

	SAFETY DATA SHEET	Page : 1 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Trade name/designation : RESTORE PLUS -
acid cooling system cleaner
Product code : CC2637 (208L Drum); CC2638EDJ (3.785 L)
Product group : Trade product
Document no. : LT16551 EU

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use, Consumer use
Use of the substance/mixture : Cleaner

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Cummins Filtration
Unit 3 / Valley Drive / Valley Park / Rugby
CV21 1 TN Warwickshire - The United Kingdom
T +44 (0)1788 853600

Cummins Filtration
Zone Industrielle du Grand Guelen
29556 Quimper Cedex 9 - France
T
+33 (0) 2 98 76 49 49

Cummins Filtration
Catenbergstraat 1
2840 Rumst - Belgium
T +32 3 456 3000

productinfosds@cummins.com

1.4. Emergency telephone number

Emergency number : +44 (0) 1235 239670 (Carechem24)
Only available during office hours.

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Dam. 1 H318

Aquatic Chronic 3 H412

Full text of hazard classes and H-statements : see section 16

	SAFETY DATA SHEET	Page : 2 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word : Danger

Hazardous ingredients : Nonylphenol, ethoxylated; alcohols, C8-10, ethoxylated propoxylated

Hazard statements (CLP) : H318 - Causes serious eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER, a doctor.
P501 - Dispose of container, contents to a hazardous or special waste collection point.

2.3. Other hazards

Other hazards : PBT/vPvB data : This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). vPvB : This information is not available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Citric acid	(CAS-No.) 77-92-9 (EC-No.) 201-069-1	10 - 30	Eye Irrit. 2, H319
Nonylphenol, ethoxylated	(CAS-No.) 9016-45-9 (EC-No.) 500-024-6	5 - 10	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Trisodium-hydroxyethylene-diaminetriacetate	(CAS-No.) 139-89-9 (EC-No.) 205-381-9	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319
alcohols, C6-10, ethoxylated propoxylated	(CAS-No.) 68987-81-5	1 - 5	Eye Irrit. 2, H319 Aquatic Chronic 3, H412
alcohols, C8-10, ethoxylated propoxylated	(CAS-No.) 68603-25-8	1 - 5	Eye Dam. 1, H318 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. See also section 8 . Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance. Treat symptomatically. In case of doubt or persistent symptoms, consult always a physician.

Inhalation : Keep at rest. Provide fresh air. In case of doubt or persistent symptoms, consult always a physician.

	SAFETY DATA SHEET	Page : 3 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

Skin contact : Wash with plenty of water/. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. In case of doubt or persistent symptoms, consult always a physician.

Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Call a physician immediately.

Ingestion : Call a physician immediately. Rinse mouth out with water. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation : May cause respiratory irritation. Most important symptoms : Cough .

Skin contact : May cause skin irritation. No sensitisation responses were observed.

Eyes contact : Causes serious eye damage. Most important symptoms : erythema (redness). Pain .

Ingestion : May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.

Unsuitable extinguishing media : Strong water jet .

5.2. Special hazards arising from the substance or mixture

Specific hazards : Contact with metals liberates hydrogen gas. (Small amounts: H₂). On heating there is a risk of a build-up of pressure in hermetically sealed containers or tanks. Burning produces noxious and toxic fumes. Carbon oxides. Nitrogen oxides (NO_x). Sulphur oxides .

5.3. Advice for firefighters

Firefighting instructions : Special protective equipment for firefighters. . Wear a self-contained breathing apparatus and chemical protective clothing. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Stay upwind/keep distance from source. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Provide adequate ventilation. Stop leak if safe to do so. Dilute with plenty of water. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

	SAFETY DATA SHEET	Page : 4 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8 . Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep out of the reach of children. Use only in well ventilated areas. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8 . Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothing. After use replace the closing cap immediately. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take any precaution to avoid mixing with combustibles/...

Hygiene measures : Keep good industrial hygiene. Wash hands and face before breaks and immediately after handling of the product. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. Separate working clothes from town clothes. Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity.

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

Engineering measure(s) : Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7 .

Personal protective equipment : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hand protection : Protective gloves complying with EN 374. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.

Eye protection : During splash contact: tightly fitting safety goggles /. Safety glasses (EN166)

Body protection : Protective suit .

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Full face mask (EN 136) (EN 136). Half-face mask (DIN EN 140) (EN 140). Filter type: A (EN 141). Self-contained breathing apparatus (EN 133) .

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : liquid. (clear).
Colour : amber.
Odour : Slight /. odourless.

