



**AZ MIR 701 RESIST (14 CPS) 302-0004**

Substance No.: 000000100048  
Version 21

Revision Date 10.02.2011

Print Date 22.07.2011

**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Trade name : AZ MIR 701 RESIST (14 CPS) 302-0004

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

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

Company : AZ Electronic Materials (Germany) GmbH  
Rheingaustrasse 190-196 ,  
65203 Wiesbaden Germany

Telephone : +49 (0)611 962 8563  
E-mail address : [PSE@az-em.com](mailto:PSE@az-em.com)

Responsible/issuing person : Product Safety:  
+49(0)6126-229248 or +49(0)6126-227340

**1.4 Emergency telephone number**

Emergency telephone number : +49 69 305 6418

**2. Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

**GHS Classification**

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Specific target organ toxicity - single exposure, Category 3	H335: May cause respiratory irritation.

**Classification (67/548/EEC, 1999/45/EC)**

Irritant	R10: Flammable.
Irritant	R37: Irritating to respiratory system.
	R41: Risk of serious damage to eyes.

**2.2 Label elements**

**GHS-Labeling**






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Symbol(s)	:	  
Signal word	:	Danger
Hazard statements	:	H226 Flammable liquid and vapour. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Precautionary statements	:	<b>Prevention:</b> P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. <b>Response:</b> P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. <b>Storage:</b> P403 + P235 Store in a well-ventilated place. Keep cool.

Hazardous components which must be listed on the label:

- 97-64-3 ethyl DL-lactate

**Labelling according to EC Directives**

Symbol(s)	:	Xi Irritant
R-phrase(s)	:	10 Flammable. 37 Irritating to respiratory system. 41 Risk of serious damage to eyes.
S-phrase(s)	:	7 Keep container tightly closed. 23.3 Do not breathe vapour. 24 Avoid contact with skin. 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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Hazardous components which must be listed on the label:

- 97-64-3 ethyl DL-lactate
- 123-86-4 n-butyl acetate

### 2.3 Other hazards

No information available.

## 3. Composition/information on ingredients

### 3.2 Mixtures

#### Chemical characterization

Preparation of polymers and diazo compounds in organic solvents (halogenfree).

#### Hazardous components

##### ethyl DL-lactate

CAS-No. : 97-64-3  
EC-No. : 202-598-0

Classification(67/548/EEC) : R10  
Xi; R37-R41

Classification : Flam. Liq. 3; H226  
(REGULATION (EC) No 3; H335  
1272/2008) Eye Dam. 1; H318

Concentration [%] : > 60

##### 4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol

CAS-No. : 110726-28-8  
EC-No. : 425-600-3  
Registration number : 01-0000017200-87-0001  
Classification(67/548/EEC) : R53

Classification : Aquatic Chronic 4; H413  
(REGULATION (EC) No 1272/2008)

Concentration [%] : < 5

##### n-butyl acetate



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CAS-No. : 123-86-4  
EC-No. : 204-658-1

Classification(67/548/EEC) : R10  
R66  
R67

Classification : Flam. Liq. 3; H226  
(REGULATION (EC) No 3; H336  
1272/2008)  
Concentration [%] : < 15

For the full text of the R-phrases mentioned in this Section, see Section 16.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

**4. First aid measures**

**4.1 Description of first aid measures**

- General advice : Remove soiled or soaked clothing immediately  
: If someone exposed to the product feels unwell, contact a doctor and show this safety data sheet.  
Adhere to personal protective measures when giving first aid
- Inhalation : Remove the casualty into fresh air and keep him calm.  
Call in a physician immediately and show him the Safety Data Sheet.
- Skin contact : In case of contact with skin wash off immediately with polyethylene glycol 400, then with plenty of water  
Consult a doctor if skin irritation persists.
- Eye contact : Rinse immediately with gently running water for 15 minutes, maintaining eyelids open. Consult at once an ophthalmologist or a physician.
- Ingestion : Let plenty of water be drunk in small gulps.  
Do not induce vomiting.  
Call in a physician immediately and show him the Safety Data Sheet.



