MATERIAL SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, WHMIS & 2001/58 EC Standards | MSDS Revision: 1.1 | MSDS Revision Date: 02/20/2011

1. PRODUCT IDENTIFICATION

1.1	Product Name:	**CaiKleen™ RBR, RBR100L** (low odor formula)
1.2	Chemical Name:	See ingredients listed in section 3
1.3	Synonyms:	CaiKleen™ RBR, RBR100L
1.4	Trade Names:	NA
1.5	Product Use:	Rubber Cleaner & Rejuvenator
1.6	Manufacturer's Name:	CAIG Laboratories, Inc.
1.7	Manufacturer's Address:	12200 Thatcher Court, Poway, CA 92064-6876
1.8	Business Phone:	+1 (800) 224-4123
1.9	Emergency Phone:	**CHEMTREC +1 (703) 527-3887/+1 (800) 424-9300**
1.10	Other Product Names:	CaiKleen™ RBR, Pump Spray, 150 mL (Part No. RBR100PS-6) CaiKleen™ RBR, Oiler Pen, 6 mL (Part No. RBR100L-P6C) CaiKleen™ RBR, Oiler Pen, 25 mL (Part No. RBR100L-25C) CaiKleen™ RBR, Dropper Bottle, 59 mL (Part No. RBR100L-2) CaiKleen™ RBR, Liquid, 354 mL (Part No. RBR100L-12)

CHEMICAL RESPONSE CARD:	01
RESPONSE TEAM PPE:	
WHMIS:	
HEALTH:	1
FLAMMABILITY:	1
PHYSICAL HAZARDS:	0
PERSONAL PROTECTION:	B

2. HAZARD IDENTIFICATION

2.1 Hazard Identification:

Combustible Liquid. This product is classified as a HAZARDOUS SUBSTANCE but NOT as DANGEROUS GOODS according to the classification criteria of NOHSC: 1008(2004) and ADG Code (Australia).

2.2 Routes of Entry:

Inhalation:	NO	Absorption:	YES	Ingestion:	YES

2.3 Effects of Exposure:

EYES: This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists
SKIN: This product can cause mild, transient skin irritation with short-term exposure.
INGESTION: If swallowed, no significant adverse health effects are anticipated. Ingestion can cause a laxative effect. If aspirated into the lungs, liquid can cause lung damage.
INHALATION: No significant adverse health effects are expected to occur upon short-term exposure to this product. Aspiration of liquid into the lungs can cause lung damage.

2.4 Symptoms of Overexposure:

EYES: Mild irritation, redness, and watering.
SKIN: Possible irritation, defatting, or dermatitis (rash), characterized by dry, scaling, red, itching, skin.
INGESTION: Laxative effects. Gastrointestinal discomfort, nausea and headache.
INHALATION: May cause irritation to the upper respiratory system. Overexposure to sprays or mists may cause chemical pneumonitis.

2.5 Acute Health Effects:

EYES: Mild to moderate irritation, but will not injure tissue
SKIN: Low toxicity. Frequent or prolonged contat may irritate the skin.
INGESTION: Low toxicity. Laxative effects. Gastrointestinal irritation and nausea and headahe.
INHALATION: Negligible. At elevated temperatures or through mechanical action, may form vapors, mist or fumes that may be irritation to the eyes, nose, throat and lungs.

2.6 Chronic Health Effects:

Contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.

2.7 Target Organs:

None reported by the manufacturer.

2.8 Toxicological Properties:

None reported by the manufacturer.

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used
NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2010 format.

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3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m³) ACGIH ppm TLV	ACGIH ppm STEL	NOHSC ppm ES-TWA	NOHSC ppm ES-STEL	NOHSC ppm ES-PEAK	OSHA ppm TLV	OSHA ppm STEL	OSHA ppm IDLH	OTHER
MINERAL SEAL OIL	64742-30-9	PY8030000	235-183-3	≤ 90.0	5	10	NF	NF	NF	5	3	NA	MIST
CHLORINATED FATTY ESTER	68440-29-9	NA	270-448-1	≤ 15.0	NA	NA	NF	NF	NF	NA	NA	NA	
d-LIMONENE	5989-27-5	GW6360000	227-813-5	≤ 5.0	NA	NA	NF	NF	NF	NA	AN	NA	

4. FIRST AID MEASURES

4.1 First Aid:

EYES: As a precaution remove contact lenses if worn and flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention.

SKIN: Remove contaminated clothing. Use a waterless hand cleaner, mineral oil, or petroleum jelly to remove the material. Then wash the skin with soap and water If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned.

INGESTION: Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.

INHALATION: Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor of hot product immediately remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.

4.2 Medical Conditions Aggravated by Exposure:

Personnel with pre-existing skin disorders should avoid repeated or prolonged contact with this product.

