SAFETY DATA SHEET

1. Identification

Product identifier	**Hybrid ELC Coolant 50/50 Premix**
Other means of identification	None.
Recommended use	Coolant
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company name	Heritage-Crystal Clean, LLC
Address	2000 Center Drive, Suite East C300 Hoffman Estates, IL 60192 United States of America
Telephone	847-836-5670
Website	www.crystal-clean.com
E-mail	cc_ehs@crystal-clean.com
Emergency telephone	CHEMTREC: 1-800-424-9300 (Toll Free) +1-703-527-3887 (International)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity, repeated exposure (inhalation)	Category 1 (lungs)
	Specific target organ toxicity, repeated exposure (oral)	Category 2 (kidneys)

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Harmful if swallowed. Causes serious eye irritation. Causes damage to organs (lungs) through prolonged or repeated exposure by inhalation. May cause damage to organs (kidneys) through prolonged or repeated exposure by ingestion.

Precautionary statement

Prevention	Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection.
Response	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. Get medical advice/attention if you feel unwell. 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.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Ethylene glycol	107-21-1	> 45
Diethylene glycol	111-46-6	< 5
Benzoic acid	65-85-0	< 2

Composition comments The exact percentage (concentration) of composition has been withheld as a trade secret. All concentrations are in percent by weight. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and delayed Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Mild skin irritation. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, hazardous combustion products are released that may include: Carbon oxides.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Do not breathe mist/vapors. Do not taste or swallow. Avoid contact with eyes. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Benzoic acid (CAS 65-85-0)	TWA	0.5 mg/m3	Inhalable fraction and vapor.
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction

US. OARS. Workplace Environmental Exposure Level (WEEL) Guide

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	10 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

Benzoic acid (CAS 65-85-0) Danger of cutaneous absorption

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved chemical safety goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Neoprene, butyl rubber, nitrile or Viton® gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Other suitable gloves can be recommended by the glove supplier.

Skin protection

Other Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece. Follow OSHA respirator regulations (29CFR 1910.134) and use NIOSH/MSHA approved respirators. Appropriate respirator selection should be made by a qualified professional.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Yellow.

Odor Mild.

Odor threshold	Not available.
pH	8 - 9
Melting point/freezing point	Not available.
Initial boiling point and boiling range	> 226 °F (> 107.78 °C) (50% water using 15 lb radiator cap)
Flash point	> 200 °F (> 93.33 °C) Pensky-Martens Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.06 - 1.09 (Water=1) (68 °F (20 °C))
Solubility(ies)	
Solubility (water)	Completely soluble in water.
Partition coefficient (n-octanol/water)	Not applicable for mixtures.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	8.9 lbs/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Causes damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	Causes mild skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure by ingestion.
Symptoms related to the physical, chemical and toxicological characteristics	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Mild skin irritation. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity	Harmful if swallowed.

Components	Species	Test Results
Benzoic acid (CAS 65-85-0)		
Acute		
Inhalation		
Dust		
LC50	Rat	> 12.2 mg/l, 4 Hours
Oral		
LD50	Rat	2565 mg/kg
Diethylene glycol (CAS 111-46-6)		
Acute		
Dermal		
LD50	Rabbit	11890 mg/kg
Ethylene glycol (CAS 107-21-1)		
Acute		
Dermal		
LD50	Rabbit	9530 mg/kg

Skin corrosion/irritation Causes mild skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity Does not meet classification criteria.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Causes damage to organs (lungs) through prolonged or repeated exposure by inhalation. May cause damage to organs (kidneys) through prolonged or repeated exposure by ingestion.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Benzoic acid (CAS 65-85-0)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	>= 100 mg/l, 48 hours
Fish	LC50	Lepomis macrochirus	44.6 mg/l, 96 Hours
Ethylene glycol (CAS 107-21-1)			
Aquatic			
Acute			
Crustacea	EC50	Ceriodaphnia dubia	10000 mg/l, 48 Hours

Components		Species	Test Results
Fish	LC50	Oncorhynchus mykiss	24591 mg/l, 96 Hours
Chronic			
Crustacea	NOEC	Ceriodaphnia dubia	3469 mg/l, 7 days
Fish	NOEC	Oncorhynchus mykiss	14692 mg/l, 12 days

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Benzoic acid (CAS 65-85-0)	1.87
Diethylene glycol (CAS 111-46-6)	-1.47
Ethylene glycol (CAS 107-21-1)	-1.36

Mobility in soil The product is soluble in water. Expected to be mobile in soil.

Other adverse effects This product contains one or more substances identified as hazardous air pollutants (HAPs) per the US Federal Clean Air Act (see section 15).

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

DOT BULK

BULK

UN number NA3082

UN proper shipping name Other regulated substances, liquid, n.o.s. (Ethylene glycol RQ = 11111 LBS)

Transport hazard class(es)

Class 9

Subsidiary risk -

Label(s) 9

Packing group III

Environmental hazards

Marine pollutant No

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions IB3, T2, TP1

Packaging exceptions 155

Packaging non bulk 203

Packaging bulk 241

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

General information DOT: Not regulated as dangerous goods unless packed in a single container with weight in lbs greater than: 5000/(percentage of Ethylene glycol in the product /100).

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Benzoic acid (CAS 65-85-0)	Listed.
Ethylene glycol (CAS 107-21-1)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated “active”.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethylene glycol	107-21-1	> 45

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethylene glycol (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Benzoic acid (CAS 65-85-0)
Ethylene glycol (CAS 107-21-1)

US. New Jersey Worker and Community Right-to-Know Act

Benzoic acid (CAS 65-85-0)
Ethylene glycol (CAS 107-21-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Benzoic acid (CAS 65-85-0)
Diethylene glycol (CAS 111-46-6)
Ethylene glycol (CAS 107-21-1)

US. Rhode Island RTK

Diethylene glycol (CAS 111-46-6)
Ethylene glycol (CAS 107-21-1)

California Proposition 65

WARNING: This product can expose you to Ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene glycol (CAS 107-21-1) Listed: June 19, 2015

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Ethylene glycol (CAS 107-21-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-December-2015

Revision date 13-July-2023

Version # 03

NFPA ratings

Disclaimer Heritage-Crystal Clean, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.