

SAFETY DATA SHEET
(according to Directive 2001/58/EC)

ALKOR® PLUS 81068

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

1.1. Identification of the substance or preparation

Product name : ALKOR® PLUS 81068

1.2. Use of the substance/preparation

Recommended uses : - Adhesive, binding agents

1.3. Company/undertaking identification **RENOLIT Belgium N.V.**

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1.4. Emergency telephone

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Cyclohexane

CAS Number : 110-82-7
ID Number (Annex I) : 601-017-00-1
EC Number (EINECS) : 203-806-2
Symbols : F, Xn, N
Phrases R : 11, 38, 50/53, 65, 67
Concentration : **2.50 - 6.00 %**

Ethyle acetate

CAS Number : 141-78-6
ID Number (Annex I) : 607-022-00-5
EC Number (EINECS) : 205-500-4
Symbols : F, Xi
Phrases R : 11, 36, 66, 67
Concentration : **2.50 - 6.00 %**

Methyl acetate

CAS Number : 79-20-9
ID Number (Annex I) : 607-021-00-X
EC Number (EINECS) : 201-185-2
Symbols : F, Xi
Phrases R : 11, 36, 66, 67
Concentration : **2.50 - 6.00 %**

4,4'-methylenediphenyl diisocyanate



CAS Number : 101-68-8
ID Number (Annex I) : 615-005-00-9
EC Number (EINECS) : 202-966-0
Symbols : Xn, Xi
Phrases R : 20, 36/37/38, 42/43
Concentration : **2.50 - 6.00 %**

Tris(nonylphenyl) phosphite

CAS Number : 26523-78-4
EC Number (EINECS) : 247-759-6
Symbols : Xi, N
Phrases R : 38, 43, 50/53
Concentration : **<= 0.50 %**

3. HAZARDS IDENTIFICATION

- Preparation classified as dangerous according to Directive 1999/45/EC.
- Highly flammable
- Hazardous product for the human health and the aquatic environment.
- Harmful and irritant product.
- Sensitising product
- Acts on the nervous system.

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 all cases.

4.2. Eyes contact

- Flush eyes with running water for 15 minutes, while keeping the eyelids wide open.
- Consult with an ophthalmologist in all cases.

4.3. Skin contact

- Remove contaminated shoes, socks and clothing; wash the affected skin with soap and water.
- Clean clothing.
- Consult with a physician in case of persistent pain or redness.

4.4. Ingestion

General recommendations

- Consult with a physician in all cases.

If the subject is completely conscious:

- Give to drink fresh water added with activated charcoal.
- Do not induce vomiting.
- If the subject presents nervous, respiratory or cardiovascular disorders: administer oxygen.

If the subject is unconscious:

- Classical resuscitation measures.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

- Powder



- Foam, AFFF.
- CO2
- Water spray

5.2. Unsuitable extinguishing media

- Jet of water

5.3. Special exposure hazards

- 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.
- Dust explosion possible in presence of air.

5.4. Protective measures in case of intervention

- 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 water spray when approaching 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 precautions

- 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 means in a jet on 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

- Steel
- Stainless steel.

7.5. Other precautions

- 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

Cyclohexane

TLV (ACGIH-USA) 2004
TWA = 100 ppm

Cyclohexane

OES (HSE-UK)
TWA = 100 ppm
TWA = 350 mg/m³
STEL = 300 ppm
STEL = 1,050 mg/m³

Ethyle acetate

TLV (ACGIH-USA) 2004
TWA = 400 ppm
TWA = 1,440 mg/m³

Ethyle acetate

OES (HSE-UK)
TWA = 200 ppm



STEL = 400 ppm

Methyl acetate

TLV (ACGIH-USA) 2004

TWA = 200 ppm

STEL = 250 ppm

Methyl acetate

OES (HSE-UK)

TWA = 200 ppm

TWA = 616 mg/m³

STEL = 250 ppm

STEL = 770 mg/m³

4,4'-methylenediphenyl diisocyanate

TLV (ACGIH-USA) 2004

TWA = 0.005 ppm

4,4'-methylenediphenyl diisocyanate

MEL (HSE-UK)

TWA = 0.02 mg/m³

STEL = 0.07 mg/m³

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 and dust clouds/fog/fumes, face mask with combined type ABEK-P2 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 : 4H ®

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 protection

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

8.2.1.5. Other precautions

- Shower and eye wash stations.
- Take off contaminated clothing immediately after work.
- 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 : liquid
Color/Colour : pale yellow
Odor/Odour : Fruity

