



SAFETY DATA SHEET

Safety data sheet in accordance with Commission Regulation (EU) No. 453/2010 of 20th May 2010 of the European parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

1. Identification of the substance/preparation and company/undertaking
 - 1.1 Product: Astonish Ultimate Limescale Remover
 - 1.2 Use of the preparation: Cleaning and removing limescale
 - 1.3 Company: The London Oil Refining Company Ltd
Astonish House
Unit 1 Premier Point
Staithgate Lane
Bradford BD6 1DW
Tel: (01274)767440 Fax: (01274) 726285
www.astonishcleaners.com
info@astonish.co.uk
 - 1.4 Emergency Telephone: (01274) 767440 (office hours only)



2. Hazards identification
 - 2.1 Classification of the mixture.
This product is not classified as hazardous in accordance to EU directive 1999/45/EC.
 - 2.2 Label elements.
The following safety phrases are recommended to be observed when using the product and are therefore on the label;
S2 Keep out of the reach of children.
S23 Do not breathe spray.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46 If swallowed seek medical advice immediately and show this container or label.
Hazardous components that must be listed on the label:
Nonionic surfactants, chloromethyldihydroisothiazolinone, methylisothiazolinone and perfume
 - 2.3 Other hazards.
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3. Composition/information on ingredients

Chemical	CAS No.	EINECS No.	Registration Number	% Conc	Classification 1999/45/EC	Classification 1272/2008
2-(2-butoxyethoxy) ethanol	112-34-5	203-961-6	01-2119475104-44-XXXX	1-5%	Xi, R36	Eye Irrit. 2—H319
Undecanol, branched and linear, ethoxylated (>5-15EO)	127036-24-2	931-721-7	-	1-5%	Xn, R22 R41	Acute Tox. 4 (Oral) - H302 Eye Dam. 1—H318
Citric acid	77-92-9	201-069-1	01-2119457026-42-XXXX	1-5%	Xi, R36	Eye Irrit. 2—H319

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.
Eye:
Rinse thoroughly with water for several minutes. If symptoms persist seek medical advice.
Skin:
Rinse affected area with water.

Ingestion:
 Drink water. If symptoms persist seek medical advice.

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

Inhalation:
 Possible mild irritation of breathing passage and possible mouth irritation.

Eye:
 Possible mild irritation, redness and soreness.

Skin:
 Possible mild transient irritation of skin.

Ingestion:
 Possible mild stomach upset and mild soreness of mouth

4.3 Indication of any immediate medical attention and special treatment needed.
 No data available.

5. Fire fighting measures

5.1 Extinguishing media
 Use extinguisher suitable to cause of fire.

5.2 Special hazards arising from the substance or mixture.
 In case of fire the following can be released; carbon and nitrous gases.

5.3 Advice for firefighters
 Use protection suitable to cause of fire.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
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6.2 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.
 Absorb household spillages with e.g. kitchen roll and dispose of in bin. Wipe effected area clean with a damp cloth.

6.4 Reference to other sections
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7. Handling and storage.

7.1 Precautions for safe handling
 Use as instructed on label.

7.2 Conditions for safe storage, including any incompatibilities.
 Store in ambient conditions.

7.3 Specific end use(s)
 Cleaning and removing limescale

8. Exposure controls/ personal protection
 The mixture has not been tested. Based on the available data of the ingredients the classification criteria are not met.

8.1 Exposure Limit Values
 Citric acid

Predicted No Effect Concentration (PNEC)
 PNECwater (freshwater) = 0.44 mg/l
 PNECwater (marine water) = 0.044 mg/l
 PNECsediment (freshwater) = 3.46 mg/l
 PNECsediment (marine water)) = 34.6 mg/l
 STP = .1000 mg/l
 PNECsoil = 33.1 mg/kg
 2-(2-butoxyethoxy)ethanol

Value	Control Parameters	Basis
TWA	10 ppm 67.5 mg/m ³	EH40 WEL
STEL	15 ppm 101.2 mg/m ³	EH40 WEL
TWA	10 ppm 67.5 mg/m ³	ECTLV
STEL	15 ppm 101.2 mg/m ³	ECTLV

DNEL's

End Use	Route/exposure time	Descriptor	Value	Potential health effects
Workers	Inhalation	DNEL	101-2 mg/m ³	Acute/local effects
Workers	Skin contact/ 1 day	DNEL	20 mg/m ³	Chronic effects
Workers	Inhalation	DNEL	67.5 mg/m ³	Chronic effects
Workers	Inhalation	DNEL	67.5 mg/m ³	Chronic/local effects
Consumers	Inhalation	DNEL	50.6 mg/m ³	Acute/local effects
Consumers	Skin contact/ 1 day	DNEL	10 mg/m ³	Chronic effects
Consumers	Inhalation	DNEL	34 mg/m ³	Chronic effects
Consumers	Ingestion	DNEL	1.25 mg/m ³	Chronic effects
Consumers	Inhalation	DNEL	34 mg/m ³	Chronic/local effects

