

Restore Plus - Acid Cooling System Cleaner

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 1/21/2022
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Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Restore Plus - Acid Cooling System Cleaner
Product code : CC2637 (55 gallon / 208 L Drum), CC2638 (1 gallon / 3.785 L)

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Radiator cleaner for removing heavy rust and scale, oil contaminants and fuel contaminants

1.3. Supplier

Manufacturer

Cummins Filtration
1200 Fleetguard Road
Cookeville, TN 38506 - USA
T 1-800-22-FILTER (1-800-223-4583)

Distributor

Cummins Western Canada
Canadian Distributor
11751 181 St.
Edmonton, AB T5S 2K5 - Canada
T 1-780-455-2151

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (Within Continental U.S.)
Chemtrec 703-527-3887 (Outside the U.S.).

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Skin Irrit. 2
Eye Dam. 1

2.2. GHS Label elements, including precautionary statements

GHS labelling

Hazard pictograms (GHS) :



Signal word (GHS) :

Danger

Hazard statements (GHS) :

Causes skin irritation.
Causes serious eye damage.

Precautionary statements (GHS) :

Wash hands, forearms and face thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center or doctor.

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%
Citric acid	Citric acid Citric acid, anhydrous / 2-Hydroxy-1,2,3-propanetricarboxylic acid / 1,2,3-Propanetricarboxylic acid, 2-hydroxy- / CITRIC ACID / 2-Hydroxypropane-1,2,3-tricarboxylic acid / anhydrous citric acid / Anhydrous citric acid	CAS-No.: 77-92-9	10 - 30
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched 4-Nonylphenol, branched, ethoxylated / Polyethylene glycol, mono(p-nonylphenyl) ether, branched / .alpha.-(4-Nonylphenyl)-.omega.-hydroxy poly(oxy-1,2-ethanediyl), branched / .alpha.-(p-Nonylphenyl)-.omega.-hydroxypoly(oxyethylene) branched / 4-Nonylphenol, branched and linear, ethoxylated / .alpha.-(4-Nonylphenyl)-.omega.-hydroxypoly(oxy-1,2-ethanediyl) branched / Ethoxylated branched and linear 4-nonylphenol / Poly (oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched / 4-Nonylphenol, branched, ethoxylated, 1 - 2.5 moles ethoxylated	CAS-No.: 127087-87-0	5 - 10
Alcohols, C8-10, ethoxylated propoxylated	Alcohols, C8-10, ethoxylated propoxylated .alpha.-Alkyl(C8-10)-.omega.-hydroxypoly(oxypropylene) and poly(oxyethylene) polymers / .alpha.-Alkyl (C8-10) hydroxypoly(oxypropylene) block polymer with polyoxyethylene	CAS-No.: 68603-25-8	1 - 5
Alcohols, C6-10, ethoxylated propoxylated	Alcohols, C6-10, ethoxylated propoxylated Ethoxylated propoxylated C6-10 alcohols / Poly(ethylene propylene)glycol ethers of C6-10 alcohols / Ethoxylated propoxylated alcohols(C6-10)	CAS-No.: 68987-81-5	1 - 5

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Name	Chemical name / Synonyms	Product identifier	%
Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, trisodium salt	Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, trisodium salt Ethylenediaminetriacetate, N-(hydroxymethyl)-, trisodium / Trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate) / Trisodium N-(2-hydroxyethyl)ethylenediaminetriacetate / Trisodium N-hydroxyethylethylenediaminetriacetate / Glycine, N-(carboxymethyl)-N'-(2-hydroxyethyl)-N,N'-ethylenedi-, trisodium salt / N-Hydroxyethylethylenediaminetriacetic acid, trisodium salt / Trisodium N-hydroxyethylethylene diaminetriacetate / Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, sodium salt (1:3) / Hydroxyethylethylenediaminetriacetic acid, trisodium salt / Trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate) / TRISODIUM HEDTA / Trisodium HEDTA / N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium salt / Trisodium (2-hydroxyethyl)ethylenediaminetriacetate / N-[2-[Bis(sodiooxycarbonylmethyl)amino]ethyl]-N-(2-hydroxyethyl)glycine sodium salt / Trisodium N-(2-hydroxyethyl)ethylenediamine triacetate / N-(2-Hydroxyethyl)ethylenediamine-N,N',N'-triacetic acid trisodium salt / Trisodium-(2-hydroxyethyl)ethylenediamine-N,N',N'-triacetate / Glycine, N-(carboxymethyl)-aminoethyl-N'-(2-hydroxyethyl) / Trisodium hydroxyethyl ethylenediamine triacetate	CAS-No.: 139-89-9	1 - 5
Phosphoric acid	Phosphoric acid Orthophosphoric acid / Phosphoric acid, liquid / Hydrophosphoric acid / Phosphoric acid solution / PHOSPHORIC ACID / Phosphoric acid, solution / Phosphoric acid ...% / ortho-Phosphoric acid / o-Phosphoric acid / Orthophosphoric acid ... % / Phosphoric acid ... % / phosphoric acid	CAS-No.: 7664-38-2	0.1 - 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
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Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	: Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard	: Products of combustion may include, and are not limited to: oxides of carbon. May emit poisonous and corrosive fumes. Irritating vapours.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Cool closed containers exposed to fire with water spray.
Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
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6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Stop leak if safe to do so. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up	: Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Do not allow clothing wet with material to stay in contact with skin. Ensure adequate ventilation, especially in confined areas. Formaldehyde is subject to the standard 29 CFR 1910.1048, which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements.
- Hygiene measures : Wash contaminated clothing before reuse. Take off contaminated clothing and wash it before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in dry, cool, well-ventilated area. Protect containers from physical damage.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

