



SAFETY DATA SHEET

Ultimate Limescale Remover

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

1.1. Product identifier

Product name Ultimate Limescale Remover
Internal identification F1V1

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

Identified uses Cleaning and Removing Limescale

1.3. Details of the supplier of the safety data sheet

Supplier The London Oil Refining Company Ltd
 Astonish House
 Unit 1 Premier Point
 Staithgate Lane
 Bradford BD6 1DW
 (01274) 767440 (office hours only)
 (01274) 726285
 www.astonishcleaners.com

Contact person info@astonish.co.uk

1.4. Emergency telephone number

Emergency telephone (01274) 767440 (office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards

Not Classified

Health hazards

Eye Irrit. 2 - H319 Elicitation (Skin Sens.)

Environmental hazards

Not Classified

2.2. Label elements

Pictogram



Signal word

Warning

Hazard statements

H319 Causes serious eye irritation.
 EUH208 Contains reaction mass of: 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Precautionary statements

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.
 P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
 P264 Wash hands thoroughly after handling.
 P280 Wear eye and face protection.

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Detergent labelling

< 5% non-ionic surfactants, < 5% perfumes, < 5% phosphonates, Contains reaction mass of: 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one

2.3. Other hazards

None

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Citric Acid Monohydrate	1-5%
CAS number: 5949-29-1 EC number: 201-069-1	
Classification Eye Irrit. 2 - H319	Classification (67/548/EEC or 1999/45/EC) Xi; R36
Butyl Diglycol	1-5%
CAS number: 112-34-5 EC number: 203-961-6	
Classification Eye Irrit. 2 - H319	Classification (67/548/EEC or 1999/45/EC) Xi; R36
Undecanol, branched and linear, ethoxylated (>5-15 EO)	1-5%
CAS number: 127036-24-2 EC number: 931-721-7	
Classification Acute Tox. 4 - H302 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) Xn; R22. Xi; R41
Glycerol	<1%
CAS number: 56-81-5 EC number: 200-289-5	
Classification Not Classified	Classification (67/548/EEC or 1999/45/EC) NC Not Classified
2,2'-iminodiethanol	<1%
CAS number: 111-42-2 EC number: 203-868-0	
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT RE 2 - H373	Classification (67/548/EEC or 1999/45/EC) Xn; R22, R48/22. Xi; R38, R41
2,6-dimethyloct-7-en-2-ol	<1%
CAS number: 18479-58-8 EC number: 242-362-4	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	Classification (67/548/EEC or 1999/45/EC) Xi; R36/38
Geraniol	<1%
CAS number: 106-24-1 EC number: 203-377-1	
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317	Classification (67/548/EEC or 1999/45/EC) Xi; R38, R41. R43

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1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one CAS number: 54464-57-2 EC number: 259-174-3 M factor (Chronic) = 1	<1%
Classification Skin Irrit. 2 - H315 Skin Sens. 1B - H317 Aquatic Chronic 1 - H410	Classification (67/548/EEC or 1999/45/EC) Xi; R38. N; R51/53. R43
Butylphenyl methylpropional CAS number: 80-54-6 EC number: 201-289-8	<1%
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Repr. 2 - H361 Aquatic Chronic 2 - H411	Classification (67/548/EEC or 1999/45/EC) Xn; R22. Repr. Cat. 3 R62. N; R51/53. R43
reaction mass of: 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS number: 55965-84-9 EC number: 611-341-5 M factor (Acute) = 10 M factor (Chronic) = 10	<1%
Classification Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1A - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC or 1999/45/EC) T; R23/24/25. C; R34. N; R50/53. R43

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

Remove exposure and give water to drink if mouth irritation experienced. Seek medical advice if recovery not rapid.

Ingestion

Drink water. If symptoms persist seek medical advice.

Skin contact

Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if irritation persists after washing.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

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

Inhalation

Possible mild irritation of breathing passage and possible mouth irritation.

Ingestion

Possible mild stomach upset and mild soreness of mouth.

Skin contact

Causes skin irritation.

Eye contact

Causes eye irritation.

