



MATERIAL SAFETY DATA SHEET

PRODUCT: Leader Lens Cleaning Liquid

Issue Date: 2 February 2009

Revision Date: 1 Oct 2010

Revision Number: 2

NFPA 	HMIS <table border="1"><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr><tr><td> </td><td> </td></tr></table>	Health Hazard	2	Fire Hazard	1	Reactivity	0			PPE 	Transport Symbol
Health Hazard	2										
Fire Hazard	1										
Reactivity	0										

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Leader Lens Cleaning Liquid
Product Number(s): LCS080600, LCS161200

Recommended Use: Lens cleaner

Supplier Information:

Radians, Inc.
5305 Distriplex Farms Drive
Memphis, Tennessee 38134
Phone: 1-901-388-7776
Fax: 1-901-266-2558

Emergency Phone: Call INFOTRAK - 1-800-535-5053

2. HAZARDS IDENTIFICATION

Potential Health Effects

Principal Routes of Exposure

Inhalation. Skin contact. Eye Contact.

Acute Toxicity

Eyes

Contact may cause irritation.

Skin

May cause irritation.

Inhalation

Avoid breathing vapors or mists. May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Ingestion

May be harmful if swallowed.

Chronic Effects

No known effects based on information supplied.

Aggravated Medical Conditions

Central nervous system. Preexisting eye disorders. Blood disorders. Kidney disorders. Liver disorders. Overexposure may cause female and male reproductive disorder(s). Skin disorders.

Interactions w/ Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

Environmental Hazards

See section 12

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3. INGREDIENTS

Chemical Name	CAS No.	% by Weight
Water	773-18-5	88 - 95
Supplier Trade Secret	Proprietary	5-10
Supplier Trade Secret	Proprietary	<0.1
Sodium Bicarbonate	144-55-8	<0.1
Anti-Fog	56-81-5	<1
Anti-Stat	68391-01-5	<1

4. FIRST AID MEASURES

Eye Contact	Rinse Immediately with plenty of clean water, also under eyelids, for at least 15 minutes. Keep eyes wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash with soap and water. If irritation persists, or allergic reaction occurs, call a physician.
Inhalation	Move to fresh air.
Ingestion	Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician immediately.
Notes to Physicians	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammable Properties	Combustible material.
Flash Point	118A°C/244.4A°F
Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Uniform Fire Code	- Combustible Liquid III-B - Other health hazard: Target Organ Toxin -- Liquid
Hazardous Byproducts of Combustion	Carbon oxides
Explosion Data	
Sensitivity to Mechanical Impact	Not sensitive
Sensitivity to Static Discharge	Yes
Protective Equipment	Wear self contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent), and full protective gear.
Special Precautions	

NFPA Health Hazard: 2 Flammability: 1 Stability: 0 Physical & Chemical Hazards:

6. ACCIDENTAL RELEASE & SPILL MEASURES

Personal Precautions	Ensure adequate ventilation. Avoid contact with skin and eyes.
Containment Methods	Prevent further leakage or spillage if safe to do so.
Clean-up Methods	Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

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7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practices. Avoid contact with skin and clothing. Avoid contact with skin. Keep out of reach of children.

Storage Keep container tightly closed in a cool dry place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Supplier Trade Secret	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ Skin	IDLH: 700 ppm

Engineering Measures Showers. Eyewash Stations. Ventilation Systems

Personal Protective Equipment

Eye & Face Protection Tight fitting safety goggles

Skin & Body Protection Lightweight protective clothing. Protective gloves.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Clear, pale pink or pale blue liquid.
Odor Mild citrus
Odor Threshold no information available
Physical State Liquid
pH 7
Flash Point 118A°C/244.4A°F
Auto-ignition Temperature no information available
Decomposition Temperature no information available
Boiling Point 98A°C/208A°F
Melting Point no information available
Flammability Limits in Air no information available
Explosion Limits no information available
Water Solubility soluble in water
Solubility no information available
Evaporation Rate no information available
Vapor Pressure no information available
Vapor Density no information available
Specific Gravity (@20°C) no information available
VOC Content 5.09
Partition coefficient (n-octanol/water)

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions

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Incompatible Products None known based on information supplied

Conditions to Avoid Heating in air.

Hazardous Byproducts of Decomposition Carbon Oxides

Hazardous Polymerization Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplies information.

Chemical Name	LD50 Oral	LD50 Dermal	LD50 Inhalation
Water	90 mL/kg (Rat)		
Supplier Trade Secret	470 mg/kg (Rat)	220 mg/kg (Rat) 2270 mg/kg (Rabbit)	2.21 mg/L (Rat) 4h 450 ppm (rat) 4h
Sodium Bicarbonate	4220 mg/kg (Rat)		

Chronic Toxicity

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Supplier Trade Secret	A3			

ACGIH: American Conference of Governmental Industrial Hygienists)

A3: Animal Carcinogen

Target Organ Effects Blood, Central Nervous System (CNS), Eyes, Hematopoietic System, Kidney, Liver, Respiratory System, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Supplier Trade Secret		LC50=1490 mg/L Lepomis macrochirus 96h		LC50 1698-1940 mg/L 24h EC50 = 1720 mg/L 24h
Sodium Bicarbonate	EC50 > 650mg/L 120h	LC50=8250-9000 mg/L Lepomis macrochirus 96h		EC50 = 2350 mg/L 48h

Chemical Name	Log Pow
Supplier Trade Secret	=0.81 25A°C

13. WASTE DISPOSAL

Waste Disposal Methods

This material as supplied is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261

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to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Materials

Dispose of in accordance with local regulations.

14. TRANSPORTATION

DOT not regulated
TDG not regulated
MEX not regulated
ICAO not regulated
IATA not regulated
IMDG/IMO not regulated
RID not regulated
ADR not regulated
ADN not regulated

15. REGULATORY INFORMATION

International Inventories

TSC Complies
DSL Does not comply
EINECS/ELINCS Does not comply
ENCS Does not comply
IECSC Does not comply
KECL Does not comply
PICCS Does not comply
AICS Does not comply

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, part 372.

Chemical Name	CAS No.	% by Weight	SARA 313 - Threshold Values %
Supplier Trade Secret	Proprietary	5-10	1.0

SARA 313 / 312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Pressure Release Hazard No
Reactive Hazard No

Clean Water Act

This Product does not contain any substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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Clean Air Act, Sec. 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPs) under Sec. 112 of the Clean Air Act.

Chemical Name	CAS No.	% by Weight	HAPs Data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Supplier Trade Secret	Proprietary	5 - 10		Group I		

CERCLA

This material as supplied does not contain any substances regulated as hazardous substances under the Comprehensive Environmental response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	MA	NJ	PA	IL	RI	
Supplier Trade Secret	X	X	X	X	X	

International Regulations

Mexico – Grade

No information available

Chemical Name	Carcinogen Status	Exposure Limits
Supplier Trade Secret		Mexico: TWA=400ppm Mexico: TWA=980 mg/m ³ Mexico: STEL=1225 mg/m ³ Mexico: STEL=500ppm

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR), and the MSDS contains all of the information required by the CPR.

WHMIS Hazard Class

Non-controlled

D1B Toxic materials



Chemical Name	National Pollutant Release Inventory
Supplier Trade Secret	X

16. OTHER INFORMATION

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Revision Note

Hazards and Emergency Overview

May be harmful if swallowed.
Irritating to eyes.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, release and disposal, and is not to be considered as a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text of this MSDS.

* * * END OF MATERIAL SAFETY DATA SHEET * * *