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**5. Fire-fighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media : alcohol-resistant foam  
dry powder  
carbon dioxide  
water spray jet

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

Specific hazards during fire fighting : In case of fires, hazardous combustion gases are formed:  
Carbon monoxide (CO)  
Carbon dioxide (CO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides

**5.3 Advice for firefighters**

Special protective equipment for fire-fighters : Use self-contained breathing apparatus  
Well closed full protective clothing (coat and pants) including helmet.

Further information : Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**6. Accidental release measures**

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

Personal precautions : See: Exposure controls and personal protection.

**6.2 Environmental precautions**

Environmental precautions : Do not allow entry to drains, water courses or soil

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

Methods for cleaning up : Take up with absorbent material (eg sand, kieselguhr, universal binder)  
When picked up, treat material as prescribed under heading "Disposal".



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Containers in which spilt substance has been collected must be adequately labelled

- : Dispose of absorbed material in accordance with the regulations.  
Clean contaminated floors and objects thoroughly, observing environmental regulations

**6.4 Reference to other sections**

- Additional advice : Information regarding Safe handling, see chapter 7.  
Information regarding personal protective measures see, chapter 8.  
Information regarding Waste Disposal, see chapter 13.

**7. Handling and storage**

**7.1 Precautions for safe handling**

- Advice on safe handling : Provide good ventilation of working area (local exhaust ventilation if necessary).  
Take precautionary measures against electrostatic loading.
- Advice on protection against fire and explosion : Keep away from sources of ignition  
Take precautions against accumulation of electrostatic charge
- : Observe the general rules of industrial fire protection

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

- Requirements for storage areas and containers : Keep only in the original container
- Further information on storage conditions : Protect from light.  
Keep container tightly closed and dry in a cool, well-ventilated place.
- Advice on common storage : Do not store or transport together with foodstuffs

**7.3 Specific end uses**



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**8. Exposure controls/personal protection**

**8.1 Control parameters**

Contains no substances with occupational exposure limit values.

**8.2 Exposure controls**

**Engineering measures**

See chapter 7; no measures exceeding the ones mentioned are necessary.

**Personal protective equipment**

Respiratory protection : Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure

Hand protection : Break through time: > 10 min  
Glove thickness: > 0,4 mm  
For short-term exposure (splash protection):  
Nitrile rubber gloves.  
Remarks: These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection : tightly fitting safety glasses

Skin and body protection : protective clothing

Hygiene measures : At work do not eat, drink, smoke or take drugs.  
Keep away from foodstuffs and beverages.  
Wash hands before breaks and after work.  
Use barrier skin cream.

Protective measures : Avoid contact with eyes and skin  
Do not inhale vapours  
: Do not inhale vapours  
Avoid contact with eyes and skin  
Observe the usual precautions for handling chemicals.

**Environmental exposure controls**

General advice : Do not allow entry to drains, water courses or soil



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**9. Physical and chemical properties**

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

**Appearance**

Form : Liquid  
Colour : yellow to red  
Odour : characteristic

**Safety data**

Flash point : 49 °C  
Method: closed cup  
Ignition temperature : not determined  
Lower explosion limit : not determined  
Upper explosion limit : not determined  
Flammability (solid, gas) : not determined  
Oxidizing properties : not determined  
Autoignition temperature : not determined  
Burning number : not determined  
pH : Note: Not applicable  
Freezing point : not determined  
Starts to boil : > 155 °C  
Sublimation point : not determined  
Vapour pressure : 0,0 hPa  
Method: calculated  
Density : 1,055 g/cm<sup>3</sup>  
Water solubility : Note: The solvent is water soluble but the product forms two





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layers.

Partition coefficient: n-  
octanol/water : Note: not reasonable

Solubility in other solvents : not determined

Viscosity, dynamic : Note: not determined

Viscosity, kinematic : not determined

Relative vapour density : not determined

Evaporation rate : not determined

**9.2 Other information**

**10. Stability and reactivity**

**10.1 Reactivity**

**10.2 Chemical stability**

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Reactions with acids, alkalies and oxidizing agents.

