

Safety Data Sheet

TI 35 ES

1. Identification of the substance/preparation and company**Trade name: TI 35 ES**

- Synonyms: none

Use of the substance/preparation:

- Industry sector: Electronic industry
- Type of use: Intermediate for electronic industry

Identification of the company:

MicroChemicals GmbH
 Schillerstraße. 18
 D-89077 Ulm
 Germany
 Phone: +49 (0) 731 36080409 Fax: +49 (0) 731 1517024

Emergency telephone number:

- Tel.: +49 (0) 178 782 51 98 or Tel.: +49 (0) 731 36 080 409 Dr. Christian Koch

2. Composition/information on ingredients**Chemical characterization:**

A mixture of polymer resins and diazo compounds in a halogen free organic solvent.

Hazardous ingredients	CAS-Nr.	Conc. [%]	Hazard symbols	R Phrases
2-Methoxy-1-Methyl ethyl acetate	108-65-6	20 / 80	Xi	10-36
Ethyllactate	687-47-8	0 / 8	Xi	10-37-41

3. Hazards identification

- Flammable.
- Irritating to respiratory system.
- Risk of serious damage to eyes.

4. First aid measures**General information**

- Remove soiled or soaked clothing immediately
- In case of medical condition, contact a physician and submit safety data sheet.
- Adhere to personal protective measures when giving first aid

After inhalation

- Remove the casualty into fresh air and keep him calm
- Call in a physician immediately and show him the safety data sheet.

After contact with skin

- In case of contact with skin wash off immediately with polyethylene glycol 400, then with plenty of water. If polyethylene glycol is not available, rinse off with plenty of water.

After contact with eyes

- Rinse the affected eye with plenty of water, at the same time keep the unaffected eye well protected.

After contact with eyes

- Rinse immediately with gently running water for 15 Minutes, maintaining eyelids open. Consult at once an ophthalmologist or a physician.

After ingestion

- Do not induce vomiting.
- Call in a physician immediately and show him the safety data sheet.
- Let plenty of water be drunk in small gulps

Advice to doctor -Treat symptomatically

5. Fire-fighting measures

Suitable extinguishing media

- alcohol-resistant foam
- dry powder
- carbon dioxide
- water spray jet

Special hazards from the substance itself, its combustion products or from its vapours

- In case of fires, hazardous combustion gases are formed:
Carbon monoxide (CO), Nitrous gases (NO_x), Sulphur dioxide (SO₂)

Special protective equipment for fire fighting

- Use self-contained breathing apparatus
- Well closed full protective clothing (coat and pants) including helmet.

Special protective equipment for fire fighting

- Fire residues and contaminated fire fighting water must be disposed of in accordance with the local regulations

6. Accidental release measures

Personal precautions

- See: Exposure controls and personal protection, see chapter 8

Environmental precautions

- Do not allow entry to drains, water courses or soil

Methods for cleaning up/taking up

- Pick up with liquid binding materials (e.g. sand, kieselguhr, universal binder) and if necessary fill in containers capable of being locked.
- Dispose of absorbed material in accordance with the regulations.
- Containers in which spilt substance has been collected must be adequately labelled
- Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional information

- 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

Advice on safe handling -Provide good ventilation of working area (local exhaust ventilation if necessary).

Advice on protection against fire and explosion -Keep away from sources of ignition

Requirements for the storage rooms and vessels - Keep only in the original container

Advice on storage compatibility -Do not store or transport together with foodstuffs

Further information on storage conditions

- Keep container tightly closed, store them in a cool, dark place
- Optimum storage Temperature 5 / 15 °C

8. Exposure controls/personal protection

Additional advice on system design

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

Ingredients with occupational exposure limits to be monitored

2-METHOXY-1-METHYLETHYLACETATE

CAS number: 108-65-6

EU. Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical, and biological agents.

EU Exposure Limit Values Data, Revision: 07 / 2000

Time Weighted Average (TWA) Values: 275 mg/m³ 50 ppm

2-METHOXY-1-METHYLETHYLACETATE

CAS number: 108-65-6

EU. Indicative Exposure and Directives relating the protection of risks related to work exposure to chemical, physical, and biological agents.

