

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

### **1.1 Product identifier**

Trade name/designation WLK (Binder)

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

#### **Relevant identified uses**

##### **remark**

Thermally conductive adhesive

The product is intended for professional use.

#### **Uses advised against**

Do not use for private purposes (household).

### **1.3 Details of the supplier of the safety data sheet**

#### **Manufacturer**

Fischer Elektronik GmbH & Co. KG

Nottebohmstraße 28

Germany-58511 Lüdenscheid

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[www.fischerelektronik.de](http://www.fischerelektronik.de)

### **1.4 Emergency telephone number**

+49-228-19240 (English and German, Giftnotruf Bonn)

## **SECTION 2: Hazards identification**

### **2.1 Classification of the substance or mixture**

#### **Classification according to Regulation (EC) No 1272/2008 [CLP]**

##### **health hazards**

Eye Irrit. 2

##### **hazard statements for health hazards**

H319 Causes serious eye irritation.

##### **health hazards**

Skin Irrit. 2

##### **hazard statements for health hazards**

H315 Causes skin irritation.

##### **health hazards**

Skin Sens. 1

##### **hazard statements for health hazards**

H317 May cause an allergic skin reaction.

##### **health hazards**

Carc. 2

##### **hazard statements for health hazards**

H351 Suspected of causing cancer.

##### **health hazards**

Muta. 2

**hazard statements for health hazards**

H341 Suspected of causing genetic defects.

**Environmental hazards**

Aquatic Chronic 2

**hazard statements for environmental hazards**

H411 Toxic to aquatic life with long lasting effects.

**remark**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**2.2 Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard components for labelling**

butyl 2,3-epoxypropyl ether

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq 700$ )

**Hazard pictograms**



GHS07



GHS09



GHS08

**Signal word**

Warning

**Hazard statements**

**hazard statements for health hazards**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H341 Suspected of causing genetic defects.

**Hazard statements for environmental hazards:**

H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention:**

P273 Avoid release to the environment.

P280 Wear protective gloves and eye/face protection.

P201 Obtain special instructions before use.

**Response:**

P363 Wash contaminated clothing before reuse.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/.

**Disposal:**

P501 Dispose of contents/container to industrial incineration plant.

**Special rules for supplemental label elements for certain mixtures**

EUH205 Contains epoxy constituents. May produce an allergic reaction.

**2.3 Other hazards**

**Adverse environmental effects**

none

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

### **3.1/3.2 Substances/Mixtures**

#### **Hazardous ingredients**

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number >25 - <50 %  
average molecular weight <= 700)

CAS 25068-38-6

EC 500-033-5

INDEX 603-074-00-8

Eye Irrit. 2, H319 / Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Aquatic

Chronic 2, H411

butyl 2,3-epoxypropyl ether >1 - <10 %

CAS 2426-08-6

EC 219-376-4

INDEX 603-039-00-7

Flam. Liq. 3, H226 / Carc. 2, H351 / Muta. 2, H341 / Acute Tox. 4,

H332 / Acute Tox. 4, H302 / STOT SE 3, H335 / Skin Sens. 1, H317 /

Aquatic Chronic 3, H412

## **SECTION 4: First aid measures**

### **4.1 Description of first aid measures**

#### **General information**

Change contaminated, saturated clothing.

#### **Following inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

#### **Following skin contact**

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

#### **After eye contact**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

#### **After ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do not induce vomiting.

### **4.2 Most important symptoms and effects, both acute and delayed**

#### **Effects**

Allergic reactions

### **4.3 Indication of any immediate medical attention and special treatment needed**

#### **Notes for the doctor**

Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Extinguishing powder

Carbon dioxide (CO<sub>2</sub>)

Water spray

Foam

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**Unsuitable extinguishing media**

Full water jet

**5.2 Special hazards arising from the substance or mixture**

**Hazardous combustion products**

Carbon monoxide

**5.3 Advice for firefighters**

**Special protective equipment for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

**Emergency procedures**

Provide adequate ventilation.

**Personal precautions**

Use personal protection equipment. Special danger of slipping by leaking/spilling product.