**10.4 Conditions to avoid**

**10.5 Incompatible materials**

**10.6 Hazardous decomposition products**

Hazardous decomposition products : when handled and stored appropriately no dangerous decomposition products are known

Thermal decomposition : Note: No decomposition if used as prescribed.

**11. Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

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Acute oral toxicity  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : LD50: > 5.000 mg/kg  
Species: rat

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

### Skin corrosion/irritation

Skin irritation  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : Species: rabbit  
Result: No skin irritation  
Method: OECD 404

### Serious eye damage/eye irritation

Eye irritation  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : Species: rabbit  
Result: No eye irritation  
Method: OECD 405

### Respiratory or skin sensitization

Sensitisation  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : Buehler Test  
Species: guinea pig  
Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : Ames test  
Result: negative

Further information : No toxicological testing was carried out on the preparation.  
The product was classified on the basis of the calculation procedure of the Dangerous Preparations Directive (1999/45/EC).



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**12. Ecological information**

**12.1 Toxicity**

Toxicity to fish  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : LC50: > 1.000 mg/l  
Exposure time: 48 h  
Species: Oryzias latipes (Orange-red killifish)

Toxicity to daphnia and other aquatic invertebrates.  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : Exposure time: 96 h  
Species: Daphnia magna (Water flea)  
Method: OECD 202  
Remarks:  
No observable toxic effect in saturated solution.

Toxicity to bacteria : no data available

**12.2 Persistence and degradability**

Biodegradability  
4,4'-(1-{4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl}ethylidene)diphenol : Result: Not readily biodegradable.  
< 10 %  
Method: Modified Sturm Test

**12.3 Bioaccumulative potential**

**12.4 Mobility in soil**

**12.5 Results of PBT and vPvB assessment**

**12.6 Other adverse effects**

Additional ecological information : Do not allow to enter soil, waterways or waste water  
No ecological testing was carried out on the preparation.  
The product was classified on the basis of the calculation procedure of the preparations directive.



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**13. Disposal considerations**

**13.1 Waste treatment methods**

- Product : Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities
- Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

**14. Transport information**

**ADR**

- UN number : 1993  
Description of the goods : FLAMMABLE LIQUID, N.O.S.  
(Ethyl lactate, n-Butyl acetate)  
Class : 3  
Packing group : III  
Classification Code : F1  
Hazard identification No : 30  
Labels : 3  
Environmentally hazardous : no

**IATA**

- UN number : 1993  
Description of the goods : Flammable liquid, n.o.s.  
(Ethyl lactate, n-Butyl acetate)  
Class : 3  
Packing group : III  
Labels : 3  
Environmentally hazardous : no

**IMDG**

- UN number : 1993  
Description of the goods : FLAMMABLE LIQUID, N.O.S.  
(Ethyl lactate, n-Butyl acetate)  
Class : 3  
Packing group : III  
Labels : 3  
EmS Number 1 : F-E  
EmS Number 2 : S-E

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Marine pollutant : no

### RID

UN number : 1993  
Description of the goods : FLAMMABLE LIQUID, N.O.S.  
(Ethyl lactate, n-Butyl acetate)  
Class : 3  
Packing group : III  
Classification Code : F1  
Hazard identification No : 30  
Labels : 3  
Environmentally hazardous : no

## 15. Regulatory information

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

Candidate List of Substances : Neither banned nor restricted  
of Very High Concern for  
Authorisation

### 15.2 Chemical Safety Assessment

## 16. Other information

### Full text of R-phrases referred to under sections 2 and 3

R10 Flammable.  
R37 Irritating to respiratory system.  
R41 Risk of serious damage to eyes.  
R53 May cause long-term adverse effects in the aquatic environment.  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

### Full text of H-Statements referred to under sections 2 and 3.

H226 Flammable liquid and vapour.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H413 May cause long lasting harmful effects to aquatic life.

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm<sup>3</sup>)

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