

# 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/preparation

Product name : ALKOR ® PLUS 81068

#### 1.2. Use of the Substance/Preparation

Recommended use : - Adhesive, binding agents

#### 1.3. Company/Undertaking Identification

Address :  
RENOLIT Belgium NV  
Industriepark De Bruwaan 9  
B – 9700 OUDENAARDE  
-

Telephone : 055/33.97.11

Telefax : 055/31.96.50

#### 1.4. Emergency telephone number

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

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### Cyclohexane

CAS-No. : 110-82-7  
Annex-1 : 601-017-00-1  
EINECS-No. : 203-806-2  
Symbol(s) : F, Xn, N  
R-phrases(s) : R11, R38, R65, R67, R50/53  
Concentration : 2.50 - 6.00 %

#### Ethylacetate

CAS-No. : 141-78-6  
Annex-1 : 607-022-00-5  
EINECS-No. : 205-500-4  
Symbol(s) : F, Xi  
R-phrases(s) : R11, R36, R66, R67  
Concentration : 2.50 - 6.00 %

#### Methyl acetate

CAS-No. : 79-20-9  
Annex-1 : 607-021-00-X  
EINECS-No. : 201-185-2  
Symbol(s) : F, Xi  
R-phrases(s) : R11, R36, R66, R67  
Concentration : 2.50 - 6.00 %

#### 4,4'-Methylenediphenyl diisocyanate



CAS-No. : 101-68-8  
Annex-1 : 615-005-00-9  
EINECS-No. : 202-966-0  
Symbol(s) : Xn, Xi  
R-phrases(s) : R20, R36/37/38, R42/43  
**Concentration** : **2.50 - 6.00 %**

**Tris(nonylphenyl) phosphite**

CAS-No. : 26523-78-4  
EINECS-No. : 247-759-6  
Symbol(s) : Xi, N  
R-phrases(s) : R38, R43, R50/53  
**Concentration** : **<= 0.50 %**

### 3. HAZARDS IDENTIFICATION

**Appearance** : liquid  
**Colour** : light yellow  
**Odour** : fruity

- The preparation is classified as dangerous in accordance with Directive 1999/45/EC.
- Highly flammable.
- Irritating to eyes, respiratory system and skin.
- May cause sensitization by inhalation and skin contact.
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 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 artificial respiration if needed.
- Consult a physician.

#### 4.2. Eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- 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.
- Wash contaminated clothing before re-use.
- If symptoms persist, call a physician.

#### 4.4. Ingestion

**The following actions are recommended :**

- Consult a physician.

**If victim is conscious:**

- Immediately give plenty of water (if possible charcoal slurry).
- Do NOT induce vomiting.
- If the subject presents nervous, respiratory or cardiovascular disorders: administer oxygen.

**If victim is unconscious but breathing:**

- Artificial respiration and/or oxygen may be necessary.



## 5. FIRE-FIGHTING MEASURES

### 5.1. Suitable extinguishing media

- powder
- Foam: AFFF
- carbon dioxide (CO<sub>2</sub>)
- water spray

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

- high volume water jet

### 5.3. Special exposure hazards in a fire

- Highly flammable.
- Hazardous decomposition products
- Gas/vapours are heavier than air and so may travel along the ground; remote ignition possible.
- Dust may form explosive mixture in air.

### 5.4. Special protective equipment for fire-fighters

- Evacuate personnel to safe areas.
- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- Wear self-contained breathing apparatus and protective suit.
- 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

- Refer to protective measures listed in sections 7 and 8.
- Prevent further leakage or spillage if safe to do so.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible products
- Approach from upwind.
- Protect intervention team with water spray.
- Isolate the area.
- Ventilate the area.
- Suppress (knock down) gases/vapours/mists with a water spray jet.
- 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 product from entering drains.
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).



- Place everything into a closed, labelled container compatible with the product.
- Store the product in a safe and isolated place.
- Treat recovered material as described in the section "Disposal considerations".
- Flush with plenty of water.

