

RADOLITE

Revision Date 02-Jul-2018

Supersedes Date: 17-Sep-2015

Revision Number 1.01

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name AIRTECH RADOLITE
Pure substance/mixture Mixture

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

Recommended use Biocidal Products (e.g. disinfectants, pest control).
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company Name
 Airtech Environmental Systems
 Stathe Road,
 Burrowbridge,
 Somerset,
 TA7 0RY
 Tel: +44 (0) 1823 690 292
 Fax: +44 (0) 1823 690 291

E-mail address info@airtechsolutions.co.uk

1.4. Emergency telephone number

United Kingdom	
-----------------------	--

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Skin Corrosion/Irritation	Category 1 Sub-category B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label Elements

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

Contains Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides



Signal Word
 DANGER

Safety Data Sheet

AIRTECH RADOLITE
Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018
Revision Number 1.01

Hazard statements

H314 - Causes severe skin burns and eye damage
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
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 or doctor
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information

This product requires tactile warnings if supplied to the general public
This product requires child resistant fastenings if supplied to the general public

2.3. Other Hazards

General Hazards

No information available.

PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Mixture

3.2 Mixtures

Chemical Name	EC No.	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH Registration Number
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	270-325-2	68424-85-1	5 - <10	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Met. Corr. 1 (H290) Aquatic Chronic 1 (H410) Eye Dam. 1 (H318)		No data available

Full text of H- and EUH-phrases: see section 16

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL.

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Safety Data Sheet

AIRTECH RADOLITE

Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018

Revision Number 1.01

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	Get medical advice/attention. Remove and isolate contaminated clothing and shoes.
Inhalation	Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult.
Skin Contact	For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Ingestion	Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a doctor.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

Symptoms None known.

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

Note to doctors Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Dry chemical, CO2 or water spray. Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dyke fire control water for later disposal; do not scatter the material.

Unsuitable Extinguishing Media

No information available

5.2. Special hazards arising from the substance or mixture

Some are oxidisers and may ignite combustibles (wood, paper, oil, clothing, etc.).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk.

Do not get water inside containers or in contact with substance.

For emergency responders

Safety Data Sheet

AIRTECH RADOLITE
Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018
Revision Number 1.01

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Methods for Containment Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Methods for cleaning up Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

6.4. Reference to other sections

Reference to other sections Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Section 13: DISPOSAL CONSIDERATIONS

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapours/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labelled containers. Keep from freezing.

7.3. Specific end use(s)

Other Information

Recommendation(s). Observe technical data sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Tight sealing safety goggles. Face protection shield.

Skin and Body Protection Suitable protective clothing. Apron. Gloves made of plastic or rubber.

Environmental Exposure Controls Do not allow into any sewer, on the ground or into any body of water.

Safety Data Sheet

AIRTECH RADOLITE

Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018

Revision Number 1.01

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Colour	Clear, colourless
Odour	Slight
Odour Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5 - 8	
Melting point / freezing point	= 0 °C / 32 °F	
Boiling point / boiling range	100 °C / 212 °F	
Flash Point	Not applicable	No information available
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	Not applicable for liquids
Flammability Limit in Air		
Upper flammability or explosive limits	No information available	
Lower flammability or explosive limits	No information available	
Vapour Pressure	No information available	
Vapour Density	No information available	
Relative Density	0.98	None known
Water Solubility	Miscible in water	
Solubility in Other Solvents	No information available	
Partition Coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Explosive Properties	No information available	
Oxidising Properties	No information available	
Kinematic Viscosity	No information available	

Dynamic Viscosity No information available

9.2. Other information

Softening Point	No information available
Molecular Weight	No information available
Solvent content (%)	No information available
Solid content (%)	No information available
Density	No data available
Bulk Density	No data available
VOC content (%)	

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions

None under normal processing.

Safety Data Sheet

AIRTECH RADOLITE
Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018
Revision Number 1.01

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

No information or data specific to the product on this toxicological (health) effect is available.

Inhalation	Causes burns.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	The product causes burns of eyes, skin and mucous membranes.
Ingestion	Causes burns.
Sensitisation	No data available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin Corrosion/Irritation	Not applicable.
Serious eye damage/eye irritation	Not applicable.
Sensitisation	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Carcinogenicity	Not applicable.
Reproductive Toxicity	No information available.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Aspiration hazard	No information available.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 5,680.00 mg/kg

Component Information

Toxicity Data Data obtained on the component(s) include

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Quaternary ammonium	= 426 mg/kg (Rat)	-	-

Safety Data Sheet

AIRTECH RADOLITE

Revision Date 02-Jul-2018

Supersedes Date: 17-Sep-2015

Revision Number 1.01

compounds, benzyl-C12-16-alkyldimethyl, chlorides 68424-85-1			
---	--	--	--

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life

Component Information

Data obtained on the component(s) include

Chemical Name	Algae/aquatic plants	Fish	Crustacea	M-Factor
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides 68424-85-1	EC50 (72h) = 0.025 mg/L Algae (Selenastrum capricornutum)(OECD 201)	LC50 (96h) = 0.085 mg/L Fish (Oncorhynchus mykiss) Static (OECD 203)	EC50 (48h) = 0.016 mg/L Waterflea (Daphnia magna)	10

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Partition coefficient No information available

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No information available

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Improper disposal or reuse of this container may be dangerous and illegal.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

Safety Data Sheet

AIRTECH RADOLITE
Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018
Revision Number 1.01

Land transport (ADR/RID)

14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides), 9, III
14.5 Environmental hazards	Yes
14.6 Special Provisions	274, 335, 601, 375
Classification Code	M6
Limited Quantity (LQ)	5 L
ADR Hazard Id (Kemmler Number)	90

IMDG

14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides), Marine Pollutant
14.3 Transport hazard class(es)	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides), 9, III, Marine Pollutant
14.5 Marine Pollutant	P
14.6 Special Provisions	274, 335, 969
Limited Quantity (LQ)	5 L
EmS-No	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

Air transport (ICAO-TI / IATA-DGR)

14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)
14.3 Transport hazard class(es)	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides), 9, III
14.5 Environmental hazards	Yes
14.6 Special Provisions	A97, A158, A197
Limited Quantity (LQ)	30 kg G
ERG Code	9L

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance

Safety Data Sheet

AIRTECH RADOLITE
Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018
Revision Number 1.01

with Article 59

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

EU-REACH (1907/2006) - Annex XIV - List of substances subject to Authorization

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Persistent Organic Pollutants

Not applicable

15.2. Chemical safety assessment

None

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H314 - Causes severe skin burns and eye damage
H302 - Harmful if swallowed
H400 - Very toxic to aquatic life
H290 - May be corrosive to metals
H410 - Very toxic to aquatic life with long lasting effects
H318 - Causes serious eye damage

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls and personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals		
STOT (RE):	Specific target organ toxicity - Repeated exposure		
STOT (SE):	Specific target organ toxicity - Single exposure		
EWC:	European Waste Catalogue		

Key literature references and sources for data

Classification and labeling data calculated from data received from raw material suppliers

Prepared By Product Safety & Regulatory Affairs

Revision Date 02-Jul-2018

Indication of changes

Safety Data Sheet

AIRTECH RADOLITE
Supersedes Date: 17-Sep-2015

Revision Date 02-Jul-2018
Revision Number 1.01

Revision Note	Not applicable.
Training Advice	No information available
Further information	No information available

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet