



# MATERIAL SAFETY DATA SHEET

## **PART I** *What is the material and what do I need to know in an emergency?*

### 1. PRODUCT IDENTIFICATION

**TRADE NAME (AS LABELED):** **OCUCOAT**  
**PRODUCT USE:** Preparation for IntraOcular Lenses  
**MANUFACTURED FOR:** **BAUSCH & LOMB**  
21 Park Place Blvd N.  
Clearwater, FL 33759  
**EMERGENCY PHONE:** CHEMTREC: 800-424-9300  
**BUSINESS PHONE:** 1-800-338-2020  
**DATE OF PREPARATION:** July 29, 1994; updated July 01, 2002

### 2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	% w/w	EXPOSURE LIMITS IN AIR					
		ACGIH		OSHA		IDLH	OTHER
		TLV	STEL	PEL	STEL		
Hydroxypropyl Methyl Cellulose	2	NE	NE	NE	NE	NE	NE
Sodium Chloride	<0.5	NE	NE	NE	NE	NE	NE
Potassium Chloride	< 0.01	NE	NE	NE	NE	NE	NE
Calcium Chloride	< 0.05	NE	NE	NE	NE	NE	NE
Magnesium Chloride	< 0.05	NE	NE	NE	NE	NE	NE
Sodium Acetate	<0.4	NE	NE	NE	NE	NE	NE
Sodium Citrate	< 0.2	NE	NE	NE	NE	NE	NE
Water	> 96	NE	NE	NE	NE	NE	NE

NE = Not Established

C = Ceiling Limit

See Section 16 for Definitions of Terms Used

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

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### 3. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** This substance consists of colorless, transparent viscous liquid with no odor. The primary health hazard associated with emergency response to this material is the potential for mild irritation of skin, eyes, and other contaminated tissue. When involved in a fire, this material and its packaging may decompose and produce irritating vapors and toxic compounds (including carbon monoxide, carbon dioxide, nitrogen oxides, and benzene). This substance is not reactive. Emergency responders must wear adequate personal protective equipment for the situations to which they are responding. Use in accordance with product literature. If you are allergic to any ingredient in this product, DO NOT USE. Keep this and all other drugs out of the reach of children.

#### **HMIS RATINGS**

Health – 0

Flammability - 0

Reactivity – 0

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## **PART II** *What should I do if a hazardous situation occurs?*

### 4. FIRST-AID MEASURES

**EYE EXPOSURE:** If discomfort or irritation develops, immediately discontinue product use and contact your eye care professional.

**SKIN EXPOSURE:** No specific treatment is necessary since this material is not likely to be hazardous by contact with the skin or mucous membranes.

**INGESTION:** No specific treatment is necessary since this material is not likely to be hazardous by ingestion. If large quantities are accidentally ingested (greater than a tablespoon), get medical attention immediately.

**INHALATION:** No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of mists, remove to fresh air and get medical attention if cough or other symptoms develop.

**Note to Physicians:** Additional details are available on the package or in the Physician's Desk Reference.

CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of the label and the MSDS to health professional with victim.

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### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not flammable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

**FLAMMABLE LIMITS (in air by volume, %):** Not applicable.

#### FIRE EXTINGUISHING MATERIALS:

Water Spray: OK      Carbon Dioxide: OK      Other: "ABC" type  
Foam: OK      Dry Chemical: OK      Halon: OK

UNUSUAL FIRE AND EXPLOSION HAZARDS: This material must be substantially pre-heated before ignition can occur. When involved in a fire, this material may decompose and produce irritating vapors and toxic compounds (including carbon monoxide, carbon dioxide).

Explosion Sensitivity to Mechanical Impact: Not applicable.

Explosion Sensitivity to Static Discharge: Not applicable.

SPECIAL FIRE-FIGHTING PROCEDURES: Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. All personal protective gear and contaminated fire-response equipment should be decontaminated with soapy water before being returned to service. Move fire-exposed containers, if it can be done without risk to firefighters. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

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## 6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: In case of a spill, clear the affected area and protect people. Trained personnel using pre-planned procedures should respond to uncontrolled releases.

Use appropriate personal protective equipment. Contain the spill to prevent drainage into sewers, drains or streams. Use absorbent material to solidify the spill. Shovel or scoop up solidified waste. Decontaminate the area thoroughly. Place all spill residue in an appropriate, labeled container and seal immediately. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations, or those of Canada and its Provinces (see Section 13, Disposal Considerations).

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## PART III *How can I prevent hazardous situations from occurring?*

### 7. HANDLING and STORAGE

No special handling is required. Use in accordance with product literature.

Store product in original containers with the cap tightly closed at a controlled room temperature 15 -30 degrees C (59 - 86 F). **KEEP THIS AND ALL DRUGS OUT OF THE REACH OF CHILDREN.**

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## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

#### **RESPIRATORY PROTECTION:**

No special controls or personal protection required under conditions of intended use.

