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#### **SECTION 1 – GENERAL INFORMATION**

#### 1.1 PRODUCT IDENTIFIER

PRODUCT NAME: CRL Silicone and Surface Preparation

PRODUCT CODE: SR200

#### 1.2 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEETS:

Name/Address: C.R. Laurence Co., Inc.

2503 E. Vernon Avenue, Los Angeles, CA 90058

**Telephone Number:** 1.800.421.6144 1.866.836.8855

1.3 EMERGENCY TELEPHONE NUMBER

EMERGENCY TELEPHONE NUMBER: CHEMTREC 1-800-424-9300 (US and Canada)

INTERNATIONAL: + 1-703-527-3887

#### **SECTION 2 – HAZARDS IDENTIFICATION**

**GENERAL DESCRIPTION: Methyl Siloxane** 

PHYSICAL FORM: Liquid COLOR: Colorless ODOR: Slight odor

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PROFILE:

Health: 1 Flammability: 3 INSTABILITY/REACTIVITY: 0

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids - Category 2

#### Label elements Hazard pictograms



Signal Word: DANGER!

#### Hazards

Highly flammable liquid and vapor.

#### **Precautionary Statements**

Prevention Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing spray.

Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

Response IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

to extinguish.

**Storage** Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents/container to an approved waste disposal plant.

# Other Hazards

Static-accumulating flammable liquid.

# **SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical nature: Methyl Siloxane

This product is a mixture



# SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS (CONT)

Component	CASRN	Concentration
Hexamethyldisiloxane	107-46-0	>=60.0 - <70.0%
Octamethyltrisiloxane	107-51-7	>=30.0 - <40.0%

# **SECTION 4 - FIRST AID MEASURES**

#### **Description of First Aid Measures**

#### General Advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin Contact:** Wash off with plenty of water.

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2

minutes and continue flushing for several additional minutes. If effects occur, consult a physician,

preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

#### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: toxicology Information.

### Indication of any immediate medical attention and special treatment needed - Notes to Physician:

May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Repeated excessive exposure may aggravate pre-existing lung disease.

# **SECTION 5 – FIRE FIGHTING MEASURES**

#### Suitable extinguishing media:

Water spray, Alcohol-resistant foam, Carbon dioxide (CO2), Dry chemical.

#### Unsuitable extinguishing media:

High volume water jet. Do not use direct water stream.

Special hazards arising from the substance or moisture/Hazardous combustion products: Carbon oxides Silicone oxides. Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Fire burns more vigorously than would be expected. Vapors may form explosive mixtures with air.

### **Advice for Firefighters**

#### Fire fighting procedures

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Contain fire water run-off if possible. Fire water run-off if not contained, may cause environmental damage. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Do not use a solid water stream as it may scatter and spread fire.

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#### **SECTION 5 - FIRE FIGHTING MEASURES (CONT)**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

#### **Special Protective Equipment for Firefighters:**

Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

### Personal precautions, protective equipment and emergency procedures:

Remove all sources of ignition. Ventilate area. Follow safe handling advice and personal protective equipment recommendations.

#### **Environmental precautions:**

Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

#### Methods and materials for containment and cleaning up:

Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. See sections: 7,8,11,12 and 13.

# **SECTION 7 – HANDLING AND STORAGE**

# Precautions for safe handling:

Avoid inhalation of vapor or mist. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice. Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

# Conditions for safe storage:

Keep in properly labelled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases.

Unsuitable materials for containers: None known.

# SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Control Parameters**

If exposure limits exists, they are listed below. If no exposure limits are displayed, then no values are applicable.



#### SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT)

Component	Regulation	Type of listing	Value/Notation
Hexamethyldisiloxane	Dow IHG	TWA	50 ppm
Octamethyltrisiloxane	Dow IHG	TWA	20 ppm

#### **Exposure Controls**

#### **Engineering Controls:**

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

# Individual protection measures

Eye/Face Protection: Use safety glasses (with side

Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use full-face respirator.

**Skin Protection** 

**Hand Protection:** 

Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include:Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other Protection:

Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend

on the task.

**Respiratory Protection:** 

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate

pre-filter.