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARDS	0
PROTECTIVE EQUIPMENT	B

EYES	SKIN		

5. FIREFIGHTING MEASURES

5.1 Flashpoint & Method:

> 200 °F, Cleveland Open Cup (based on mineral seal oil)

5.2 Autoignition Temperature:

NA

5.3 Flammability Limits: Lower Explosive Limit (LEL): **NA** Upper Explosive Limit (UEL): **NA**

5.4 Fire & Explosion Hazards:

This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point. Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, phosphorus, zinc and nitrogen. Also, depending upon the conditions of use, low concentrations of hydrogen sulfide can be released.

5.5 Extinguishing Methods:

Dry chemical, foam, carbon dioxide and water fog.

5. FIREFIGHTING MEASURES - continued

5.6 Firefighting Procedures:

Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Avoid spraying water directly into storage containers because of danger of boilover. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

6. ACCIDENTAL RELEASE MEASURES

6.1 Spills:

Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Stop spill or leak at source if safely possible. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment. Recover free liquid or cover with inert absorbent material and place into appropriate container(s) for disposal. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers or any natural waterway or drinking supply. Contact appropriate local and/or provincial authorities for assistance and/or reporting requirements. For water spills, remove from surface by skimming or with suitable absorbents. If allowed by federal & provincial environmental agencies, sinking and/or suitable dispersants may be used in unconfined waters. Consult an expert on disposal of recovered material. Ensure disposal on compliance with government requirements & secure conformity to local disposal regulations. Notify the appropriate federal & provincial authorities immediately. Take all additional action necessary to prevent & remedy the adverse effects of the spill.

7. HANDLING & STORAGE INFORMATION

7.1 Work & Hygiene Practices:

Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. Avoid breathing vapors. Avoid direct skin contact.

7.2 Storage & Handling:

Use and store in a cool, dry, well-ventilated area. Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Do not store in unmarked containers or storage devices

7.3 Special Precautions:

Empty containers may contain product residues. Do not pressurize, cut, heat or weld empty containers. Do not reuse empty containers without commercial cleaning or reconditioning.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 Ventilation & Engineering Controls:

The use of mechanical dilution ventilation is recommended to maintain airborne concentrations below the recommended occupational exposure limits, whenever this material is used in a confined space, is heated above normal temperatures (up to 38°C) or is agitated.

8.2 Respiratory Protection:

Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

8.3 Eye Protection:

Safety glasses equipped with side shields should be adequate protection under most conditions of use. Wear goggles and/or face shield if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125 °F (51 °C). Have suitable eye wash water available.

8.4 Hand Protection:

Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.

8.5 Body Protection:

Avoid prolonged and/or repeated skin contact. Use clean and impervious protective clothing (e.g., neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing should include long-sleeves, apron, boots and additional facial protection. Remove oil contaminated clothing. Launder oil contaminated clothing before reusing. Contaminated leather goods should be removed promptly and discarded.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	**0.913 g/cm3 @ 15 °C**
9.2	Boiling Point:	**NA**
9.3	Melting Point:	**ND**
9.4	Evaporation Rate:	**< 1.0 (n-butyl acetate = 1.0)**
9.5	Vapor Pressure:	**< 0.01 kPa**
9.6	Molecular Weight:	**NA**
9.7	Appearance & Color:	**Amber Liquid, Citrus Odor**
9.8	Odor Threshold:	**NA**
9.9	Solubility:	**NA**
9.10	Ph	**NA**
9.11	Viscosity:	**NA**
9.12	Other Information:	**ND**

10. STABILITY & REACTIVITY

10.1	Stability: **Stable under normal conditions of use (see section 7).**
10.2	Hazardous Decomposition Products: **Fumes , smoke, carbon monoxide, metal oxides, and trace hydrocarbons.**
10.3	Hazardous Polymerization: **Will not occur.**
10.4	Conditions to Avoid: **Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances.**
10.5	Incompatible Substances: **Strong oxidizers such as peroxides, nitrates, and chlorates.**

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: **This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. These data have not been presented in this document.**	
11.2	Acute Toxicity: **Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.**	
11.3	Chronic Toxicity: **See section 2.6**	
11.4	Suspected Carcinogen: **No. This products contains less than 3% DMSO (dimethyl sulfoxide).**	
11.5	Reproductive Toxicity:	**This product is not reported to produce reproductive toxicity in humans.**
	Mutagenicity:	**This product is not reported to produce mutagenic effects in humans.**
	Embryotoxicity:	**This product is not reported to produce embryotoxic effects in humans.**
	Teratogenicity:	**This product is not reported to produce teratogenic effects in humans.**
	Reproductive Toxicity:	**This product is not reported to produce reproductive effects in humans.**
11.6	Irritancy of Product: **See Section 2.3**	
11.7	Biological Exposure Indices: **NE**	
11.8	Physician Recommendations: **Treat symptomatically.**	

