

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

1.1 Product identifier

Trade name: PURE AIR A

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

Application of the substance / the mixture Coating agent - component A

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Mursall Active Coating GmbH

Löwensternstraße 4

5411 Oberalm, Austria

Tel. +43 6245 21811

Further information obtainable from:

Robert Kummerer

Email: r.kummerer@active-coating.com

1.4 Emergency telephone number:

+43 6245 21811

Available during office hours:

Mo. – Th.: 8-12 h und 13-17 h

Fr.: 8-13 h

Call the national emergency number!

* **SECTION 2: Hazards identification**

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02

Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 Keep container tightly closed.
 P280 Wear protective gloves / eye protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Contains nanoparticles. Aerosols containing nanoparticles may be formed during spraying. Do not inhale aerosols.

Results of PBT and vPvB assessment

PBT: No data available.

vPvB: No data available.






*** SECTION 3: Composition/information on ingredients**

3.2 Mixtures

Description:

Mixture of substances listed below with nonhazardous additions.
 Contains nanoparticles.

Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol  Flam. Liq. 2, H225  Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2; H319: C ≥ 50 %	30 – 50%
CAS: 1314-13-2 EINECS: 215-222-5 Index number: 030-013-00-7 Reg.nr.: 01-2119463881-32-XXXX	zinc oxide nano  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 2.5%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3	butanone  Flam. Liq. 2, H225  Eye Irrit. 2, H319; STOT SE 3, H336 EUH066	< 1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

In case of discomfort or doubt, seek medical advice.

If unconscious, use a stable lateral position and do not administer anything through mouth.

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Trade name: PURE AIR A

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Immediately remove any clothing soiled by the product.

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Wash with plenty of soap and water.

Take off contaminated clothing and wash it before reuse.

Seek medical treatment in case of complaints.

After eye contact:

Rinse opened eye for several minutes under running water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Seek medical treatment in case of complaints.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

CO_x

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

Fumes can combine with air to form an explosive mixture.

5.3 Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Restricted access to the affected area until cleaning work is completed.

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Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Avoid contact with skin and eyes.

Do not breathe vapour/spray.

Remove ignition sources, if possible without danger.

6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding, inert material (sand, diatomite, acid binders, universal binders).

Dispose of the material collected according to regulations.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Keep receptacles tightly sealed.

Avoid contact with skin and eyes.

Avoid breathing mist/vapours/spray.

Use personal protective equipment as required.

Observe protective measures and safety instructions.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Use non-sparking tools.

Ground and bond container and receiving equipment.

Traces of flammable substances may collect in the steam chamber of enclosed systems. Keep clear of ignition sources.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Store in dry conditions.

Protect from heat and direct sunlight.

Protect from frost.

Store receptacle in a well ventilated area.

Store in accordance with local/regional/national/international regulations.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Recommended storage temperature: room temperature

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Storage class: 3

7.3 Specific end use(s) No further relevant information available.

* SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm

CAS: 78-93-3 butanone

WEL Short-term value: 899 mg/m³, 300 ppm
Long-term value: 600 mg/m³, 200 ppm
Sk, BMGV

Regulatory information WEL: EH40/2020

DNELs

CAS: 64-17-5 ethanol

Oral	Long-term exposure - systemic effects	87 mg/kg bw/d (consumer)
Dermal	Long-term exposure - systemic effects	206 mg/kg bw/d (consumer) 343 mg/kg bw/d (workers)
Inhalative	Long-term exposure - systemic effects	114 mg/m ³ (consumer) 950 mg/m ³ (workers)

CAS: 1314-13-2 zinc oxide nano

Oral	Long-term exposure - systemic effects	0.83 mg/kg bw/d (consumer)
Dermal	Long-term exposure - systemic effects	83 mg/kg bw/d (consumer) 83 mg/kg bw/d (workers)
Inhalative	Long-term exposure - systemic effects	2.5 mg/m ³ (consumer) 5 mg/m ³ (workers)
	Long-term exposure - local effects	0.5 mg/m ³ (workers)

