

SAFETY DATA SHEET
According to Directive 2001/58/EC

ALKOR® PLUS 81044

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance/preparation

Product name : ALKOR® PLUS 81044
Chemical Name : Acetic acid, ethyl ester
Molecular formula : C₄H₈O₂
Molecular Weight : 88 g/mol

1.2. Use of the Substance/Preparation

Recommended use : - Detergents

1.3. Company/Undertaking Identification

Address : **RENOLIT Belgium N.V.**
INDUSTRIEPARK DE BRUWAAN 9
B- 9700 OUDENAARDE

Telephone : 3255339711

Telefax : 3255319650

1.4. Emergency telephone number

Telephone : +44(0)208 762 8322 [CareChem 24] (Europe)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ethylacetate
CAS-No. : 141-78-6
Annex-1 : 607-022-00-5
EINECS-No. : 205-500-4
Symbol(s) : F, Xi
R-phrases) : R11, R36, R66, R67
Concentration : >= 99.00 %

3. HAZARDS IDENTIFICATION

Appearance : liquid
Colour : colorless/colourless
Odour : Fruity

- This substance is classified and labelled according to Annex I of Directive 67/548/EEC, as amended.
- Highly flammable
- Irritating to eyes.
- Repeated exposure may cause skin dryness or cracking.
- Vapours may cause drowsiness and dizziness.



4. FIRST AID MEASURES

4.1. Inhalation

- Remove the subject from the contaminated area as soon as possible; transport him/her lying down, with the head higher than the body, to a quiet, uncontaminated and well-ventilated location..
- Oxygen or pulmonary resuscitation if necessary.
- Consult with a physician in case of respiratory and nervous symptoms.

4.2. Eye contact

- Flush eyes with running water for several minutes, while keeping the eyelids wide open.
- Consult with an ophthalmologist in case of persistent pain.

4.3. Skin contact

- Wash the affected skin with running water.
- Clean clothing.
- Consult with a physician in case of persistent pain or redness.

4.4. Ingestion

The following actions are recommended :

- Contact a physician for advice.

If victim is conscious:

- Rinse mouth and administer fresh water.
- If the subject presents nervous, respiratory or cardiovascular disorders: administer oxygen.

If victim is unconscious but breathing:

- Classical resuscitation measures.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

- Powder
- Foam, AFFF.
- CO2
- Water spray

5.2. Extinguishing media which must not be used for safety reasons

- Water may be inappropriate

5.3. Special exposure hazards in a fire

- Highly flammable (see section 9).
- Formation of dangerous gas/vapours in case of decomposition (see section 10).
- Gas/vapours are heavier than air and so may travel along the ground; remote ignition possible.
- Gas/vapours explosion possible in presence of air.

5.4. Special protective equipment for fire-fighters

- Evacuate all non-essential personnel.
- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- In all cases wear self-contained breathing apparatus.
- When intervention in close proximity wear acid resistant over suit.
- Protect intervention team with a water spray as they approach the fire.
- After intervention, proceed to clean the equipment (take a shower, remove clothing carefully, clean and check).
- Fire fighters must wear fire resistant personnel protective equipment.

5.5. Other information

- If safe to do so, remove the exposed containers, or cool with large quantities of water.
- Approach from upwind.



- Avoid propagating the fire when directing the extinguishing agent as a jet onto the surface of the burning liquid.
- After the fire, proceed rapidly to clean the surfaces exposed to the fumes in order to limit the damage to the equipment.
- As for any fire, ventilate and clean the rooms before re-entry.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

- Follow the protective measures given in section 5.
- Follow the protective measures given in section 8.
- If safe to do so, without over exposing anyone, try to stop the leak.
- Eliminate all sources of ignition, and do not generate flames or sparks.
- Keep away materials and products which are incompatible with the product (see section 10).
- Approach from upwind.
- Protect intervention team with water spray.
- Isolate the area.
- Ventilate the premises.
- Disperse gas/vapours with water spray.
- Cover the spreading liquid with foam in order to slow down the evaporation.

6.2. Environmental precautions

- Do not discharge into the environment (sewers, rivers, soils, ...).
- Immediately notify the appropriate authorities in case of discharge.

6.3. Methods for cleaning up

- If possible, dam large quantities of liquid with sand or earth.
- Prevent the product from entering sewers or confined places.
- Remove the product with an inert absorbent (sand, kieselguhr, vermiculite, ...).
- Place everything into a closed, labelled container compatible with the product.
- Store the product in a safe and isolated place.
- For disposal methods, refer to section 13.
- Clean the area with large quantities of water.