**6.2 Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers).

**6.3 Methods and material for containment and cleaning up**

**For containment**

**Suitable material for taking up:**

Sand

Universal binder

Sawdust

**6.4 Reference to other sections**

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Advices on general occupational hygiene**

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Use protective skin cream before handling the product. Wash contaminated clothing prior to re-use.

**Protective measures**

**Advices on safe handling**

Use only in well-ventilated areas.

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep/Store only in original container. Keep container tightly closed. The floor should be leak tight, jointless and not absorbent.

**Hints on joint storage**

**Materials to avoid**

Oxidising agent

Food and feedingstuffs

**Storage class**

Flammable liquids

**7.3 Specific end use(s)**

**Recommendation**

Observe technical data sheet.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limit values**

CAS No.	Substance name	LTV	STV	remark
2426-08-6	n-Butyl glycidyl ether	[135] mg/m <sup>3</sup>	[25] ppm	The UK Advisory Committee on Toxic Substances has expressed concern that, for the OELs shown in parentheses, health may not be adequately protected because of doubts that the limit was not soundly-based. These OELs were included in the published UK 2002 list and its 2003 supplement, but are omitted from the published 2005 list.  Great Britain (UK)

LTV = long-term occupational exposure limit value

STV = short-term occupational exposure limit value

source: GESTIS International Limit Values (<http://limitvalue.ifa.dguv.de/>)

Monitoring and observation processes: GESTIS Analytical Methods (<http://amcaw.ifa.dguv.de/>)

**8.2 Exposure controls**

**Appropriate engineering controls**

**Substance/mixture related measures to prevent exposure during identified uses**

Fresh air (open windows and doors) is necessary.

**Personal protection equipment**

**Eye/face protection**

**Suitable eye protection:**

Eye glasses with side protection

goggles

**Recommended eye protection articles**

**DIN-/EN-Norms:**

DIN EN 166

**Skin protection**

**Suitable material:**

Butyl caoutchouc (butyl rubber)

**Breakthrough time (maximum wearing time)** >480 min

**Thickness of the glove material** 0,7 mm

**Recommended glove articles**

**DIN-/EN-Norms:**

DIN EN 374

**remark**

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Body protection:**

**Suitable protective clothing:**

not relevant

**Respiratory protection**

**Suitable respiratory protection apparatus:**

Combination filtering device (EN 14387)

ABEK-P3

**remark**

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Usually no personal respiratory protection necessary.

**Environmental exposure controls**

**Organisational measures to prevent exposure**

not determined

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**Appearance**

**Physical state**

liquid

**Colour**

blue

**Odour**

characteristic

**Odour threshold:**

not determined

	parameter	Method - source - remark
pH		not applicable
Melting point/freezing point		not determined
Initial boiling point and boiling range		not determined
Flash point (°C)	>100 °C	
Evaporation rate		not determined
flammability		not determined
Upper explosion limit		not determined
lower explosion limit		not determined
Vapour pressure		not determined
Vapour density		not determined
Relative density	>2 - <2,2 g/cm³	
Fat solubility (g/L)		not determined

parameter	Method - source - remark
Water solubility (g/L)	Immiscible
Soluble (g/L) in	not determined
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not determined
Dynamic viscosity	not determined
flow time	not determined
Kinematic viscosity	not determined
Oxidising liquids	none
Oxidising solids	not determined
Oxidising gases	not determined

## 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non-reactive under normal use conditions.

### 10.2 Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

In case of warming:

Danger of bursting container.

### 10.5 Incompatible materials

#### Materials to avoid

Oxidising agent, strong

Acid

Alkali (lye)

### 10.6 Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Aspiration hazard

##### Assessment/classification

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

#### Acute toxicity

#### Acute dermal toxicity

**ingredient** reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)



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**Acute dermal toxicity** 22800 mg/kg

**Species:**

Rabbit

**source**

GESTIS

**ingredient** butyl 2,3-epoxypropyl ether

**Acute dermal toxicity** 2520 mg/kg

**Effective dose**

LD50:

**Species:**

Rabbit

**Assessment/classification**

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

**Acute inhalation toxicity (gas)**

**ingredient** butyl 2,3-epoxypropyl ether

**Acute inhalation toxicity (gas)** 14,02 mg/L

**Effective dose**

LC50:

**Exposure time** 4 h

**Species:**

Rat

**Acute oral toxicity**

**ingredient** reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  
≤ 700)

**Acute oral toxicity** 11400 mg/kg

**Species:**

Rat

**source**

GESTIS

**ingredient** butyl 2,3-epoxypropyl ether

**Acute oral toxicity** 1660 mg/kg

**Effective dose**

LD50:

**Species:**

Rat

**skin corrosion/irritation**

**Assessment/classification**

Irritant.