#### **SKIN PROTECTION:**

No special controls or personal protection required under conditions of intended use.

#### **EYE PROTECTION:**

No special controls or personal protection required under conditions of intended use.

#### **ADDITIONAL PROTECTIVE CLOTHING & EQUIPMENT:**

NA

## 9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): Not applicable.

SPECIFIC GRAVITY (water = 1): 1.006

SOLUBILITY IN WATER: Soluble.

VAPOR PRESSURE, mm Hg: 23.8 @ 25 C

ODOR THRESHOLD: Not applicable.

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not available.

EVAPORATION RATE (n-BuAc=1): Not applicable.

MELTING/FREEZING POINT: Not Applicable

BOILING POINT: 100 C

pH: Not applicable.

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## 10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: None

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures and incompatible chemicals.

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## **PART IV** *Is there any other useful information about this material?*

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## 11. TOXICOLOGICAL INFORMATION

CAS# 9004-65-3 **Hydroxypropyl Methylcellulose**

May cause irritation to the eyes, skin and respiratory tract. Dust exposure to the eyes, skin, respiratory and digestive tract can cause hypersensitivity in some individuals. Intraperitoneal-rat LD50 5200 mg/kg, intraperitoneal-mouse LD50 5000 mg/kg.

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## 12. ECOLOGICAL INFORMATION

No specific ecological data are available for this product.

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## 13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or those of Canada and its Provinces. If unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority.

U.S. EPA WASTE NUMBER: Not applicable to wastes consisting only of Ocucoat.

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## 14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Not applicable.

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable.

UN IDENTIFICATION NUMBER: Not applicable.

PACKING GROUP: Not applicable.

DOT LABEL(S) REQUIRED: Not applicable.

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 1996: Not applicable.

MARINE POLLUTANT: Not designated as a marine pollutant, per Appendix B to U.S. EPA, 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS NOT CONSIDERED A DANGEROUS GOODS.

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## 15. REGULATORY INFORMATION

### **ADDITIONAL U.S. REGULATIONS:**

U.S. SARA REPORTING REQUIREMENTS: Not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: This product is regulated under Food and Drug Administration Standards and is not subject to the requirements of TSCA.

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OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Not covered under specific State regulations, as denoted below:

**Alaska - Designated Toxic and Hazardous Substances:** No.

**California - Permissible Exposure Limits for Chemical Contaminants:** No.

**Florida - Substance List:** No.

**Illinois - Toxic Substance List:** No.

**Kansas - Section 302/313 List:** No.

**Massachusetts - Substance List:** No.

**Michigan - Critical Materials Register:** No.

**Minnesota - List of Hazardous Substances:** No.

**Missouri - Employer Information/Toxic Substance List:** No.

**New Jersey - Right to Know Hazardous Substance List:** No.

**North Dakota - List of Hazardous Chemicals, Reportable Quantities:** No.

**Pennsylvania - Hazardous Substance List:** No.

**Rhode Island - Hazardous Substance List:** No.

**Texas - Hazardous Substance List:** No.

**West Virginia - Hazardous Substance List:** No.

**Wisconsin - Toxic and Hazardous Substances:** No.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65) No listed substances on the California Proposition 65 lists.

**ADDITIONAL CANADIAN REGULATIONS:**

CANADIAN DSL/NDL INVENTORY STATUS: Regulated under the Canadian Food and Drugs Act; the requirements of CEPA are not applicable to this product.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: Not on the CEPA Priorities Substances Lists.

CANADIAN WHMIS SYMBOLS: Not applicable.

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## 16. OTHER INFORMATION

*To the best of our knowledge, the information contained herein is accurate. However, neither Bausch & Lomb Incorporated 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 materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE IS MADE. In no event shall Bausch & Lomb Incorporated or any of its subsidiaries be liable for any special, incidental or consequential damages.*

## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

**CAS #:** This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

### EXPOSURE LIMITS IN AIR:

**ACGIH** - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **TLV** - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (**TWA**), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (**C**). Skin absorption effects must also be considered.

**OSHA** - U.S. Occupational Safety and Health Administration.

**PEL** - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order. **IDLH** - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG** - **MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**RELs**). When no exposure guidelines are established, an entry of **NE** is made for reference.

### HAZARD RATINGS:

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM:** Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). Reactivity Hazard: **0** (normally stable); **1** (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

**NATIONAL FIRE PROTECTION ASSOCIATION:** Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure causes death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

### FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

### TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD<sub>50</sub>** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC<sub>50</sub>** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m<sup>3</sup>** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** **EC** is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K<sub>ow</sub>** or **log K<sub>oc</sub>** and is used to assess a substance's behavior in the environment.

### REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **U.S.:** **EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA:** **CEPA** is the Canadian Environmental Protection Act. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.