Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758 - United Kingdom: Great Britain

Date of issue/ Date of revision 11.04.2023 Date of previous issue 11.12.2020

Version 6.0



SAFETY DATA SHEET

Commercial Fuel Solutions Limited, Unit 43 City Industrial Park, Southampton, SO15 1HG, Tel +44 (0)2380 118 670





Air1

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

1.1 Product identifier

Product name Air1 **Product code** PA516L Product type Liquid

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

Notes

The safety data sheet and any attached exposure scenario are compiled in accordance with the REACH regulation and in no way reflects the specification, purity or quality standards required for specific applications and use of the product identified in section 1.1.

Identified uses

Industrial distribution.

Industrial Use for flue gas NOx and SOx reduction.

Industrial USE as a laboratory/research chemical.

Professional USE as reactive agent/processing aid and for general chemical applications.

Professional USE as a laboratory/research chemical.

Consumer USE as part of specialist products.

Uses advised against None identified.

1.3 Details of the supplier of the safety data sheet

Yara UK Limited

Address

Fax no.

Street Pocklington Industrial Estate

Postal code **YO42 1DN** City York

Country United Kingdom Telephone number +44 1759 302545 +44 1759 303650

e-mail address of person yarauk.hesq@yara.com

responsible for this SDS

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1.4 Emergency telephone number

National advisory body/Poison : Not available.

Center

<u>Supplier</u>

Emergency telephone number National Chemical Emergency Centre

(with hours of operation) +44 (0) 1865 407333 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture.

Product definition Mixture

Classification according to UK CLP/GHS

Classification Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word No signal word.

Hazard statements Not applicable.

Precautionary statements Not applicable.

EU Regulation (EC) No.

1907/2006 (REACH) Annex XVII

- Restrictions on the

manufacture, placing on the

market and use of certain

dangerous substances,

mixtures and articles

Special packaging requirements

Containers to be fitted with

child-resistant fastenings

Not applicable.

Not applicable.

Tactile warning of danger Not applicable.

2.3 Other hazards

Product meets the

: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

criteria for PBT or vPvB

according to Regulation (EC) No.

1907/2006, Annex XIII

Other hazards which do not

result in classification

None known.

Additional information None.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Remarks : Aqueous solution

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Rinse with plenty of running water. Check for and remove any

contact lenses. Get medical attention if irritation occurs.

Inhalation : Avoid inhalation of vapor, spray or mist. If inhaled, remove to

fresh air. Get medical attention if you feel unwell.

Skin contact : Wash with soap and water. Get medical attention if irritation

develops.

Ingestion : Wash out mouth with water. If material has been swallowed and

the exposed person is conscious, give small quantities of water to drink. Get medical attention if adverse health effects persist or

are severe.

Protection of first-aiders : No action shall be taken involving any personal risk or without

suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact: No specific data.Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist

immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept

under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

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Unsuitable extinguishing media

None identified.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products

Decomposition products may include the following materials: nitrogen oxides, ammonia, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with

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non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Bund storage facilities to prevent soil and water pollution in the event of spillage.

7.3 Specific end use(s)

Recommendations : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Remark: No exposure limit value known.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other

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control measures and/or the necessity to use respiratory protective equipment.

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls

 Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures

: A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin protection Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the

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requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

(Pictograms)



SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid Color : Colorless.,

Odor : slight, ammoniacal

 $\begin{array}{lll} \mbox{Melting point/freezing point} & : & -10.5 \ ^{\circ}\mbox{C} \\ \mbox{Initial boiling point and boiling} & : & 100 \ ^{\circ}\mbox{C} \\ \end{array}$

range

Flammability : Non-flammable.

Upper/lower flammability or

explosive limits

Lower: Not applicable. Upper: Not applicable.

Flash point : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not applicable.

pH : 9 - 10

Viscosity : Dynamic: 1.4 mPa.s @ 20 °C

Kinematic: 1.287 mm2/s @ 20 °C (68 °F)

Water solubility : > 100 g/l

Partition coefficient: n-

octanol/water

Not applicable.

Vapor pressure : Ingredient name Vapor pressure

water 30.94 hPa (@ 25 °C)

Density : 1.088 g/cm3

Relative vapour density : < 1 [Air = 1]

Explosive properties : Non-explosive.