## 7. HANDLING AND STORAGE

### 7.1. Handling

- Use in closed system.
- Handle small quantities under a lab hood.
- Use only in well-ventilated areas.
- No sparking tools should be used.
- Prevent any product decomposition from contacting hot spots.
- Keep away from heat and sources of ignition.
- Do not use compressed air for transferring or handling the product.
- Keep away from incompatible products

### 7.2. Storage

- Keep in a cool, well-ventilated place.
- Keep away from heat and sources of ignition.
- Keep 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 further information, please contact: 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.
- Ensure all equipment is electrically grounded before beginning transfer operations.
- Take measures to prevent the build up of electrostatic charge.
- Warn people about the dangers of the product.
- Refer to protective measures listed in sections 7 and 8.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Exposure Limit Values

#### Cyclohexane

- US. ACGIH Threshold Limit Values 2005  
TWA = 100 ppm
- WEL (UK) 2005  
TWA = 100 ppm  
TWA = 350 mg/m<sup>3</sup>
- WEL (UK) 2005  
STEL = 300 ppm  
STEL = 1,050 mg/m<sup>3</sup>

#### Ethylacetate

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



- WEL (UK) 2005  
STEL = 400 ppm

#### **Methyl acetate**

- US. ACGIH Threshold Limit Values 2005  
TWA = 200 ppm
- US. ACGIH Threshold Limit Values 2005  
STEL = 250 ppm
- WEL (UK) 2005  
TWA = 200 ppm  
TWA = 616 mg/m<sup>3</sup>
- WEL (UK) 2005  
STEL = 250 ppm  
STEL = 770 mg/m<sup>3</sup>

#### **4,4'-Methylenediphenyl diisocyanate**

- US. ACGIH Threshold Limit Values 2005  
TWA = 0.005 ppm
- WEL (UK) 2005  
TWA = 0.02 mg/m<sup>3</sup>
- WEL (UK) 2005  
STEL = 0.07 mg/m<sup>3</sup>

### **8.2. Exposure controls**

- Ensure adequate ventilation.
- Provide local ventilation appropriate to the product decomposition risk (see section 10).
- Apply technical measures to comply with the occupational 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 and body protection**

- Wear suitable protective clothing.
- Apron/boots of butyl rubber if risk of splashing.

##### **8.2.1.5. Hygiene measures**

- Shower and eye wash stations.
- Take off contaminated clothing immediately after work.
- Handle in accordance with good industrial hygiene and safety practice.

#### **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** : light yellow  
**Odour** : fruity

## 9.2. Important Health Safety and Environmental Information

**Boiling point/range** : 92 °C  
**Flash point** : -7 °C  
*Remarks: Highly flammable.*

**Flammability (solid, gas)** :  
**Explosive properties** : *Remarks: Explosion possible with gas/vapour and air mixtures.*

**Vapour pressure** : *Remarks: no data available*

**Relative density / Density** : 1

**Solubility** : insoluble  
: water

**Partition coefficient (n-octanol/water)** : *Remarks: no data available*

**Viscosity** : 6,000 mPa.s

**Vapour density** : > 1

## 9.3. Other data

**Autoinflammability** : *Remarks: no data available*

# 10. STABILITY AND REACTIVITY

## 10.1. Stability

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

## 10.2. Conditions to avoid

- Heat.
- Naked flames, sparks.

## 10.3. Materials to avoid

- oxidizing agents
- strong bases
- strong acids
- alkali metals
- Certain plastic materials
- Alcohol
- amines

## 10.4. Hazardous decomposition products

- Acetic acid
- nitrogen oxides (NOx)
- Carbon monoxide



## 11. TOXICOLOGICAL INFORMATION

### 11.1 Toxicological data

#### *Possible hazards (summary)*

- no data available
- Information given is based on data obtained from similar substances.
- Irritating to eyes, respiratory system and skin.
- Sensitizer effect for the skin and respiratory tract
- Harmful by inhalation.
- Prolonged exposure to dust or fumes of the preparation above the occupational exposure limits, may result in a risk of irreversible and cumulative effects which are linked with a stabilizer included in the preparation.