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

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Notes for the doctor

No data available

Specific treatments

No data available.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguisher suitable to cause of fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards

Product does not support combustion, minimal fire hazard. Minimal quantities of oxides of carbon may be produced.

5.3. Advice for firefighters

Protective actions during firefighting

Use protection suitable to cause of fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions

Product is intended to be rinsed away to sewer after use. For bigger spillages non-household spillages prevent entry into sewer or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Absorb household spillages with e.g kitchen roll and dispose of in bin. Wipe affected area clean with a damp cloth.

6.4. Reference to other sections

Reference to other sections

None

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Use as instructed on label. Avoid breathing spray. Point spray away from face. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in ambient conditions. Keep out of the reach of children.

7.3. Specific end use(s)

Specific end use(s)

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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Butyl Diglycol

Long-term exposure limit (8-hour TWA): ELV (IE) 67.5 10

Short-term exposure limit (15-minute): ELV (IE) 101.2 15

Short-term exposure limit (15-minute): WEL 101.2 15

Glycerol

Long-term exposure limit (8-hour TWA): WEL 10 mist

Long-term exposure limit (8-hour TWA): ELV (IE) 10 mist

2,2'-iminodiethanol

Long-term exposure limit (8-hour TWA): WEL 13 mg/m³

2,6-dimethyloct-7-en-2-ol

Long-term exposure limit (8-hour TWA): DNEL 73.5 mg/m³ Inhalation

Long-term exposure limit (8-hour TWA): DNEL 20.8 mg/kg Dermal

Geraniol

Long-term exposure limit (8-hour TWA): DNEL 161.6 mg/m³ Inhalation

Long-term exposure limit (8-hour TWA): DNEL 12.5 mg/kg Dermal

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one

Long-term exposure limit (8-hour TWA): DNEL 0.1011 mg/cm³ Dermal

Long-term exposure limit (8-hour TWA): DNEL 1.76 mg/m³ Inhalation

Long-term exposure limit (8-hour TWA): DNEL 1.73 mg/kg Dermal

Butylphenyl methylpropional

Long-term exposure limit (8-hour TWA): DNEL 0.44 mg/cm³ Inhalation

Short-term exposure limit (15-minute): DNEL 0.41 mg/cm² Dermal

Long-term exposure limit (8-hour TWA): DNEL 2.075 mg/kg Dermal

WEL = Workplace Exposure Limit

Citric Acid Monohydrate (CAS: 5949-29-1)

PNEC

- Fresh water; 0.44 mg/l
- Sediment (Freshwater); 3.46 mg/kg
- Sediment (Marinewater); 34.6 mg/kg
- Marine water; 0.044 mg/l
- STP; >1000 mg/l
- Soil; 33.1 mg/kg

8.2. Exposure controls

Environmental exposure controls

This product does not pose a hazard in normal use when following the usage instructions. Take care to avoid contact with skin and eyes.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance

Clear liquid.

Colour

Colourless.

Odour

Fresh

pH

pH (concentrated solution): 2.0 - 3.0

Initial boiling point and range

Not measured (>100°C)

Flash point

Not applicable.

Evaporation rate

Not measured.

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Flammability (solid, gas)

Does not ignite.

Vapour density

> 1 (Air=1)

Relative density

1.006 - 1.018

Solubility(ies)

Soluble in water

Partition coefficient

n-octanol/water

Viscosity

Not measured

Oxidising properties

Not available.

9.2. Other information**Other information**

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazards expected.

10.2. Chemical stability**Stability**

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials**Materials to avoid**

None known.

10.6. Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects**Toxicological effects**

This mixture has not been tested. Based on the available data of the ingredients the classification criteria are not met.

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

24,221.4532872

Toxicological information on ingredients.

