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Revision Number 3

This document complies with the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING****GHS product identifier****Product Name** DuraShield 310 Resin**Other means of identification****Synonyms** DuraShield 310 Resin – Part A , DuraShield 310 Polyol, DuraShield 310 Polyol – Part A, DuraShield 310-61 Resin, DuraShield 310-61 Resin Part A, DuraShield 310-61 Polyol, DuraShield 310-61 Polyol Part A**Recommended use of the chemical and restrictions on use****Recommended Use** Resin for Chemical Resistant Coating**Uses advised against** Consumer use**Supplier's details****Initial Supplier**Cloverdale Paint Inc.  
400-2630 Croydon Drive  
Surrey, British Columbia  
V3Z 6T3**Manufacturer Address**LifeLast. Inc.  
3813 Helios Way, Suite 190  
Pflugerville, TX 78660  
Telephone number: 512-628-2112**Emergency telephone number****Emergency Telephone Number** Chemtrec 1-800-424-9300**2. HAZARDS IDENTIFICATION****Classification**

This product is considered hazardous according to the criteria set within the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

Skin Sensitization	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2

**Label Elements****Signal Word**

## Warning

**Hazard Statements**

May cause an allergic skin reaction  
 May cause damage to organs through prolonged or repeated exposure

**Physical and Health Hazards Not Otherwise Classified**

Not applicable.

**Precautionary Statements****Prevention**

- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves.
- Do not breathe dust/fume/gas/mist/vapors/spray.

**General Advice**

- Get medical attention/advice if you feel unwell

**Skin**

- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.

**Storage**

- None

**Disposal**

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

**Other information**

**Unknown acute toxicity** 0% of the mixture consists of ingredient(s) of unknown toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**

DuraShield 310 Resin – Part A , DuraShield 310 Polyol,  
 DuraShield 310 Polyol – Part A, DuraShield 310-61 Resin,  
 DuraShield 310-61 Resin Part A, DuraShield 310-61 Polyol,  
 DuraShield 310-61 Polyol Part A

Chemical Name	CAS-No	Weight %	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Quartz	14808-60-7	15-40	11895	2018-01-12
Titanium dioxide	13463-67-7	0-5	11895	2018-01-12
Carbon black	1333-86-4	0-5	11895	2018-01-12
Diamine	Trade Secret	0-5	11895	2018-01-12
Aliphatic Amine	Trade Secret	0-5	11895	2018-01-12

### 4. FIRST AID MEASURES

**Description of necessary first-aid measures**

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Remove and wash contaminated clothing before re-use.
<b>Inhalation</b>	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Protection of First-aiders</b>	Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes and clothing.

**Most important symptoms/effects, acute and delayed**

**Most Important Symptoms/Effects** Rashes. Itching.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to Physician** May cause sensitization by skin contact.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** None

**Specific Hazards Arising from the Chemical** Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Combustion Products** Carbon oxides. Nitrogen oxides (NOx).

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Avoid contact with skin, eyes and clothing. Wear protective gloves.

**Environmental Precautions**

**Environmental Precautions** Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Dike far ahead of liquid spill for later disposal.

**Methods for Cleaning Up** Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Use personal protective equipment. Sweep up and shovel into suitable containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** Wear personal protective equipment. Avoid contact with skin, eyes and clothing.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep container tightly closed.

**Incompatible Products** Strong oxidizing agents. Strong acids.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	30/(%SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, Total Dust;250/(%SiO <sub>2</sub> +5) mppcf TWA, respirable fraction; 10/(%SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, respirable TWA: 0.1 mg/m <sup>3</sup> (vacated)	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 mg/m <sup>3</sup>
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable particulate matter	TWA: 3.5 mg/m <sup>3</sup> (vacated) TWA: 3.5 mg/m <sup>3</sup>	IDLH: 1750 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

### Appropriate engineering controls

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Safety glasses with side-shields.  
**Skin and Body Protection** Wear protective gloves/clothing.  
**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical State** Liquid. **Appearance** Varies.

<b>Odor</b>	Faint.	<b>Odor Threshold</b>	No information available.
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<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	> 232 °C	None known
Flash Point	> 226 °C	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	No data available	None known
Specific Gravity	1.3 (25 C)	None known
Water Solubility	Insoluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
<b>Flammable Properties</b>	Not flammable	
<b>Explosive Properties</b>	No data available	
<b>Oxidizing Properties</b>	No data available	
<b><u>Other information</u></b>		
VOC Content (%)	No data available	

## 10. STABILITY AND REACTIVITY

<b><u>Reactivity</u></b>	No data available.
<b><u>Chemical stability</u></b>	Stable under recommended storage conditions.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Hazardous Polymerization</u></b>	Hazardous polymerization does not occur.
<b><u>Conditions to avoid</u></b>	High temperatures.
<b><u>Incompatible materials</u></b>	Strong oxidizing agents. Strong acids.
<b><u>Hazardous decomposition products</u></b>	Carbon oxides. Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

### **Information on likely routes of exposure**

<b>Product Information</b>	There is no data available for this product
<b>Inhalation</b>	May cause irritation.
<b>Eye Contact</b>	May cause irritation.
<b>Skin Contact</b>	May cause allergic skin reaction.
<b>Ingestion</b>	There is no data available for this product.