### 11.2. Health effects

#### *Main effects*

- The product causes irritation of eyes, skin and mucous membranes.
- 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.

#### *Eye contact*

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

#### *Skin contact*

- Dermal absorption possible
- 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 effects

#### *Acute toxicity*

- Fishes, *Lepomis macrochirus*, LC50, 96 h, 34 mg/l (Cyclohexane)
- Crustaceans, *Daphnia magna*, EC50, 48 h, 3.78 mg/l (Cyclohexane)

#### *Chronic toxicity*

- Algae, *Scenedesmus subspicatus*, LC50, 72 h, > 500 mg/l (Cyclohexane)

### 12.2. Mobility

- Remarks: no data available

### 12.3. Persistence and degradability

#### *Abiotic degradation*

- Result: no data available



**Biodegradation**

- Remarks: no data available

**12.4. Bioaccumulative potential**

- Result: no data available

**12.5. Other adverse effects**

- no data available

**12.6. Possible hazards (summary)**

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

**13. DISPOSAL CONSIDERATIONS****13.1. Waste from residues / unused products**

- In accordance with local and national regulations.
- Refer to manufacturer/supplier for information on recovery/recycling.
- 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**

<b>UN-No</b>	<b>1133</b>
<b>IATA-DGR</b>	
Class	3
Packing group	II
ICAO-Labels	FLAMMABLE LIQUID
Proper shipping name: ADHESIVES	
<b>IMDG</b>	
Class	3
Packing group	II
IMO-Labels	Flammable Liquids
HI/UN No.	1133
EmS:	F-E, S-D
Proper shipping name: ADHESIVES	
<b>ADR</b>	
Class	3
Packing group	II
ADR/RID-Labels	3
HI/UN No.	33/1133
Special Provision 640A	640D
Proper shipping name: ADHESIVES	
<b>RID</b>	



Class	3
Packing group	II
ADR/RID-Labels	3
HI/UN No.	33/1133
Special Provision 640A	640D
Proper shipping name: ADHESIVES	

## 15. REGULATORY INFORMATION

### 15.1. EC Label

- Hazardous components which must be listed on the label: Cyclohexane / Ethylacetate / Methyl acetate / 4,4'-Methylenediphenyl diisocyanate
- The product is classified and labelled in accordance with Directive 1999/45/EC.

Symbol(s)	F	Highly flammable
	Xn	Harmful
	N	Dangerous for the environment
R-phrase(s)	R11	Highly flammable.
	R36/37/38	Irritating to eyes, respiratory system and skin.
	R42/43	May cause sensitization by inhalation and skin contact.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	R67	Vapours may cause drowsiness and dizziness.
	S16	Keep away from sources of ignition - No smoking.
	S23	Do not breathe vapour.
	S36/37	Wear suitable protective clothing and gloves.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

- Contains Tris(nonylphenyl) phosphite (>=0.1 - <1%). May produce an allergic reaction.

## 16. OTHER INFORMATION

### 16.1. Administrative information

- Update  
This data sheet contains changes from the previous version in section(s): 1, 2, 3, 8.1, 12, 15, 16
- Distribute new edition to clients

### 16.2. Text of R phrases mentioned in Section 2

- R11: Highly flammable.
- R20: Harmful by inhalation.
- R36: Irritating to eyes.
- R36/37/38: Irritating to eyes, respiratory system and skin.
- R38: Irritating to skin.
- R42/43: May cause sensitization by inhalation and skin contact.
- R43: May cause sensitization by skin contact.
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R65: Harmful: may cause lung damage if swallowed.
- 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. You should contact Solvay 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 specification, 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.