Citric acid (77-92-9)

No additional information available

Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched (127087-87-0)

No additional information available

Alcohols, C6-10, ethoxylated propoxylated (68987-81-5)

No additional information available

Alcohols, C8-10, ethoxylated propoxylated (68603-25-8)

No additional information available

Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, trisodium salt (139-89-9)

No additional information available

Phosphoric acid (7664-38-2)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	1 mg/m ³
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ACGIH OEL STEL	3 mg/m ³
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USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA [1]	1 mg/m ³
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USA - IDLH - Occupational Exposure Limits

IDLH	1000 mg/m ³
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USA - NIOSH - Occupational Exposure Limits

NIOSH REL TWA	1 mg/m ³
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Phosphoric acid (7664-38-2)

NIOSH REL STEL	3 mg/m ³
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8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Wear eye/face protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Amber. Liquid.
Colour	: Amber
Odour	: No data available
Odour threshold	: No data available
pH	: 2.5 – 3
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 104 °C
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.11 – 1.13 (Water=1)
Solubility	: Water: Miscible
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Do not mix with other chemicals.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, poisonous and corrosive fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

Citric acid (77-92-9)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
ATE CA (oral)	5400 mg/kg bodyweight
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched (127087-87-0)	
LD50 oral rat	1310 mg/kg
ATE CA (oral)	657.2 mg/kg bodyweight
Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, trisodium salt (139-89-9)	
LD50 oral rat	10000 mg/kg
ATE CA (oral)	10000 mg/kg bodyweight
Phosphoric acid (7664-38-2)	
LD50 oral rat	1530 mg/kg
LD50 dermal rabbit	2740 mg/kg
ATE CA (oral)	1530 mg/kg bodyweight
ATE CA (Dermal)	2740 mg/kg bodyweight

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Skin corrosion/irritation	: Not classified. pH: 2.5 – 3
Serious eye damage/irritation	: Not classified. pH: 2.5 – 3
Respiratory or skin sensitisation	: Not classified.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.

Citric acid (77-92-9)	
LOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	4000 mg/kg bodyweight Animal: rat
Phosphoric acid (7664-38-2)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard	: Not classified.
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
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Citric acid (77-92-9)	
LC50 - Fish [1]	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched (127087-87-0)	
LC50 - Fish [1]	84.7 mg/l Test organisms (species): Lepomis macrochirus
EC50 - Crustacea [1]	14 mg/l Test organisms (species): Daphnia magna
Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-, trisodium salt (139-89-9)	
LC50 - Fish [1]	372 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Phosphoric acid (7664-38-2)	
LC50 - Fish [1]	75.1 mg/l
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna

12.2. Persistence and degradability

Restore Plus - Acid Cooling System Cleaner	
Persistence and degradability	Not established.

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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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Citric acid (77-92-9)

Partition coefficient n-octanol/water	-1.72 (at 20 °C)
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

In accordance with DOT / TDG

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT/TDG) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

TDG
Transport hazard class(es) (TDG) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (TDG) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

DOT
No data available

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TDG

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations


All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

15.3. US State regulations

 **WARNING:** This product can expose you to Formaldehyde, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Revision date : 01/21/2022
Other information : None.
Prepared by: Nexreg Compliance, Inc.
Prepared for: Cummins Filtration

Full text of H-statements

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2

SDS HazCom 2012 - WHMIS 2015 (Nexreg) 2021

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