# **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** 

Physical State Liquid
Color Colorless
Odor Slight
Odor Threshold No Data Available

pH No Data Available
Melting point/range No Data Available
Freezing point No Data Available
Boiling Point (730 mmHg) 110° C (230° F)
Flash Point Closed cup -3° C (27° F)

Evaporation Rate No Data Available

(Butyl Acetate =1)

Flammability (solid, gas) Not applicable



#### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES (CONT)

Lower Explosion Limit 0.9% vol Upper Explosion Limit 13.8% vol Vapor Pressure No Data Ava

Vapor Pressure
Relative Vapor Density (air = 1)
No Data Available
No Data Available

Relative Density (water – 1) 0.78

Water Solubility
Partition Coefficient:
n-octanol/water
Auto-ignition temperature
Decomposition temperature
No Data Available
No Data Available
No Data Available

Kinematic Viscosity 0.75 cSt
Explosive properties Not explosive

Oxidizing properties The substance or mixture is not classified as oxidizing

Molecular weight No Data Available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

# **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity** Not classified as a reactivity hazard.

Chemical Stability: Stable under normal conditions

Possibility of hazardous reactions: Can react with strong oxidizing agents. Vapors may form explosive

mixture with air. Highly flammable liquid and vapor.

Conditions to avoid: Heat, flames and sparks

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Formaldehyde

### **SECTION 11 – TOXICOLOGICAL INFORMATION**

Toxicological information appears in this section when such data is available.

**Acute Toxicity** 

Acute oral toxicity Very low toxicity if swallowed. Harmful effects not anticipated from

swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s): LD50, Rat, > 2000 mg/kg Estimated.

Acute dermal toxicity Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s): LD50, Rabbit, > 2000 mg/kg Estimated.

Acute inhalation toxicity No adverse effects are anticipated from single exposure to vapor. Excessive

exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Vapor concentrations of volatile silicones are likely to become uncomfortable to humans before they result in toxicologically significant

effects.

As product: The LC50 has not been determined.

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#### **SECTION 11 - TOXICOLOGICAL INFORMATION (CONT)**

#### Skin Corrosion/irritation

Brief contact is essentially non-irritating to skin.

Prolonged contact may cause skin irritation with local redness.

May cause more severe response on covered skin (under clothing, gloves).

#### Serious eye damage/eye irritation

May cause slight temporary eye irritation

Corneal injury is unlikely

Vapor or mist may cause eye irritation.

#### Sensitization

Based on information for component(s):

Did not cause allergic skin reactions when tested in humans.

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

#### Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

#### Specific Target Organ Systemic Toxicity (Repeated Exposure)

Contains component(s) which have been reported to cause effects on the following organs in animals:

Kidney

Liver

Testes

However, the effects are species specific and are not relevant to humans.

This material contains octamethyltrisiloxane (L3). Repeated inhalation exposure in rats to L3 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown. This material contains hexamethyldisiloxane (HMDS). Repeated inhalation exposure in rats to HMDS resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

#### Carginogenicity

Based on information for component(s): Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans. Early onset of testicular cell tumors has been observed that are spontaneous and common in rats. These effects are believed to be species specific and unlikely to occur in humans.

# Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

### Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies. Contains component(s) which did not interfere with fertility in animal studies.

#### Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

#### **Aspiration Hazard**

No aspiration toxicity classification



#### SECTION 11 - TOXICOLOGICAL INFORMATION (CONT)

#### COMPONENTS INFLUENCING TOXICOLOGY:

#### **Hexamethyldisiloxane**

#### Acute inhalation toxicity

LC50 Rat, male and female, 4 hour, vapor, 106 mg/l OECD Test Guideline 403

#### **Octamethyltrisiloxane**

#### Acute inhalation toxicity

LC50 Rat, male and female, 4 hour, vapor, > 22.6 mg/l No deaths occurred at this concentration.

#### **SECTION 12 - ECOLOGICAL INFORMATION**

Ecotoxicological information appears in this section when such data is available.

#### **Toxicity**

#### **Hexamethyldisiloxane**

#### Acute toxicity to fish

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 0.46 mg/l

#### Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

ErC50, Selenastrum capricornutum (green algae), 72 Hour, Growth rate, > 0.55 mg/l OECD

Test Guideline 201

#### Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 0.08 mg/l

# **Octamethyltrisiloxane**

# Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, > 0.0191 mg/l, OECD

Test Guideline 203

# Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0.02 mg/l OECD

Test Guideline 202

# Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 0.0094 mg/l, OECD Test Guideline 201

#### Toxicity to bacteria

For similar material(s):

EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l, OECD

Test Guideline 209

#### Chronic toxicity to fish

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 90 d, > 0.027 mg/l

#### Chronic toxicity to aquatic vertebrates

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, > 0.015 mg/l



# SECTION 12 - ECOLOGICAL INFORMATION (CONT)

#### Persistence and degradability

#### **Hexamethyldisiloxane**

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass

OECD/EEC tests for ready biodegradability.