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability: **Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.**
12.2	Effects on Plants & Animals: **There is no specific data available for this product.**
12.3	Effects on Aquatic Life: **Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway can result in a loss of marine life or create an anaerobic environment. This material contains phosphorus which is a controlled element for disposal in effluent waters in most sections of North America. Phosphorus is known to enhance the formation of algae. Severe algae growth can reduce oxygen content in the water possibly below levels necessary to support marine life.**

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal: **Dispose of in accordance with federal, state or local regulations. Do not dump into sewers, on the ground or into any body of water.**
13.2	Special Considerations: **NA**

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): **NOT REGULATED**
14.2	IATA (AIR): **NOT REGULATED**
14.3	IMDG (OCN): **NOT REGULATED**
14.4	TDGR (Canadian GND): **NOT REGULATED**
14.5	ADR/RID (EU): **NOT REGULATED**
14.6	MEXICO (SCT): **NOT REGULATED**
14.7	ADGR (AUS): **NOT REGULATED**

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: **This product does not contain any chemicals subject to SARA reporting requirements.**
15.2	SARA Threshold Planning Quantity: **NA**
15.3	TSCA Inventory Status: **All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.**
15.4	CERCLA Reportable Quantity (RQ): **This product has no CERCLA Reportable Quantity. However, release into a waterway may require reporting to the National Response Center.**
15.5	Other Federal Requirements: **NA**
15.6	Other Canadian Regulations **This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.**
15.7	State Regulatory Information: **NA**

15. REGULATORY INFORMATION- continued

15.8	67/548/EEC (European Union) Requirements: **The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC.** **(Xi) Irritant . R: 42/43-48/20 - May cause sensitization by inhalation and skin contact. Harmful danger to health by prolonged exposure through inhalation. S: 2-29-36 – Keep out of the reach of children. Do not empty into drains. Wear suitable protective clothing.**	

16. OTHER INFORMATION

16.1	Other Information: **NA**	
16.2	Terms & Definitions: **See last page of this MSDS.**	
16.3	Disclaimer: This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for: **CAIG Laboratories, Inc.** **12200 Thatcher Court** **Poway, CA 92064-6876** **+1 (800) CAIG-123 (244-4123) phone** **+1 (858) 486-8398 fax** **http://www.caig.com/**	CAIG LABORATORIES, INC.
16.5	Prepared by: **ShipMate, Inc.** **P.O. Box 787** **780 Buckaroo Trail Suite D** **Sisters, OR 97759** **+1 (310) 370-3600 phone** **+1 (310) 370-5700 fax** **http://www.shipmate.com**	ShipMate® Dangerous Goods Training & Consulting

DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

FIRST AID MEASURES:

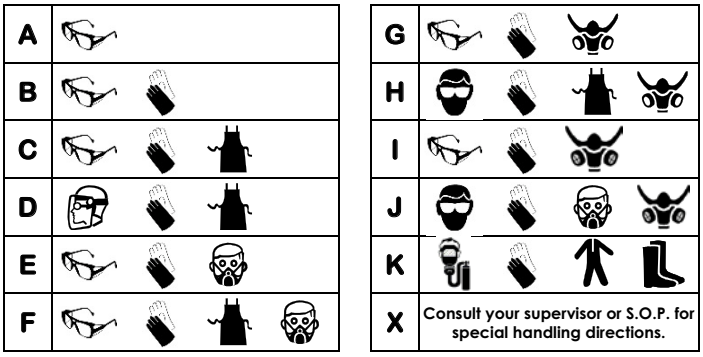
CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

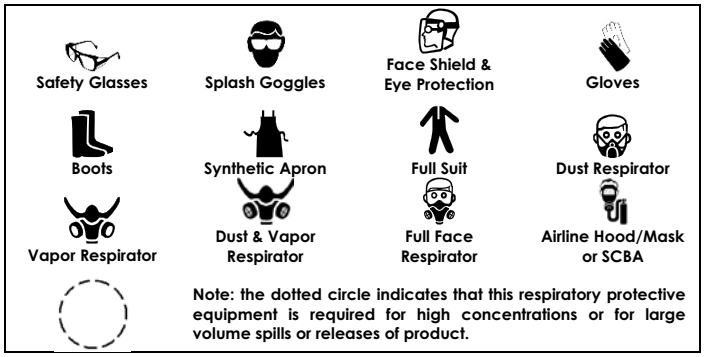
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

PERSONAL PROTECTION RATINGS:





OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
NF	Not Found
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

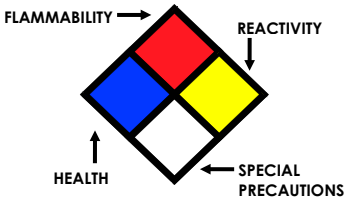
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
~~W~~	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD_{50}	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
LC_{50}	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD_{lo}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD_{lo}, LD_{lo}, & LD_o or TC, TC_o, LC_{lo}, & LC_o	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{OW} or log K_{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful