



Waterline™ CI

SAFETY DATA SHEET

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier	
Product Name	Waterline™ CI
CAS No.	Mixture.
EINECS No.	None assigned.
REACH Registration No.	None assigned.
Relevant identified uses of the substance or mixture and uses advised against	
1.2 Identified use(s)	Corrosion inhibitor.
Uses advised against	None known.
Details of the supplier of the Safety Data Sheet	
1.3 Company Identification	Rivertop Renewables 1121 E. Broadway Missoula, MT 59802 USA
Telephone	(406) 549-6126
Fax	(406) 532-3267
E-Mail (competent person)	brian@rivertop.com
Emergency telephone number	
1.4 Emergency Phone No.	(406) 549-6126 [8am-5pm M-F (UTC -7)]

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
GHS	Not classified as dangerous for supply/use.
Regulation (EC) No. 1272/2008 (CLP)	Not classified as dangerous for supply/use.
2.2 Label elements	According to GHS and Regulation (EC) No. 1272/2008 (CLP)
Hazard pictogram(s)	None.
Signal word(s)	None.
Hazard statement(s)	None.
Precautionary statement(s)	None.
Other hazards	None.
2.3 Additional Information	None.
2.4	

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3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

EC Classification No. 1272/2008

Ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard pictogram(s) and Hazard statement(s)
D-Glucose, oxidation reaction products	40-60	1362053-75-5	None assigned	None assigned	None
Water	40-60	7732-18-5	231-791-2		None

3.2 Additional Information

None.

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin Contact	Wash with plenty of soap and water.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open.
Ingestion	Give plenty of water to drink. If symptoms develop, obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

None anticipated.

4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary treat symptomatically.

5. SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media	As appropriate for surrounding fire. Water spray, foam, dry powder or CO2.
Unsuitable Extinguishing Media	None known.

5.2 Special hazards arising from the substance or mixture

None anticipated.

5.3 Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Caution - spillages may be slippery. Ensure adequate ventilation. Wear protective gloves.

6.2 Environmental precautions

Do not release large quantities into the surface water or into drains.

6.3 Methods and material for containment and cleaning up

Adsorb spillages onto sand, earth or any suitable adsorbent material.

6.4 Reference to other sections

See Also Section: 8, 13.

7. SECTION 7: HANDLING AND STORAGE

General hygiene measures for the handling of chemicals are applicable.

7.1 Precautions for safe handling

Wear suitable gloves if prolonged skin contact is likely.
Wash hands and exposed skin after use. Do not eat, drink

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7.2 Conditions for safe storage, including any incompatibilities	or smoke when using this product. Keep in a cool, well ventilated place.
Storage Temperature	Ambient.
Storage Life	Stable under normal conditions.
Incompatible materials	Strongly acidic.
7.3 Specific end use(s)	Corrosion inhibitor.




8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
D-Glucose, oxidation reaction products	1362053-75-5	-	-	-	-	Not established
Water	7732-18-5	-	-	-	-	

Source: WEL: Workplace Exposure Limit (UK HSE EH40)

8.1.2 Biological limit value	Not established.
8.1.3 PNECs and DNELs	Not established.
8.2 Exposure controls	
8.2.1 Appropriate engineering controls	Provide adequate ventilation.
8.2.2 Personal protection equipment	
Eye/face protection	Wear protective eye glasses for protection against liquid splashes.
	
Skin protection (Hand protection/ Other)	Wear suitable gloves if prolonged skin contact is likely. Wear impervious gloves (EN374).
	
Respiratory protection	Normally no personal respiratory protection is necessary.
	
Thermal hazards	Not applicable.
8.2.3 Environmental Exposure Controls	Do not release large quantities into the surface water or into drains.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Brown.
Odour	Slightly sweet odour.
Odour Threshold	Not established.
pH	7-9 (50% solution).

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Melting Point/Freezing Point	Not applicable.
Initial boiling point and boiling range	96°C-145°C
Flash point	>100°C
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	7.5pa
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Soluble in water.
Partition coefficient: n-octanol/water	<-2 log units
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2 Other information	None.

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions known if used for its intended purpose.
10.4 Conditions to avoid	None anticipated.
10.5 Incompatible materials	Strongly acidic.
10.6 Hazardous Decomposition Product(s)	No hazardous decomposition products known.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity	LD 50 Rat >5,000mg/Kg
Irritation	Non-irritant to skin and eyes
Corrosivity	Not classified.
Sensitisation	It is not a skin sensitiser.
Repeated dose toxicity	None anticipated.
Carcinogenicity	No evidence of carcinogenicity.
Mutagenicity	No evidence of mutagenic potential.
Toxicity for reproduction	None anticipated.
11.2 Other information	None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Low toxicity to aquatic organisms. LC50 (Ceriodaphnia dubia -48 hour): >1000 mg/l LC50 (Fathead Minnow -48 hour): >1000 mg/l EC50 (Pseudokirchneriella subcapitata -72hr) >100mg/L
12.2 Persistence and degradability	Biodegradable
12.3 Bioaccumulative potential	No information available.
12.4 Mobility in soil	No information available
12.5 Results of PBT and VPvB assessment	Not classified as PBT or vPvB.
12.6 Other adverse effects	None known.



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13. SECTION 13: DISPOSAL CONSIDERATIONS

- | | | |
|------|--------------------------------|---|
| 13.1 | Waste treatment methods | Use appropriate tools to put the spilled substance in a convenient waste disposal container. Finish cleaning by spreading soap and water on the contaminated surface. |
| 13.2 | Additional Information | Disposal should be in accordance with local, state or national legislation. |

14. SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous for transport.

- | | | |
|------|--|-----------------|
| 14.1 | UN number | Not applicable. |
| 14.2 | UN Proper Shipping Name | Not applicable. |
| 14.3 | Transport hazard class(es) | Not applicable. |
| 14.4 | Packing Group | Not applicable. |
| 14.5 | Environmental hazards | Not applicable. |
| 14.6 | Special precautions for user | Not applicable. |
| 14.7 | Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15. SECTION 15: REGULATORY INFORMATION

- | | | |
|--------|---|--|
| 15.1 | Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| 15.1.1 | EU regulations | |
| | Authorisations and/or restrictions on use | |
| | Candidate List of Substances of Very High Concern for Authorisation | Not listed. |
| | REACH: ANNEX XIV List of substances subject to authorisation | Not listed. |
| | REACH: ANNEX XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | Not listed. |
| | Community Rolling Action Plan (CoRAP) | All chemicals are not listed. |
| 15.2 | GHS | Created in accordance with the OSHA's implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) |
| 15.3 | US EPA | TSCA: D-Glucose, oxidation reaction products is on the TSCA inventory. |

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
vPvB	very Persistent and very Bioaccumulative



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Annex to the extended Safety Data Sheet (eSDS)

No information available.