

**SAFETY DATA SHEET****Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US
Product number FO00889US

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

Identified uses Cleaning agent.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Cbee Europe Ltd
Eton House
2nd Floor
18-24 Paradise Road
Richmond
TW9 1SE, UK
Tel: +44 (0) 208 614 7120
Fax: +44 (0) 208 940 2040
consumerservices@clorox.co.uk

1.4. Emergency telephone number

Emergency telephone +44 (0) 208 614 7120
Monday - Thursday:- 09:00 - 17:30
Friday:- 09:00 - 17:00

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification****Physical hazards**

Not Classified

Health hazards

Skin Irrit. 2 - H315 Eye Irrit. 2 - H319

Environmental hazards

Not Classified

Classification (67/548/EEC or 1999/45/EC)

Xi; R36/38

2.2. Label elements**Pictogram**

Signal word Warning

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**Hazard statements**

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash contaminated skin thoroughly after handling.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

Detergent labelling

< 5% perfumes

Supplementary precautionary statements

P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

2-Aminoethanol		0.25 - <0.5%
CAS number: 141-43-5 EC number: 205-483-3		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn; R20/21/22. C; R34	
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Corr. 1B - H314		
STOT SE 3 - H335		
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides		0.025 - <0.25%
CAS number: 68424-85-1 EC number: 270-325-2		
M factor (Acute) = 100		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 3 - H301	T; R24/25. C; R34. N; R50	
Acute Tox. 3 - H311		
Skin Corr. 1C - H314		
Aquatic Acute 1 - H400		
Ethanol		0.025 - <0.25%
CAS number: 64-17-5 EC number: 200-578-6		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Flam. Liq. 2 - H225	F; R11	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion

Rinse mouth thoroughly with water. Give plenty of water to drink. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Skin contact

Wash skin thoroughly with soap and water.

Eye contact

Remove any contact lenses and open eyelids wide apart. Continue to rinse.

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

Irritation of nose, throat and airway.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting.

Skin contact

Skin irritation.

Eye contact

Irritation of eyes and mucous membranes. Prolonged contact may cause redness and/or tearing.

4.3. Indication of any immediate medical attention and special treatment needed**Notes for the doctor**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture**Hazardous combustion products**

Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.

5.3. Advice for firefighters**Special protective equipment for firefighters**

Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****Personal precautions**

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with eyes and prolonged skin contact.

6.2. Environmental precautions**Environmental precautions**

Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up**Methods for cleaning up**

Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**6.4. Reference to other sections****Reference to other sections**

See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Usage precautions**

Read and follow manufacturer's recommendations.

Advice on general occupational hygiene

Avoid contact with eyes and prolonged skin contact.

7.2. Conditions for safe storage, including any incompatibilities**Storage precautions**

Store in a cool and well-ventilated place.

7.3. Specific end use(s)**Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection**8.1. Control parameters****Occupational exposure limits****2-Aminoethanol**

Long-term exposure limit (8-hour TWA): WEL 1 ppm 2.5 mg/m³

Short-term exposure limit (15-minute): WEL 3 ppm 7.6 mg/m³

Sk

Ethanol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

Benzene

Long-term exposure limit (8-hour TWA): WEL 1 ppm 3.25 mg/m³

Carc, Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Carc = Capable of causing cancer and/or heritable genetic damage.

8.2. Exposure controls**Eye/face protection**

Wear chemical splash goggles.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

Hygiene measures

No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

SECTION 9: Physical and Chemical Properties**9.1. Information on basic physical and chemical properties****Appearance**

Coloured liquid.

Colour

Green.

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**Odour**

Citrus. Floral.

Odour threshold

Not determined.

pH

pH (concentrated solution): 9 - 11.5

Melting point

Not relevant.

Initial boiling point and range

Not determined.

Flash point

> 93°C CC (Closed cup).

Evaporation rate

Not determined.

Evaporation factor

Not determined.

Flammability (solid, gas)

Not relevant.

Upper/lower flammability or explosive limits

Not relevant.

Vapour pressure

Not determined.

Vapour density

Not relevant.