9.2. Important health, safety and environmental information

Boiling point : No data
Flash point : < 0 °C
Remark: Highly flammable
Flammability : 260 °C
Explosive properties : *Remark: Explosion possible with gas/vapour and air mixtures.*
Vapor/vapour pressure : No data
Density : Specific gravity:
1
Solubility : Insoluble in
: Water
**Partition coefficient: n-
octanol/water** : No data
Viscosity : 6,000 mPa.s
**Vapor/vapour density
(air=1)** : > 1

9.3. Other information

Auto-flammability : No data

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

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

10.2. Materials to avoid

- Oxidizing agents
- Strong bases
- Strong acids
- Alkaline metals
- Certain plastic materials.
- Alcohols
- Amines

10.3. Hazardous decomposition products

- acetic acid
- Nitrogen oxide(s)
- Carbon monoxide

10.4. Other information

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



11. TOXICOLOGICAL INFORMATION

11.1. Toxicological datas

Comments

- No specific data
- By analogy with the tested compound
- Irritant effect for the skin, the eyes and respiratory tract
- Sensitizer effect for the skin and respiratory tract
- Harmful effect by inhalation
- Prolonged exposure to dusts or fumes from the preparation out of the range of the occupational exposure limits presents a risk of irreversible and cumulative effects linked with a stabilizer included in the preparation

11.2. Health effects

Main effects

- Irritating to mucous membrane, eyes and skin.
- Risk of respiratory and skin sensitization.
- Risk of central nervous system effects.

Inhalation

- Nose and throat irritation.
- At high concentrations, cough and difficulty in breathing.
- At high concentrations, headaches, dizziness and drowsiness.
- At high concentrations, nausea and vomiting.
- At high concentrations, risk of narcosis.
- In case of repeated or prolonged exposure: risk of respiratory sensitization.

Eyes contact

- Eye irritation, watering and redness.
- Risk of temporary eye lesions.

Skin contact

- The product can be absorbed by intact skin.
- Irritation.
- In case of repeated contact : dry and chapped skin, risk of chronic dermatitis.
- In case of repeated contact: risk of allergic dermatitis.

Ingestion

- Irritation of the mouth and throat.
- Nausea, vomiting, abdominal cramps 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

Acute ecotoxicity

- Fishes, *Lepomis macrochirus*, LC 50, 96 h, 34 mg/l (Cyclohexane)
- Crustaceans, *Daphnia magna*, EC 50, 48 h, 3.78 mg/l (Cyclohexane)
- Algae, *Scenedesmus subspicatus*, LC 50, 72 h, > 500 mg/l (Cyclohexane)

12.2. Mobility

- Result: no data



12.3. Persistence and degradability

Abiotic degradation

- Result: no data

Biotic degradation

- Result: no data

12.4. Bioaccumulative potential

- Result: no data

12.5. Other adverse effects

- Study in progress

12.6. Comments

- No specific data.
- Toxic for aquatic organisms.
- No data about the environmental fate of the product.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment

- Dispose in compliance with local/federal and national regulations.
- It is recommended to contact the producer for recycling/recovery.
- Or
- 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 Number	1133
IATA Class:	3
Packing group:	II
Hazard label:	FLAMMABLE LIQUID
PSN: ADHESIVES	
IMDG Class:	3
Packing group:	II
Hazard label:	FLAMMABLE LIQUID
Placard:	1133
EmS:	F-E, S-D
IMDG Name: ADHESIVES	
ADR/ADNR Class	3
Packing group:	II
Hazard label:	3
Placard:	33/1133
Special provisions:	640D
ADR/RID Name: ADHESIVES	
RID Class:	3



Packing group:	II
Hazard label:	3
P label:	33/1133
Special provisions:	640D
ADR/RID Name:	ADHESIVES

15. REGULATORY INFORMATION

15.1. EC Labelling

- Name of dangerous product(s) (to indicate on the label): 4,4'-methylenediphenyl diisocyanate / Tris(nonylphenyl) phosphite
- Labelling following Directive 1999/45/EC.

Symbols	F	Highly flammable
	Xn	Harmful
	N	Dangerous for the environment
Phrases R	11	Highly flammable.
	36/37/38	Irritating to eyes, respiratory system and skin.
	42/43	May cause sensitization by inhalation and skin contact.
	51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Phrases S	67	Vapours may cause drowsiness and dizziness.
	16	Keep away from sources of ignition --- No smoking.
	23.3	Do not breathe vapor.
	33	Take precautionary measures against static discharges.
	36/37	Wear suitable protective clothing and gloves.
	45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

16.1. Reason for update

- Update:
- sections 8 - 16

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. You should contact RENOLIT America company representative for the official North America MSDS.

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.