	SAFETY DATA SHEET	Page : 5 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

Odour threshold	: No data available
pH	: 2,5 - 3
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: No data available
Freezing point	: No data available
Initial boiling point and boiling range	: 104 °C
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Vapour density	: > 1
Relative density	: 1,11 - 1,13
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Kinematic viscosity	: No data available
Dynamic viscosity	: No data available
Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
Explosive limits	: No data available

9.2. Other information

VOC content : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur. Gives off hydrogen by reaction with metals. (Small amounts: H2).

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. See also section 7 : Handling and storage .

10.5. Incompatible materials

oxidising substances. Reducing agent. Bases . See also section 7 : Handling and storage .

10.6. Hazardous decomposition products

Burning produces noxious and toxic fumes. Hazardous decomposition products. Carbon oxides. Nitrogen oxides (NOx). Sulphur oxides .

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met.)

Nonylphenol, ethoxylated (9016-45-9)	
LD50/oral/rat	2590 mg/kg
LD50/dermal/rabbit	1780 µl/kg
Citric acid (77-92-9)	
LD50/oral/rat	3000 mg/kg

	SAFETY DATA SHEET	Page : 6 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met.) pH: 2,5 - 3
Serious eye damage/irritation	: Causes serious eye damage. pH: 2,5 - 3
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met.)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met.)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met.)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met.)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met.)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met.)
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties	: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Should not be released into the environment. No data is available on the product itself.
--------------------------	--

Citric acid (77-92-9)	
LC50 fish 1	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	120 mg/l Daphnia magna (72h)
EC50 other aquatic organisms 1	> 10000 mg/l Pseudomonas putida

12.2. Persistence and degradability

RESTORE PLUS - acid cooling system cleaner	
Persistence and degradability	The product itself has not been tested.

12.3. Bioaccumulative potential

RESTORE PLUS - acid cooling system cleaner	
Partition coefficient n-octanol/water	No data available
Citric acid (77-92-9)	
Partition coefficient n-octanol/water	-1,72 (at 20 °C)

12.4. Mobility in soil

RESTORE PLUS - acid cooling system cleaner	
Ecology - soil	The product itself has not been tested.

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

Additional information	: None known.
------------------------	---------------

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility. Dispose of contaminated materials in accordance with current regulations.
--	--

	SAFETY DATA SHEET	Page : 7 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

Additional information : Delivery to an approved waste disposal company. In accordance with local and national regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Classified as hazardous waste according to European Union regulations. The following Waste Codes are only suggestions:
07 02 04* - other organic solvents, washing liquids and mother liquors /
150110 - packaging containing residues of or contaminated by dangerous substances .
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

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. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	RESTORE PLUS - acid cooling system cleaner - alcohols, C8-10, ethoxylated propoxylated
--	--

	SAFETY DATA SHEET	Page : 8 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	RESTORE PLUS - acid cooling system cleaner - alcohols, C8-10, ethoxylated propoxylated
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	RESTORE PLUS - acid cooling system cleaner - alcohols, C8-10, ethoxylated propoxylated
46(b) Nonylphenol ethoxylates (C ₂ H ₄ O) _n C ₁₅ H ₂₄ O	Nonylphenol, ethoxylated
46.a. Nonylphenol ethoxylates (NPE) (C ₂ H ₄ O) _n C ₁₅ H ₂₄ O	Nonylphenol, ethoxylated

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : No data available

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 2, significant hazard to waters (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

Waterbezwaaarlijkheid : 8 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. (A)

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes:

SECTION : 1, 2, 3, 9, 11, 12, 14, 15, 16.

Abbreviations and acronyms:

	SAFETY DATA SHEET	Page : 9 / 9
		Revision nr : 2.0
	RESTORE PLUS - acid cooling system cleaner	Issue date : 31/08/2017
		Supersedes : 12/07/2012
		LT16551 EU

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	CSR = CSR = Chemical Safety Report
	EC50 = Median Effective Concentration
	LD50 = Median lethal dose
	LC50 = Median lethal concentration
	N.O.S. = Not Otherwise Specified
	DNEL = DNEL = Derived No Effect Level
	PNEC = Predicted No Effect Concentration
	TLV = Threshold limits
	TWA = time weighted average
	STEL = Short term exposure limit
	persistent, bioaccumulating and toxic (PBT).
	vPvB = very persistent and very bioaccumulating
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the : European Chemicals Bureau SDS Supplier No LT16551 EU reviewed 10/06/2010. datasheet

Training advice : Manipulations are to be done only by qualified and authorised persons. Training staff on good practice.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - chronic hazard category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - chronic hazard category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
 Classification according to Regulation (EC) No. 1272/2008 [CLP]
 Labelling according to Regulation (EC) No. 1272/2008 [CLP]

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.