Relative density

Not determined.

Bulk density

Not determined.

Partition coefficient

Not determined.

Auto-ignition temperature

Not relevant.

Decomposition Temperature

Not relevant.

Viscosity

Not determined.

Explosive properties

Not considered to be explosive.

Oxidising properties

The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information**Other information**

No information required.

SECTION 10: Stability and reactivity**10.1. Reactivity**

There are no known reactivity hazards associated with this product.

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**10.2. Chemical stability****Stability**

Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Will not polymerise.

10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials**Materials to avoid**

No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

None at ambient temperatures. Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity - oral**

Based on available data the classification criteria are not met.

ATE oral (mg/kg)

66,666.66666667

Acute toxicity - dermal

Based on available data the classification criteria are not met.

ATE dermal (mg/kg)

200000.0

Acute toxicity - inhalation

Based on available data the classification criteria are not met.

Skin corrosion/irritation**Animal data**

Dose: 0.5 ml, Rabbit, Skin Irrit. 2 - H315

Serious eye damage/irritation

Eye Irrit. 2 - H319 Dose: 0.1 ml, 1 second, Rabbit

Respiratory sensitisation

Based on available data the classification criteria are not met.

Skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity**Genotoxicity - in vitro**

Based on available data the classification criteria are not met.

Genotoxicity - in vivo

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity**Reproductive toxicity - fertility**

Based on available data the classification criteria are not met.

Reproductive toxicity - development

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Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure**STOT - single exposure**

Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure**STOT - repeated exposure**

Based on available data the classification criteria are not met.

Aspiration hazard

Not anticipated to present an aspiration hazard, based on chemical structure.

Toxicological information on ingredients.**2-Aminoethanol****Acute toxicity - oral****Acute toxicity oral (LD50 mg/kg)**

1,515.0

Species

Rat

REACH dossier information.

ATE oral (mg/kg)

1,515.0

Acute toxicity - dermal

Converted acute toxicity point estimate (cATpE)

ATE dermal (mg/kg)

1100

Acute toxicity - inhalation

Converted acute toxicity point estimate (cATpE)

ATE inhalation (vapours mg/l)

11.0

Skin corrosion/irritation**Animal data**

Dose: 0.5 ml, 4 hours, Rabbit REACH dossier information. Skin Corr. 1B - H314 Causes severe skin burns and eye damage.

Serious eye damage/irritation

REACH dossier information. Corrosive to skin. Corrosivity to eyes is assumed.

Skin sensitisation

Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information.

Germ cell mutagenicity**Genotoxicity - in vitro**

Chromosome aberration: Negative. REACH dossier information.

Genotoxicity - in vivo

Chromosome aberration: Negative. REACH dossier information.

Reproductive toxicity**Reproductive toxicity - fertility**

Two-generation study - NOAEL 300 mg/kg/day, Oral, Rat P REACH dossier information.

Reproductive toxicity - development

Maternal toxicity: - NOAEL: 120 mg/kg/day, Oral, Rat REACH dossier information.

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides****Acute toxicity - oral****ATE oral (mg/kg)**

100.0

Acute toxicity - dermal**ATE dermal (mg/kg)**

300.0

Ethanol**Acute toxicity - oral****Acute toxicity oral (LD50 mg/kg)**

10,470.0

Species

Rat

REACH dossier information.

ATE oral (mg/kg)

10,470.0

Acute toxicity - inhalation**Acute toxicity inhalation (LC50 vapours mg/l)**

116.9

Species

Rat

REACH dossier information.

ATE inhalation (vapours mg/l)

116.9

Skin corrosion/irritation**Animal data**

Dose: 0.2 ml, 24 hours, Rabbit Primary dermal irritation index: 0 REACH dossier information. Not irritating.

Serious eye damage/irritation

Not irritating.

Germ cell mutagenicity**Genotoxicity - in vitro**

Gene mutation: Negative. REACH dossier information.

Genotoxicity - in vivo

Chromosome aberration: Negative. REACH dossier information.