7. HANDLING AND STORAGE

7.1. Handling

- Carry out industrial operations in closed piping circuits and equipment.
- Handle small quantities under a lab hood.
- Operate in a well-ventilated area.
- Do not use tools that produce sparks.
- Prevent any product decomposition from contacting hot spots.
- Keep away from ignition and heat sources.
- Do not use compressed air for transferring or handling the product.
- Keep away from reactive products (see section 10).

7.2. Storage

- In a ventilated, cool area.
- Keep away from ignition and heat sources.
- Under inert gas.
- Keep away from reactive products (see section 10).
- Containment bund around storage containers and transfer installation.
- For bulk storage, consult the producer.

7.3. Specific use(s)

- For any particular use, please contact the supplier.



7.4. Packaging material

- Steel
- Stainless steel.

7.5. Other information

- No open flames or sparks, no smoking.
- Provide electrical equipment safe for hazardous locations.
- Grounded equipment.
- Prevent electrostatic discharges.
- Warn people about the dangers of the product.
- Follow the protective measures given in section 8.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Exposure Limit Values

Ethylacetate

- US. ACGIH Threshold Limit Values 2005
TWA = 400 ppm
- WEL (UK) 2005
TWA = 200 ppm
- WEL (UK) 2005
STEL = 400 ppm

8.2. Exposure controls

- Premises ventilation.
- Provide local ventilation suitable for the product decomposition risk (see section 10).
- Maintain employee exposures to levels below the applicable exposure limits.

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

- In case of emissions, face mask with type A cartridge.
- Self-contained breathing apparatus in medium confinement/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection.
- Use only respiratory protection that conforms to international/ national standards.

8.2.1.2. Hand protection

- Protective gloves - chemical resistant:
- Recommended materials: Butyl rubber

8.2.1.3. Eye protection

- Wear protective goggles for all industrial operations.
- If risk of splashing, chemical proof goggles/face shield.

8.2.1.4. Skin and body protection

- Protective clothing suitable for the handling of chemicals.
- Apron/boots of butyl rubber if risk of splashing.

8.2.1.5. Hygiene measures

- Shower and eye wash stations.
- Consult the industrial hygienist or the safety manager for the selection of personal protective equipment suitable for the working conditions.

8.2.2. Environmental exposure controls

- Respect local/federal and national regulations for aqueous emissions (see section 15).



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information (appearance, odour)

Appearance	:	liquid
Colour	:	colorless/colourless
Odour	:	Fruity

9.2. Important Health Safety and Environmental Information

Boiling point/range	:	77 °C
Flash point	:	-4 °C <i>Remarks: Highly flammable</i>
Flammability (solid, gas)	:	<u>Upper explosion limit:</u> 11.5 %(V) <u>Lower explosion limit:</u> 2.2 %(V)
Explosive properties	:	<i>Remarks: With certain materials (see section 10).</i>
Vapour pressure	:	93 hPa <i>Temperature: 20 °C</i>
Relative density / Density	:	= 0.9
Solubility	:	Water 80 g/l <i>Temperature: 25 °C</i> <i>Remarks: Decomposition in contact with water</i>
Partition coefficient (n-octanol/water)	:	<u>log Pow:</u> = 0.7
Vapour density	:	3.04

9.3. Other data

Melting point/range	:	-83 °C
Autoinflammability	:	430 °C

10. STABILITY AND REACTIVITY

10.1. Stability

- The vapor is heavier than air, disperses at ground level.

10.2. Conditions to avoid

- Heat/Sources of heat
- Naked flames, sparks.

10.3. Materials to avoid

- Oxidizing agents
- Strong bases
- Strong acids
- Alkaline metals
- Certain plastic materials



10.4. Hazardous decomposition products

- acetic acid
- Carbon monoxide

11. TOXICOLOGICAL INFORMATION

11.1 Toxicological data

Acute oral toxicity

- LD 50, rat, 6,100 mg/kg

Acute inhalation toxicity

- LC50, 4 h, rat, 29 - 59 mg/l

Acute dermal toxicity

- LD 50, rabbit, > 18,000 mg/kg

Skin irritation

- Rabbit, non irritant (skin)

Eye irritation

- Rabbit, slightly irritant (eyes)

Sensitization

- Guinea Pig, Non sensitizing (skin)

Chronic toxicity

- Inhalation, after prolonged exposure, rat, Target Organs: upper respiratory tract, NOEL: 350 ppm, no systemic effect

Genetic toxicity in vitro

- Mutagenic effect in vitro but not in vivo

Possible hazards (summary)

- Slightly irritant effect for the eyes
- Mutagenic effect in vitro

11.2. Health effects

Main effects

- Irritating to mucous membrane and eyes.
- Risk of central nervous system effects.