CAS: 78-93-3 butanone

Oral	Long-term exposure - systemic effects	31 mg/kg bw/d (consumer)
Dermal	Long-term exposure - systemic effects	412 mg/kg bw/d (consumer) 1,161 mg/kg bw/d (workers)
Inhalative	Long-term exposure - systemic effects	106 mg/m ³ (consumer) 600 mg/m ³ (workers)

PNECs

CAS: 64-17-5 ethanol

fresh water	960 µg/l
sea water	790 µg/l
intermittent release (fresh water)	2.75 mg/l

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STP	580 mg/l
sediment (fresh water)	3.6 mg/kg dw
sediment (sea water)	2.9 mg/kg dw
soil	0.63 mg/kg dw
oral	0.38 mg/kg food
CAS: 1314-13-2 zinc oxide nano	
fresh water	20.6 µg/l
sea water	6.1 µg/l
STP	0.1 mg/l
sediment (fresh water)	117.8 mg/kg dw
sediment (sea water)	56.5 mg/kg dw
soil	35.6 mg/kg dw
CAS: 78-93-3 butanone	
fresh water	55.8 mg/l
sea water	55.8 mg/l
intermittent release (fresh water)	55.8 mg/l
STP	709 mg/l
sediment (fresh water)	284.74 mg/kg dw
sediment (sea water)	284.7 mg/kg dw
soil	22.5 mg/kg dw
oral	1,000 mg/kg food
Ingredients with biological limit values:	
CAS: 78-93-3 butanone	
BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

Regulatory information BMGV: EH40/2011

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Appropriate engineering controls

No further data; see item 7.

Technical measures and the use of suitable working methods take priority over the use of personal protective equipment.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Do not eat or drink while working.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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Immediately remove all soiled and contaminated clothing
Avoid breathing mist/vapours/spray.

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:

If vapours/aerosols and/or inadequate ventilation are present, respiratory protection must be worn.

Hand protection



Protective gloves

EN 374

The glove material has to be impermeable and resistant to the product/ the substance/ the mixture.

Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection



Tightly sealed goggles

EN 166

Body protection: Protective work clothing

Environmental exposure controls

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state

Fluid

Colour:

White

Odour:

Alcohol-like

Odour threshold:

No information available.

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Trade name: PURE AIR A

(Contd. of page 7)

Melting point/freezing point: No information available.

Boiling point or initial boiling point and boiling range No information available.

Flammability Not applicable.

Lower and upper explosion limit

Lower: 3.5 Vol %

Upper: 15 Vol %

Flash point: < 21 °C

Auto-ignition temperature: Product is not selfigniting.

64-17-5	ethanol	363 - 425 ° C
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Decomposition temperature: No information available.

pH Not determined.

Viscosity:

Kinematic viscosity No information available.

Dynamic: No information available.

Solubility water: miscible

Partition coefficient n-octanol/water (log value)

64-17-5	ethanol	-0,35 log Kow
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78-93-3	butanone	0,3 log Kow
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Vapour pressure: Not determined.

Density and/or relative density

Density at 20 °C: ca. 0.91 g/cm³

Vapour density No information available.

9.2 Other information

Appearance:

Form: Fluid

Important information on protection of health and environment, and on safety.

Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Change in condition

Softening point/range

Oxidising properties No information available.

Evaporation rate No information available.

Information with regard to physical hazard

classes

Explosives Void

Flammable gases Void

Aerosols Void

Oxidising gases Void

Gases under pressure Void

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Trade name: PURE AIR A

(Contd. of page 8)

Flammable liquids

Highly flammable liquid and vapour.