Reproductive toxicity**Reproductive toxicity - fertility**

Two-generation study - NOAEL 15 %, Oral, Mouse P Two-generation study - NOAEL 10 %, Oral, Mouse F1 REACH dossier information.

Reproductive toxicity - development

Maternal toxicity: - NOAEL: 16000 ppm, Inhalation, Rat REACH dossier information.

SECTION 12: Ecological Information

12.1. Toxicity

Not considered toxic to fish.

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**Ecological information on ingredients.****2-Aminoethanol****Acute toxicity - fish**

LC₅₀, 96 hours: 349 mg/l, Cyprinus carpio (Common carp) REACH dossier information.

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 65 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants

NOEC, 72 hours: 1 mg/l, Pseudokirchneriella subcapitata EC₅₀, 72 hours: 2.8 mg/l, Pseudokirchneriella subcapitata REACH dossier information.

Chronic toxicity - fish early life stage

NOEC, 41 days: 1.24 mg/l, Oryzias latipes (Red killifish) REACH dossier information.

Chronic toxicity - aquatic invertebrates

NOEC, 21 days: 0.85 mg/l, Daphnia magna EC₅₀, 21 days: 2.5 mg/l, Daphnia magna REACH dossier information.

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides**Acute aquatic toxicity****LE(C)₅₀**

$0.001 < L(E)C_{50} \leq 0.01$

M factor (Acute)

100

Ethanol**Acute toxicity - fish**

LC₅₀, 96 hours: 14200 mg/l, Pimephales promelas (Fat-head Minnow) LC₀, 96 hours: 7960 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.

Acute toxicity - aquatic invertebrates

LC₅₀, 48 hours: 5012 mg/l, Ceriodaphnia REACH dossier information.

Acute toxicity - aquatic plants

EC₅₀, 96 hours: 675 mg/l, Freshwater algae EC₅₀, 72 hours: 275 mg/l, Freshwater algae EC₁₀₀, 72 hours: 14200 mg/l, Freshwater algae REACH dossier information.

Chronic toxicity - aquatic invertebrates

NOEC, 9 days: 9.6 mg/l, Daphnia magna REACH dossier information.

12.2. Persistence and degradability**Persistence and degradability**

The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

Ecological information on ingredients.**2-Aminoethanol****Biodegradation**

Water - Degradation (>90%): 21 days REACH dossier information. The substance is readily biodegradable.

Ethanol**Biodegradation**

Water - Degradation (~74%): 5 days Water - Degradation (~95%): 15 days Water - Degradation (~84%): 20 days REACH dossier information. The substance is readily biodegradable.

Chemical oxygen demand

1.99 g O₂/g substance REACH dossier information.

12.3. Bioaccumulative potential

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US

No data available on bioaccumulation.

Partition coefficient

Not determined.

Ecological information on ingredients.**2-Aminoethanol****Partition coefficient**

log Pow: -2.3 REACH dossier information.

Ethanol**Partition coefficient**

log Pow: -0.35 REACH dossier information.

12.4. Mobility in soil**Mobility**

The product is soluble in water.

Ecological information on ingredients.**2-Aminoethanol****Henry's law constant**

0.000000118 Pa m³/mol @ 25°C REACH dossier information.

Ethanol**Surface tension**

24.5 mN/m @ 20°C REACH dossier information.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Not relevant.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****General information**

Dispose of waste product or used containers in accordance with local regulations

SECTION 14: Transport information**General**

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US

No.

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.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

EH40/2005 Workplace exposure limits.

EU legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information**Classification procedures according to Regulation (EC) 1272/2008**

Eye Irrit. 2 - H319, Skin Irrit. 2 - H315: Calculation method.

Revision comments

Classification according to CLP Annex I.

Revision date 14/05/2014**Revision** 2**Supersedes date** 01/09/2012**SDS number** 157**Risk phrases in full**

R11 Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R24/25 Toxic in contact with skin and if swallowed.
R34 Causes burns.
R36/38 Irritating to eyes and skin.
R50 Very toxic to aquatic organisms.

Hazard statements in full

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.

Formula 409® Antibacterial All-Purpose Cleaner - Lemon - US**Disclaimer**

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