10-day Window: Not applicable Biodegradation: 2% Exposure time: 28 d

Method: OECD Test Guideline 301C

This material rapidly hydrolyzes to products that are either readily or ultimately biodegradable.

#### Stability in Water (1/2 -life)

Hydrolyses on contact with water.

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals Atmospheric half-life: 11.9 d

Method: Estimated

#### Octamethyltrisiloxane

Biodegradability: Biodegradation under aerobic laboratory conditions is below detectable limits

(BOD20 or BOD28/ThOD < 2.5%) 10-day Window: Not applicable

Biodegradation: 0% Exposure time: 28 d

Method: OECD Test Guideline 310 or Equivalent

**Photodegradation** 

Atmospheric half-life: 8.94 d

Method: Estimated

#### Bioaccumulative potential

#### **Hexamethyldisiloxane**

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between

3 and 5). Reacts with water.

Partition coefficient: n-octanol/water (lowPow): 4.20 Measured

Bioconcentration factor (BCF): 1,300 Fish Measured

# **Octamethyltrisiloxane**

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Low Pow between 5 and 7).

Partition coefficient: n-octanol/water (low Pow): 5.35 Estimated.

Bioconcentration factor (BCF): >= 500 Pimephales Promelas (fathead minnow)

OECD Test Guideline 305

# Mobility in soil

# **Hexamethyldisiloxane**

Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient (Koc): 390 – 4600 Estimated.

# Octamethyltrisiloxane

Potential for mobility in soil is slight (Koc between 2000 and 5000).

Partition coefficient (Koc): 3179 Estimated.

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#### **SECTION 13 - DISPOSAL**

#### **Disposal Methods:**

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted recycler/ reclaimer/incinerator or other thermal destruction device. For additional information refer to Handling & Storage Information, SDS Section 7 Stability & Reactivity Information SDS Section 10 Regulatory Information SDS Section 15.

#### Treatment and disposal methods of used packaging:

Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

#### **SECTION 14 - TRANSPORTATION**

DOT

Proper Shipping Name Flammable liquids, n.o.s. (Hexamethyldisiloxane,

Octamethyltrisiloxane)

UN 1993 Class 3 Packing Group II

Marine Pollutant Hexamethyldisiloxane

Transport in Bulk Consult IMO regulations before transporting ocean bulk

According to Annex I or II Of MARPOL 73/78 and the

**IBC or IGC Code** 

Classification for SEA transport (IMO-IMDG):

**Proper Shipping Name** Flammable liquids, n.o.s. (Hexamethyldisiloxane,

Octamethyltrisiloxane)

UN Number UN 1993 Class 3 Packing Group II

Marine Pollutant Hexamethyldisiloxane

Transport in bulk Consult IMO regulations before transporting ocean bulk

According to Annex I or II of MARPOL 73/78 and the

**IBC or IGC Code** 

Classification for AIR transport (IATA/ICAO):

Proper Shipping Name Flammable liquids, n.o.s. (Hexamethyldisiloxane,

Octamethyltrisiloxane)

UN Number UN 1993 Class 3 Packing Group II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of material.

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# **SECTION 15 – REGULATORY INFORMATION**

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Flammable (gases, aerosols, liquids or solids)

Hazard not otherwise classified (physical hazards)

# Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103 This material does not contain any components with a CERCLA RQ

#### Pennsylvania Right to Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

ComponentsCASRNHexamethyldisiloxane107-46-0Octamethyltrisiloxane107-51-7

#### California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm

#### **United States TSCA Inventory (TASCA)**

All components of this product are in compliance with the inventory listing requirements of the US Toxic Substances Control Act (TSCA) Chemical Substance Inventory

# **SECTION 16 – OTHER INFORMATION**

# **Hazard Rating System**

# NFPA

HEALTH	FLAMMABILITY	INSTABILITY
0	3	0
HMIS		
HEALTH	FLAMMABILITY	PHYSICAL HAZARD
0	3	0

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