EU Exposure Limit Values Data, Revision: 07 / 2000

Skin Designation:

Can be absorbed through the skin

2-METHOXY-1-METHYLETHYLACETATE

CAS number: 108-65-6

EU. Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical, and biological agents.

EU Exposure Limit Values Data, Revision: 07 / 2000

Short Term Exposure Limit (STEL): Values: 550 mg/m³ 100 ppm

General protective measures

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

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.

Respiratory protection:

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

Hand protection:

- For short-term exposure (splash protection):
- Nitrile rubber gloves.
- Minimum breakthrough time / gloves : > 10 min
- Minimum thickness / gloves > 0,4 mm
- 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 particular working conditions under which the gloves are being used.

Eye protection: -tightly fitting safety glasses

Body protection: -protective clothing

9. Physical and chemical properties

Form (at 20°C):	liquid
Odour:	ester-like
Colour:	red to dark
PH-Value:	Not Applicable
Starts to Boil:	145 °C
Flash point:	>42 °C (Method: DIN 51755 (closed cup))
Lower explosion limit:	not determined
Vapour Pressure (at 20°C):	approx. 5 mBar
Density (at 20°C):	0.96 – 1.04 g / cm ³
Solubility in Water:	partly soluble
Viscosity:	95 – 130 mPa·s

10. Stability and reactivity

Thermal decomposition: -No decomposition if used as prescribed

Hazardous reactions: -Incompatible with oxidizing materials.

Hazardous decomposition products: -No hazardous decomposition products known.

11. Toxicological information

Remarks:

- 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).

12. Ecological information

Remarks:

- 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 Dangerous Preparations Directive (1999/45/EC).

13. Disposal considerations

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

Uncleaned packaging

- Packaging that cannot be cleaned should be disposed of as product waste

14. Transport Information

ADR/RID

- Proper shipping name: Flammable liquid, n.o.s.
- Class: 3
- Packing group: III
- UN no. UN 1993
- Primary risk: 3
- Hazard no. : 30
- Remarks: Shipment permitted
- Hazard inducer(s): Methoxy propyl acetate

ADNR

- Proper shipping name: Flammable liquid, n.o.s.
- Class: 3
- Packing group: III
- UN no. UN 1993
- Primary risk: 3
- Remarks: Shipment permitted
- Hazard inducer(s): Methoxy propyl acetate

IATA

- Proper shipping name: Flammable liquid, n.o.s.
- Class: 3
- Packing group: III
- UN/ID number: UN 1993
- Primary risk: 3
- Remarks: Shipment permitted
- Hazard inducer(s): Methoxy propyl acetate

IMDG

- Proper shipping name: Flammable liquid, n.o.s.
- Class: 3
- Packing group: III

- UN no. UN 1993
- Primary risk: 3
- Remarks: Shipment permitted
- Hazard inducer(s): Methoxy propyl acetate
- EmS : 3-07

15. Regulatory Information

Labelling in accordance with EC-Directives

- The product is classified and labelled in accordance with EC directives/German regulations on dangerous substances.

Hazard symbols

- Xi Irritant

Hazardous component(s) to be indicated on label

- 2-Methoxy-1-methyl ethyl acetate

R phrases

- 10 Flammable.
- 36 Irritating to eyes.
- 37 Irritating to respiratory system.
- 41 Risk of serious damage to eyes.

S phrases

- 23.3 Do not breathe vapour.
- 24 Avoid contact with skin.
- 25 Avoid contact with eyes.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 39 Wear eye/face protection.

National and other regulation

- BG Data Sheet M 004 "Substances causing irritation / corrosive substances"
- Observe the provisions of The Water Act for installations dealing with substances hazardous to water

16. Other Information

- Contains: <0.5% 2-Methoxypropylacetate CAS-No. 70657-70-4. EC Classification: T, R 10-37-61

Text of the R-phrases which are allocated to the ingredients/components mentioned in section 2 of this Safety Data Sheet.

- 10 Flammable.
- 36 Irritating to eyes.
- 37 Irritating to respiratory system.
- 41 Risk of serious damage to eyes.

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

Sheet generated: 2003-09-10 (YYYY-MM-DD)

Document No.: SDS TI 35 ES (Version 2003-09-10) en.doc