Predicted No Effect Concentration (PNEC)

PNECwater (freshwater) = 1 mg/l

PNECwater (marine water) = 0.1 mg/l

PNECsediment (freshwater) = 4 mg/kg

PNECsediment (marine water) = 0.4 mg/kg

PNECsoil = 0.4 mg/kg

9. Physical and chemical properties

9.1 Important health, safety and environmental information

Appearance:	Colourless liquid	Odour:	Fresh
pH :	2—3	Boiling point:	Not measured (>100°C)
Flash Point:	Not applicable	Flammability:	Does not ignite
Explosive properties:	None	Oxidising properties:	Not available
Vapour pressure:	Not available	Relative density:	1.006—1.018
Solubility:	Soluble in water	Water solubility:	Completely soluble
Partition coefficient:	n-octanol/water:		Not available
Viscosity:	Not measured	Vapour density:	>1 (Air=1)
Evaporation rate:	Not measured		

9.2 Other information

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10. Stability and reactivity

10.1 Reactivity

No reactivity hazards expected.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reaction

None under normal conditions.

10.4 Conditions to avoid

None

10.5 Incompatible materials

None

10.6 Hazardous decomposition products

Carbon oxides.

11. Information on toxicological effects.

11.1 Toxicity.

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

2-(2-butoxyethoxy)ethanol

LD50 oral rat 1153 mg/kg

LD50 dermal rat > 4640 mg/kg

Citric acid
 Acute toxicity
 LD50 oral rat >5000 mg/kg
 LD50 dermal rat > 2000 mg/kg

Skin Corrosion/irritation
 Dose 0.5g 4hr Rat
 Primary dermal irritation index (PDI)
 0.3/8
 Not classified. Test method(s): OECD 404.

Serious eye damage/irritation:
 Causes serious eye irritation. Test method(s): equivalent or similar to OECD 405.

12. Ecological information

12.1 Toxicity.

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

2-(2-butoxyethoxy)ethanol

Species	Exposure time	Value type	Value
Fish (<i>Leuciscus idus</i>)	-	LC50	>100 mg/l
Aquatic invertebrates (<i>Daphnia magna</i>)	48h	EC50	>100 mg/l
Algae (<i>Desmodesmus subspicatus</i>)	-	EC50	>100 mg/l

Citric acid

Species	Exposure time	Value type	Value
Fish (<i>Onchorhynchus mykiss</i>)	48h	LC50	440 mg/l
Aquatic invertebrates (<i>Daphnia magna</i>)	24h	EC50	1535 mg/l
Algae	8 days	NOEC	425 mg/l

Alcohols branched/linear, ethoxylated

Fish— <i>Cyprinus carpio</i>	LC50	96h	>1-10 mg/l
<i>Daphnia magna</i>	EC50	48h	>1-10 mg/l
Algae— <i>Desmodesmus subspicatus</i>	EC50	72h	>1-10 mg/l

12.2 Persistence and biodegradability

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

Alcohols branched/linear, ethoxylated

Readily biodegradable; >70%; 28d; aerobic; OECD Test Guideline 301A.

12.3 Bioaccumulative potential

No bioaccumulative potential noted for any component.

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

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12.6 Other adverse effects.

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13. Disposal consideration.

13.1 Waste treatment methods

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.

14. Transport information

Not regulated for transport.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Commission Regulation (EC) No. 453/2010 of 20th May 2010 amending Regulation (EC) No. 1907/2006 of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 1999/45/EC of 31st May 1999, The Dangerous Preparations Directive.

Regulation (EC) No. 648/2004 of the European Parliament and of the Council of 31st March 2004 on detergents.

15.2 Chemical Safety Assessment

The chemical safety assessment has not been carried out for the mixture.

16. Other information.

In addition to the R and S phrases stated in section 15 the full text of other phrases and statements etc. used but not written out in full in other sections are listed in full here;

R22 Harmful if swallowed

R36 Irritating to eyes

R41 Risk of serious damage to eyes

H302 Harmful if swallowed

H318 Causes serious eye damage

H319 Causes serious eye damage

Eye Irrit. 2 Serious eye damage/eye irritation Category 2

Eye Dam. 1 Serious eye damage/eye irritation Category 2

Acute tox. 4 Acute toxicity Category 4