### **Numerical measures of toxicity - Product**

The following values are calculated based on chapter 3.1 of the GHS document:

<b>LD50 Oral</b>	10109 mg/kg; Acute toxicity estimate
<b>LD50 Dermal</b>	9012 mg/kg; Acute toxicity estimate
<b>Inhalation dust/mist</b>	5.7 mg/L; Acute toxicity estimate
<b>Unknown acute toxicity</b>	0% of the mixture consists of ingredient(s) of unknown toxicity.
Acute Oral Toxicity	0% of the mixture consists of ingredient(s) of unknown acute oral toxicity
Acute Dermal Toxicity	0% of the mixture consists of ingredient(s) of unknown acute dermal toxicity
Acute Inhalation (dust/mist) Toxicity	0% of the mixture consists of ingredient(s) of unknown acute inhalation (dust/mist) toxicity
Acute Inhalation (vapor) Toxicity	0% of the mixture consists of ingredient(s) of unknown acute inhalation (vapor) toxicity
Acute Inhalation (gas) Toxicity	0% of the mixture consists of ingredient(s) of unknown acute inhalation (gas) toxicity

### Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Quartz	-	-	-
Titanium dioxide	> 10000 mg/kg ( Rat )	-	> 6820 mg/m <sup>3</sup>
Carbon black	> 15400 mg/kg ( Rat )	> 3 g/kg ( Rabbit )	-
Aliphatic Amine	= 1000 mg/kg ( Rat )	-	-

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** rash

### Delayed and immediate effects and also chronic effects from short and long term exposure

**Respiratory or Skin Sensitization** May cause sensitization by skin contact.  
**Germ Cell Mutagenicity** No information available.  
**Carcinogenicity** This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to this product. This product contains titanium dioxide which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is a liquid. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Quartz	A2	Group 1	Known	X
Titanium dioxide		Group 2B		X
Carbon black	A3	Group 2B	-	X

#### ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

A2 - Suspected Human Carcinogen

#### IARC: (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 1 - Carcinogenic to Humans

#### NTP: (National Toxicity Program)

Known - Known Carcinogen

#### OSHA: (Occupational Safety & Health Administration)

X - Present

**Reproductive Toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** May cause disorder and damage to the: Liver, Blood.  
**Aspiration Hazard** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Not Classified

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Carbon black 1333-86-4				EC50 24 h: > 5600 mg/L (Daphnia magna)
Aliphatic Amine		LC50 96 h: 46 - 100 mg/L static (Leuciscus idus)		

**Persistence and Degradability** No information available.**Bioaccumulation** No information available.

Chemical Name	Log Pow
Aliphatic Amine	2.03

**Mobility** No information available.**Other Adverse Effects** No information available.**13. DISPOSAL CONSIDERATIONS**

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

**Contaminated Packaging** Do not re-use empty containers.**14. TRANSPORT INFORMATION****DOT** Not regulated**TDG** Not regulated**MEX** Not regulated**15. REGULATORY INFORMATION****International Regulations**

**Ozone depleting substances** Not applicable  
**Persistent Organic Pollutants** Not applicable  
**Hazardous Waste** Not applicable  
**The Rotterdam Convention (Prior Informed Consent)** Not applicable  
**International Convention for the Prevention of Pollution from Ships (MARPOL)** Not applicable

**International Inventories**

**TSCA** Complies  
**DSL** Complies

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

**U.S. Federal Regulations**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

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

**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**

The classification listed below only applies to respirable quartz. The classification listed below only applies to respirable Titanium dioxide and respirable carbon black. This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Quartz	14808-60-7	Carcinogen
Titanium dioxide	13463-67-7	Carcinogen
Carbon black	1333-86-4	Carcinogen

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Quartz	X	X	X	-	X
Titanium dioxide	X	X	X	-	X
Carbon black	X	X	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

**NFPA** Health Hazard 2 Flammability 1 Instability 0 Physical and Chemical Hazards -

**HMIS** Health Hazard 2\* Flammability 1 Physical Hazard 0 Personal Protection X

\*Indicates a chronic health hazard.

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**General Disclaimer**

The information provided on this SDS 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, disposal and release and is not to be considered as a warranty or quality specification. The information relates 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.

**End of Safety Data Sheet**