Flammable solids

Void

Self-reactive substances and mixtures

Void

Pyrophoric liquids

Void

Pyrophoric solids

Void

Self-heating substances and mixtures

Void

Substances and mixtures, which emit flammable

gases in contact with water

Void

Oxidising liquids

Void

Oxidising solids

Void

Organic peroxides

Void

Corrosive to metals

Void

Desensitised explosives

Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Fumes can combine with air to form an explosive mixture.

Violent reactions with:

Alkali metals, alkaline earth metals, acetic anhydride, peroxides, phosphorus oxides, strong oxidants, nitric acid, nitrate, perchlorates, => explosion hazard

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products:

No decomposition if used and stored according to specifications.

*** SECTION 11: Toxicological information**

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

CAS: 64-17-5 ethanol

Oral	LD50	10,470 mg/kg (rat)
Inhalative	LC50/4 h	124.7 mg/l (rat)

Inhalative	LC50/4 h	124.7 mg/l (rat)
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CAS: 1314-13-2 zinc oxide nano

Oral	LD50	> 5,000 mg/kg (rat)
Inhalative	LC50/4h	2,500 mg/m ³ (mouse)

Inhalative	LC50/4h	2,500 mg/m ³ (mouse)
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CAS: 78-93-3 butanone

Oral	LD50	2,193 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rabbit)

Dermal	LD50	5,000 mg/kg (rabbit)
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(Contd. on page 10)

Trade name: PURE AIR A

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Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

CAS: 78-93-3 butanone

List II

*** SECTION 12: Ecological information**

12.1 Toxicity

Aquatic toxicity:

CAS: 64-17-5 ethanol

EC50 (48 h) 12,340 mg/l (daphnia) (Daphnia magna)

LC50 (96 h) 12,900 – 15,300 mg/l (fish) (Onchorhynchus mykiss)

CAS: 1314-13-2 zinc oxide nano

LC50 (96 h) 0.169 mg/l (fish) (Onchorhynchus mykiss)

CAS: 78-93-3 butanone

EC50 (48 h) 308 mg/l (daphnia)

LC50 (96 h) 2,993 mg/l (fish)

EC50 (96 h) 2,029 mg/l (algae)

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: No data available.

vPvB: No data available.

12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects

Remark: Harmful to fish

Additional ecological information:

General notes:

Harmful to aquatic life with long lasting effects.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow product to reach ground water, water course or sewage system.

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Trade name: PURE AIR A

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Only dispose of product residues via authorised companies according to local legislation.

European waste catalogue

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.

14 06 03*	other solvents and solvent mixtures
11 01 98*	other wastes containing hazardous substances

Uncleaned packaging:

Recommendation:

Dispose of packaging according to regulations on the disposal of packagings.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN, IMDG, IATA UN1170

14.2 UN proper shipping name

ADR/RID/ADN 1170 ETHANOL (ETHYL ALCOHOL) solution
IMDG ETHANOL (ETHYL ALCOHOL) solution
IATA ETHANOL solution

14.3 Transport hazard class(es)

ADR/RID/ADN, IMDG, IATA



Class 3 Flammable liquids.

Label 3

14.4 Packing group

ADR/RID/ADN, IMDG, IATA II

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user Warning: Flammable liquids.

Hazard identification number (Kemler code): 33

EMS Number: F-E,S-D

Stowage Category A

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

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Trade name: PURE AIR A

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Transport/Additional information:

ADR/RID/ADN

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

Transport category

2

Tunnel restriction code

D/E

IMDG

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":

UN 1170 ETHANOL (ETHYL ALCOHOL) SOLUTION,
3, II

* SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

Training hints

Regular training of staff involved in the transport of dangerous goods (in accordance with Chapter 1.3 ADR).

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Trade name: PURE AIR A

(Contd. of page 12)

Before handling, storage or use for the first time, employees must be informed about the properties of the substance and about measures taken to ensure safety and environmental protection.

Department issuing SDS:

UmEnA GmbH

<http://umena.at>

Email: office@umena.at

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

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

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**