg; Ingestion/Oral-Rat LD50 • 2 g/kg; **Irritation**: Skin-Human • 0.03 % 96 Hour(s) • Mild irritation; **Reproductive:** Ingestion/Oral-Rat TDLo • 15 mg/kg (11-13D preg); Reproductive Effects: Effects on Fertility: **Post-implantation**

		mortality; Reproductive Effects: Effects on Embryo or Fetus**: Fetal death;** Ingestion/Oral-Rat TDLo • 1.25 mg/kg (14D preg); Reproductive Effects: Specific Developmental Abnormalities: **Craniofacial (including nose and tongue);** Skin-Rat TDLo • 55 mg/kg (6-16D preg); Reproductive Effects: Effects on Embryo or Fetus: **Fetotoxicity (except death, e.g., stunted fetus);** Skin-Rat TDLo • 27500 µg/kg (6-16D preg); Reproductive Effects: Maternal Effects**: Other effects**; Reproductive Effects: Specific Developmental Abnormalities: **Musculoskeletal system**

GHS Properties	Classification
Acute toxicity	**OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**OSHA HCS 2012** • Skin Irritation 2
Serious eye damage/Irritation	**OSHA HCS 2012** • Eye Irritation 2A
Skin sensitization	**OSHA HCS 2012** • Classification criteria not met
Respiratory sensitization	**OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**OSHA HCS 2012** • Classification criteria not met
Germ Cell Mutagenicity	**OSHA HCS 2012** • Classification criteria not met
Toxicity for Reproduction	**OSHA HCS 2012** • Toxic to Reproduction 2
STOT-SE	**OSHA HCS 2012** • Classification criteria not met
STOT-RE	**OSHA HCS 2012** • Classification criteria not met

Potential Health Effects

Inhalation

Acute (Immediate): No data available

Chronic (Delayed): No data available

Skin

Acute (Immediate): Causes skin irritation. This medicine causes increased sensitivity to Sunlight.

Chronic (Delayed): Repeated and prolonged exposure may cause sensitization. Refer to the product inserts and/or product prescribing information for comprehensive information regarding adverse reactions and other important symptoms and effects.

Eye

Acute (Immediate): Causes serious eye irritation.

Chronic (Delayed): No data available.

Ingestion

Acute (Immediate): Not expected to be an exposure route. However, may cause gastric and intestinal irritation if ingested.

Chronic (Delayed): No data available.

Carcinogenic Effects: Studies in hairless albino mice with a different formulation suggest that concurrent exposure to tretinoin may enhance the tumorigenic potential of carcinogenic does of UVB and UVA light from a solar simulator. Although the significance of these studies to humans is not clear, exposure to sunlight or artificial irradiation sources should be minimized.

Reproductive Effects: Oral tretinoin has been shown to be teratogenic in rats, mice, rabbits, hamsters, and subhuman primates. Tretinoin was teratogenic in Wistar rats when given orally or topically in doses greater than 1 mg/kg/day (8 times the maximum human systemic dose normalized for total body surface area). However, variations in teratogenic doses among various strains of rats have been reported. Topical tretinoin in a different formulation has generated equivocal results in animal teratogenicity tests. There is evidence for teratogenicity of topical tretinoin in Wistar rats at doses greater than 1 mg/kg/day (Approximately 8 times the clinical dose assuming 100% absorption and based on body surface area comparison). Topical tretinoin has been shown to be fetotoxic in rabbits when administered in doses 8 times the clinical dose based on body surface area comparison.

Section 12: Ecological information

Toxicity: This material has not been tested for environmental effects.
Persistence and degradability: No data available.
Bio accumulative potential: No data available
Mobility in Soil: No data available.

Section 13: Disposal consideration

Waste Disposal Methods

Product waste: Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14: Transport information

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
ADN	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
ADR/RID	Not Applicable	Not Regulated	Not Applicable	Not Applicable	
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	

Special precautions for user: No data available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No data available.

Section 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
SARA Hazard Classifications: No data available

Inventory				
Component	**CAS**	**Canada DSL**	**EU EINECS**	**TSCA**
Stearyl alcohol	112-92-5	Yes	Yes	Yes
Butylated hydroxytoluene	128-37-0	Yes	Yes	Yes
Polyoxyl 40 stearate	9004-99-3	Yes	No	Yes
Tretinoin	302-79-4	Yes	Yes	Yes
Sorbic acid	22500-92-1	No	No	No
Stearic acid	57-11-4	Yes	Yes	Yes
Isopropyl myristate	110-27-0	Yes	Yes	Yes
Xanthan gum	11138-66-2	Yes	Yes	Yes

Canada

Labor
Canada - WHMIS 1988 - Classifications of Substances

• Polyoxyl 40 stearate	9004-99-3	Uncontrolled product according to WHMIS classification criteria
• Stearic acid	57-11-4	Uncontrolled product according to WHMIS classification criteria
• Stearyl alcohol	112-92-5	Uncontrolled product according to WHMIS classification criteria
• Butylated hydroxytoluene	128-37-0	Not Listed
• Isopropyl myristate	110-27-0	Not Listed
• Xanthan gum	11138-66-2	Not Listed
• Tretinoin	302-79-4	Not Listed
• Sorbic acid		

Canada - WHMIS 1988 - Ingredient Disclosure List

• Polyoxyl 40 stearate	9004-99-3	1 %
• Stearic acid	57-11-4	1 %
• Stearyl alcohol	112-92-5	Not Listed
• Butylated hydroxytoluene	128-37-0	1 %
• Isopropyl myristate	110-27-0	Not Listed
• Xanthan gum	11138-66-2	Not Listed
• Tretinoin	302-79-4	Not Listed
• Sorbic acid	22500-92-1	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Polyoxyl 40 stearate	9004-99-3	Not Listed
• Stearic acid	57-11-4	Not Listed
• Stearyl alcohol	112-92-5	Not Listed
• Butylated hydroxytoluene	128-37-0	Not Listed
• Isopropyl myristate	110-27-0	Not Listed
• Xanthan gum	11138-66-2	Not Listed
• Tretinoin	302-79-4	Not Listed
• Sorbic acid	22500-92-1	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Polyoxyl 40 stearate	9004-99-3	Not Listed
• Stearic acid	57-11-4	Not Listed
• Stearyl alcohol	112-92-5	Not Listed
• Butylated hydroxytoluene	128-37-0	Not Listed
• Isopropyl myristate	110-27-0	Not Listed
• Xanthan gum	11138-66-2	Not Listed
• Tretinoin	302-79-4	developmental toxicity, 1/1/1989
• Sorbic acid	22500-92-1	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity – Female

• Polyoxyl 40 stearate	9004-99-3	Not Listed
• Stearic acid	57-11-4	Not Listed
• Stearyl alcohol	112-92-5	Not Listed
• Butylated hydroxytoluene	128-37-0	Not Listed
• Isopropyl myristate	110-27-0	Not Listed
• Xanthan gum	11138-66-2	Not Listed
• Tretinoin	302-79-4	Not Listed
• Sorbic acid	22500-92-1	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity – Male

• Polyoxyl 40 stearate	9004-99-3	Not Listed
• Stearic acid	57-11-4	Not Listed
• Stearyl alcohol	112-92-5	Not Listed
• Butylated hydroxytoluene	128-37-0	Not Listed
• Isopropyl myristate	110-27-0	Not Listed
• Xanthan gum	11138-66-2	Not Listed
• Tretinoin	302-79-4	Not Listed
• Sorbic acid	22500-92-1	Not Listed

Section 16: Other information

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Date of issue: 01/08/24 **Supersedes edition:** N/A