Oxidizing properties : None

Particle characteristics

Median particle size : Not applicable.

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9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity No specific test data related to reactivity available for this

product or its ingredients.

10.2 Chemical stability The product is stable.

10.3 Possibility of hazardous Under normal conditions of storage and use, hazardous

reactions reactions will not occur.

10.4 Conditions to avoid Avoid contamination by any source including metals, dust

and organic materials.

10.5 Incompatible materials Urea reacts with calcium hypochlorite or sodium

hypochlorite to form the explosive nitrogen trichloride.

Remark Reactive or incompatible with the following materials:

Oxidizing agents

acids alkalis

Nitrites and nitrates

10.6 Hazardous Under normal conditions of storage and use, hazardous decomposition products

decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Conclusion/Summary No known significant effects or critical hazards.

Acute toxicity estimates

N/A

Irritation/Corrosion

Conclusion/Summary

Skin No known significant effects or critical hazards. No known significant effects or critical hazards. Eyes Respiratory No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin No known significant effects or critical hazards. Respiratory No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary No known significant effects or critical hazards.

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Carcinogenicity

Conclusion/Summary: No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Inhalation : Exposure to decomposition products may cause a health

hazard. Serious effects may be delayed following

exposure.

Ingestion: No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:No specific data.Ingestion:No specific data.Skin contact:No specific data.Eye contact:No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects: No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Other effects : No known significant effects or critical hazards.

Toxicokinetics

Absorption : Rapidly absorbed.

Distribution

Not metabolized within liver tissues before entering the

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systemic circulation.

Metabolism : Metabolite is not known to be toxic.

Elimination : The chemical and its metabolites are fully excreted and do

not accumulate within the body.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary: No known significant effects or critical hazards.

12.2 Persistence and degradability

Conclusion/Summary: No known significant effects or critical hazards.

12.3 Bioaccumulative potential

Conclusion/Summary : No known significant effects or critical hazards.

12.4 Mobility in soil

Soil/water partition coefficient

(KOC)

Not available.

Mobility : This product may move with surface or groundwater flows

because its water solubility is: high

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with

jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product

is not regarded as hazardous waste, as defined by EU

Directive 2008/98/EC.

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Waste catalogue

Waste code	Waste designation
06 10 99	wastes not otherwise specified

Packaging

Methods of disposal

: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

: This material and its container must be disposed of in a

safe way.

Empty containers or liners may retain some product

residues.

Avoid dispersal of spilled material and runoff and contact

with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.3 Transport hazard class(es)	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.4 Packing group	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.5. Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user

Transport within user's premises: Ensure that persons transporting the product know what to do in the event of

an accident or spillage.

14.7 Transport in bulk according to IMO instruments

Proper shipping name : Urea solution

Remarks

Liquid bulk cargoes

Ship type: 3

Pollution category: Z

SECTION 15: Regulatory information

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

UK (GB) /REACH

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

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Substances of very high concern

None of the components are listed.

Ozone depleting substances

None of the components are listed.

Prior Informed Consent (PIC)

None of the components are listed.

Persistent Organic Pollutants

None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

Other regulations : This product is not subject to The Poison Act 1972 and the

following amendments, but all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulations

Biocidal products regulation : Not applicable.

EU regulations

Notes : To our knowledge no other country or state specific

regulations are applicable.

15.2 Chemical Safety

<u>Assessment</u>

Complete.

SECTION 16: Other information

Abbreviations and acronyms : ATE = Acute Toxicity Estimate

GB CLP = UK CLP (EC No 1272/2008) on the

Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No.

720 and amendments

DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level

EUH statement = GB CLP-specific Hazard statement

N/A = Not available

PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

SGG = Segregation Group

PBT = Persistent, Bioaccumulative and Toxic

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vPvB = Very Persistent and Very Bioaccumulative

bw = Body weight

Key data sources : EU REACH ECHA/IUCLID5 CSR.

National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical

Substances.

Sphera Solutions Inc., 4777 Levy Street, St Laurent,

Quebec HAR 2P9, Canada.

Procedure used to derive the classification

Not classified.

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

Revision comments : The safety data sheet has been revised according to UK

REACH Regulation SI 2019/758.

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Prepared by : Product Stewardship and Compliance (PSC).

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.

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