Inhalation

- Slight nose irritation.
- At high concentrations, headaches and nausea.
- At high concentrations, dizziness and drowsiness.
- At high concentrations, risk of narcosis.
- In case of repeated or prolonged exposure, at high concentrations: risk of sore throat, nose bleeds.

Eye contact

- Moderate irritation.

Skin contact

- The product can be absorbed by intact skin.
- In case of prolonged contact: slight irritation.
- In case of repeated contact: dry and chapped skin.

Ingestion

- Irritation of the mouth and throat.
- Nausea, vomiting and diarrhea.
- By ingestion of large quantities: dizziness and drowsiness.
- By ingestion of large quantities: risk of narcosis.
- By ingestion of large quantities: risk of chemical pneumopathy from product inhalation.



12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

- Fishes, Pimephales promelas, LC50, 96 h, 230 mg/l
Remarks: fresh water
- Crustaceans, Daphnia magna, EC 50, 24 h, 2,500 mg/l
Remarks: fresh water

Chronic toxicity

- Remarks: no data
- Algae, Scenedesmus subspicatus, NOEC, biomass, 72 h, > 100 mg/l
Remarks: fresh water

12.2. Mobility

- Air, Volatility, Henry's law constant (H) 14 - 24 Pa.m³/mol
Conditions: 25 °C
- water, evaporation, t1/2: 5 - 134.4 h
Conditions: estimated value
- Soil/sediments, log KOC:8.8
Remarks: significant evaporation and percolation

12.3. Persistence and degradability

Abiotic degradation

- Air, degradation, t 1/2 8.3 d
- water, hydrolysis, t 1/2 24 Months
Conditions: pH 7

Biodegradation

- aerobic, Tested according to: ready biodegradability/closed bottle, degradation 28 d
Remarks: Readily biodegradable.

12.4. Bioaccumulative potential

- Bioconcentration: log Po/w 0.73
Remarks: estimated value

12.5. Other adverse effects

- no data available

12.6. Possible hazards (summary)

- Hazard for the aquatic environment is limited due to product properties:
 - . low toxicity for aquatic organisms.
 - . ready biodegradability.
- High mobility.

13. DISPOSAL CONSIDERATIONS

13.1. Waste from residues / unused products

- Dispose in compliance with local/federal and national regulations.
- Send the product to an authorized hazardous waste incinerator.

13.2. Packaging treatment

- Rinse the empty containers with a low volatility hydrocarbon and treat the effluent in the same way as waste.
- Or
- Dispose of the containers by dispatching them to an approved incineration facility for hazardous waste.
- Containers that cannot be cleaned must be treated as waste.



14. TRANSPORT INFORMATION

UN-No	1173
IATA-DGR	
Class	3
Packing group	II
ICAO-Labels	FLAMMABLE LIQUID
Proper shipping name: ETHYL ACETATE	
IMDG	
Class	3
Packing group	II
IMO-Labels	Flammable Liquids
HI/UN No.	1173
EmS:	F-E, S-D
Proper shipping name: ETHYLE ACETATE	
ADR	
Class	3
Packing group	II
ADR/RID-Labels	3
HI/UN No.	33/1173
Proper shipping name: ETHYL ACETATE	
RID	
Class	3
Packing group	II
ADR/RID-Labels	3
HI/UN No.	33/1173
Proper shipping name: ETHYL ACETATE	

15. REGULATORY INFORMATION

15.1. EC Label

- Hazardous components which must be listed on the label: Ethylacetate
- This substance is classified and labelled according to Annex I of Directive 67/548/EEC, as amended.

Symbol(s)	F Xi	Highly flammable Irritant
R-pharse(s)	R11 R36 R66 R67	Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
S-pharse(s)	S 2 S16 S26 S33	Keep out of the reach of children. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take precautionary measures against static discharges.



15.2. Other information

- Indicate on the label: EC LABELING

16. OTHER INFORMATION

16.1. Administrative information

- Update
This data sheet contains changes from the previous version in section(s): 1, 3, 8.1, 12, 15, 16
- Distribute new edition to clients

16.2. Text of R phrases mentioned in Section 2

- R11 : Highly flammable.
- R36 : Irritating to eyes.
- R66 : Repeated exposure may cause skin dryness or cracking.
- R67 : Vapours may cause drowsiness and dizziness.

This MSDS is intended for only the selected countries to which it is applicable. For example, this MSDS is not intended for use nor distribution within North America.

The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product which conforms to the specifications, unless otherwise stated. In this case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and protection of human welfare and the environment.