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Citric Acid Monohydrate

Acute toxicity - oral

Acute toxicity oral (LD mg/kg)

5,400.0

Species

Rat

ATE oral (mg/kg)

5,400.0

Acute toxicity - dermal

Acute toxicity dermal (LD mg/kg)

2000.0

Species

Rabbit

Butyl Diglycol

Acute toxicity - oral

Acute toxicity oral (LD mg/kg)

2,000.0

Species

Rat

Acute toxicity - dermal

Acute toxicity dermal (LD mg/kg)

2000.0

Species

Rabbit

Undecanol, branched and linear, ethoxylated (>5-15 EO)

Acute toxicity - oral

Acute toxicity oral (LD mg/kg)

350.0

Species

Rat

ATE oral (mg/kg)

350.0

Acute toxicity - dermal

Acute toxicity dermal (LD mg/kg)

2001.0

Species

Rat

ATE dermal (mg/kg)

2001.0

Glycerol

Acute toxicity - oral

Acute toxicity oral (LD mg/kg)

2,000.0

Species

Rat

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2,2'-iminodiethanol

Acute toxicity - oral

Acute toxicity oral (LD mg/kg)

620.0

Species

Rat

ATE oral (mg/kg)

620.0

Butylphenyl methylpropional

Acute toxicity - oral

ATE oral (mg/kg)

1,390.0

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SECTION 12: Ecological Information

Ecotoxicity

The mixture has not been tested. Based on the available data of the ingredients the classification criteria are not met.

12.1. Toxicity

The mixture has not been tested. Based on the available data of the ingredients the classification criteria are not met.

Ecological information on ingredients.

Citric Acid Monohydrate

Acute toxicity - fish

LC , 48 hours: 440 mg/l, Fish

Acute toxicity - aquatic invertebrates

EC , 24 hours: 1535 mg/l, Daphnia magna

Acute toxicity - aquatic plants

NOEC, 8 days: 425 mg/l, Algae

Butyl Diglycol

Acute toxicity - fish

LC , : 100 mg/l, Fish

Acute toxicity - aquatic invertebrates

EC , 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic plants

EC , : 100 mg/l, Desmodemus subspicatus

Undecanol, branched and linear, ethoxylated (>5-15 EO)

Acute toxicity - fish

LC , 96 hours: >1 - 10 mg/l, Cyprinus carpio (Common carp)

Acute toxicity - aquatic invertebrates

EC , 48 hours: >1 - 10 mg/l, Daphnia magna

Acute toxicity - aquatic plants

EC , 72 hours: >1 - 10 mg/l, Desmodemus subspicatus

Glycerol

Acute toxicity - fish

LC , 96 hours: >5000 mg/l, Fish

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one

Chronic aquatic toxicity

NOEC

0.01 < NOEC ≤ 0.1

Degradability

Non-rapidly degradable

M factor (Chronic)

1

12.2. Persistence and degradability

Persistence and degradability

Does not contain any components considered to be persistent. Contains detergents that satisfy the biodegradation requirements of directive 648/2004/EC.

Ecological information on ingredients.

Butyl Diglycol

Biodegradation

- Degradation 76: 28 days - Degradation 90-100: 8 days - Degradation 90-100: 14 days

12.3. Bioaccumulative potential

No bio-accumulative potential noted for any component.

Partition coefficient

n-octanol/water

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12.4. Mobility in soil

Mobility

The components of the mixture are readily absorbed into soil and are mobile in water environment.

12.5. Results of PBT and vPvB assessment

No data available.

Ecological information on ingredients.

Butyl Diglycol

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

12.6. Other adverse effects

Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment. Dispose of contaminated packaging in the same way as the product itself. Non-contaminated packages may be recycled.

SECTION 14: Transport information

General Not regulated.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not regulated.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

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

EU legislation

This safety data sheet is compliant with EC Regulation 1907/2006 (REACH) as adapted by 453/2010, Directive 67/548/EEC and EC Regulation 1272/2008 (CLP). Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No. 648/2004 of the European Parliament and of the Council of 31st March 2004 on detergents.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Issued by	The London Oil Refining Company Ltd
Revision date	13/02/2015
Revision	1
SDS number	4908

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SDS status

Approved.

Risk phrases in full

R22 Harmful if swallowed.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.

Hazard statements in full

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH208 Contains reaction mass of: 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.