**Serious eye damage/irritation**

**Assessment/classification**

Irritant.

**Respiratory or skin sensitisation**

**Skin sensitisation**

**Assessment/classification**

May cause an allergic skin reaction.



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## **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

### **Germ cell mutagenicity**

#### **Human toxicological data**

**remark**

Evidence exists for human germ cell mutagenicity.

### **Carcinogenicity**

**remark**

Evidence for human carcinogenicity.

### **Reproductive toxicity**

**Practical experience/human evidence**

No indications of human reproductive toxicity exist.

### **STOT-repeated exposure**

#### **STOT RE 1 and 2**

#### **Other information**

not relevant

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Aquatic toxicity**

##### **Acute (short-term) fish toxicity**

**ingredient** reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq 700$ )

**Acute (short-term) fish toxicity** 3,1 mg/L

**Effective dose**

LC50:

**Test duration** 96 h

**species**

Pimephales promelas (fathead minnow)

##### **Acute (short-term) toxicity to crustacea**

**ingredient** reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq 700$ )

**Acute (short-term) toxicity to crustacea**  $>1,4 - <1,7$  mg/L

**Effective dose**

EC50

**Test duration** 48 h

**species**

Daphnia magna (Big water flea)

### **12.2 Persistence and degradability**

No information available.

### **12.3 Bioaccumulative potential**

No information available.

### **12.4 Mobility in soil**

No information available.

### **12.5 Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

## 12.6 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Appropriate disposal / Product

Dispose of waste according to applicable legislation.

#### Appropriate disposal / Package

Handle contaminated packages in the same way as the substance itself.

**Waste code packaging** 150110

**hazardous waste** Yes.

#### Waste name

packaging containing residues of or contaminated by hazardous substances

**Waste code product** 080409

**hazardous waste** Yes.

#### Waste name

waste adhesives and sealants containing organic solvents or other hazardous substances

## SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN-No.	3082	3082	3082
14.2 Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A/F-Epoxidharz)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A/F Epoxy resin)	Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A/F Epoxy resin)
14.3 Class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 ENVIRONMENTALLY HAZARDOUS	Yes.	Yes.	Yes.
14.6 Special precautions for user	not applicable	not applicable	not applicable
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not applicable	not applicable	not applicable

### Additional information - Land transport (ADR/RID)

**Hazard label(s)** 9  
**Classification code** M6  
**Limited quantity (LQ)** 5 L  
**Hazard identification number (Kemler No.)** 90  
**tunnel restriction code** -  
**transport category** 3

### Additional information - Sea transport (IMDG)

**Marine pollutant** Yes.  
**remark** EMS F-A, S-F

### Additional information - Air transport (ICAO-TI / IATA-DGR)

**Limited quantity (LQ)** 30

## **SECTION 15: Regulatory information**

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

#### **EU legislation**

##### **Authorisations and/or restrictions on use**

##### **Restrictions of occupation**

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).  
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

##### **Other regulations (EU)**

**Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).**

**Volatile organic compounds (VOC) content in percent by weight:** 10 Wt %

### **15.2 Chemical Safety Assessment**

not applicable

## **SECTION 16: Other information**

#### **Abbreviations and acronyms**

See overview table at [www.euphrac.eu](http://www.euphrac.eu)

#### **Additional information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

#### **Relevant R-, H- and EUH-phrases (Number and full text)**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H312 Harmful in contact with skin.

H411 Toxic to aquatic life with long lasting effects.

H226 Flammable liquid and vapour.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

H302+H332 Harmful if swallowed or if inhaled.

H351 Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).