

SAFETY DATA SHEET

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Test pens pink 32 - 44 mN/m - Art.-No. 40.45100.0
according to 91/155 EEC and 93/112 EC

reviewed on: 29.01.2004

1. Name of substance, preparation and company

Commercial name of the product:	TEST PENS pink 32 - 44 mN/m
Use of the substance / of the preparation	Printing inks
Manufacturer/supplier:	arcotest GmbH Rotweg 25, D-71297 Mönsheim
Contact for information:	Mrs. Anke Krombach phone: +49 (0) 7044-90 22 70 fax : +49 (0) 7044-90 22 69

2. Chemical analysis/information about the ingredients

Chemical characterisation

Description: Preparation of solvents and one colouring agent

Dangerous ingredients:

Which are injurious to health within the meaning of Commission Directive 67 / 548 / EEC on dangerous substances.

CAS: 107-41-5	2-methyl-2,4-pentanediol	2,5 – 80 %
EC number: 203-489-0	Xi ; R 36/38	
EC index number: 603		

CAS: 111-46-6	Diethylene glycol	20 – 100 %
EC number: 203-872-2	Xn; R 22	
EC index number: 603		

Additional information:

The text of the mentioned particular hazards can be learnt from chapter 15.

3. Possible hazards

Injurious to health when swallowed, irritating to eyes and skin.

4. First aid measures

General information:

When any symptoms are appearing or in all cases of doubt seek medical advice.
Never give anything by mouth to an unconscious person.

After inhalation:	Remove to fresh air.
After skin contact:	Wash off thoroughly with plenty of water, do not use solvents or thinners. Remove contaminated clothing after having finished work.
After eye contact:	Irrigate copiously with plenty of clean, fresh water for at least 10 minutes, holding the eyelids apart. If necessary, remove the contact lenses and seek medical advice.

5. Fire fighting measures

Suitable extinguishing agents: Water, foam, carbon dioxide (CO₂), powders

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Special hazards caused by the substance, its products of combustion or flue gases:

Fire will produce dense black smoke.

Exposure to hazardous decomposition products may cause a health hazard.

Suitable respiratory protective equipment independent from ambient air may be required.

Cool closed containers exposed to fire with water spray.

Additional information: Collect run-off from fire fighting.

6. Accidental release measures

Person-related safety precautions:

Ensure supply of fresh air.

Observe the safety instructions in section 7 and 8.

Environmental-protection measures:

Do not allow to enter sewerage system.

Measures for cleaning / collecting:

Collect spillage with liquid-absorbent material (e.g. sand, diatomaceous earth, vermiculite) and store it in containers for disposal according to local regulations.

Clean preferably with a detergent.

Avoid use of solvents.

7. Handling and storage

Handling:

Information for safe handling:

Avoid skin and eye contact.

Do not eat, drink and smoke while working in application area.

For personal protective equipment see section 8.

Storage:

The pens must be carefully closed.

Further information about storage conditions:

Store at a dry, well ventilated place.

Keep away from heat and direct sunlight.

Storage temperature between +15°C and + 25°C.

8. Exposure controls and personal protection

Components with critical values that require monitoring at the workplace:

(Numerical data – if specified – are taken from the valid national lists (such as TRGS 900 for Germany)).

107-41-5 2-methyl-2,4-pentanediol (2,5 – 80 %)

MAK (max. workplace concentration): 125 mg/m³

NL

111-46-6 Diethylene glycol (20 – 100 %)

MAK (max. workplace concentration) 44 mg/ m³, 10 ml/ m³

Y; DFG

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Personal protective equipment:

Protection of hands:

In case of prolonged or repeated contact use protective gloves (e.g. gloves made from nitrile rubber presenting a film thickness of 0.11 mm). Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Body protection:

The skin should be washed after contact.

Working clothes must not consist of textiles which show a dangerous melting behaviour in case of fire.

9. Physical and chemical properties

Form:	fluid
Colour:	red to pink
Odour:	slightly sweetish

Change in condition

Boiling point/Boiling range:	200°C to 250 °C
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Flash point range:	100°C to 150 °C
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Ignition temperature range:	345°C to 425°C
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Critical value for explosion

Lower value:	0,7 Vol. %
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Upper value:	22,0 Vol. %
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Steam pressure at 20°C	0,1 hPa
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Density: (approx. values) at 20°C	0,92 g/cm ³ - 1,12 g/cm ³
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Solubility in / Miscibility with water:	Solvent fully miscible
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10. Stability and reactivity

Thermal decomposition / conditions to be avoided:

Stable under recommended storage and handling conditions (see section 7).

Materials to be avoided:

Keep away from oxidizing agents, strongly acid and strongly alkaline materials in order to avoid exothermic reactions.

11. Toxicological information

The preparation is classified according to the conventional method (calculation method of the regulation concerning hazardous substances resp. of the EEC-Directive 88/379/EEC).

Repeated or prolonged contact with the product may cause removal of natural fat from the skin which can cause a drying-out of the skin and irritations.

The liquid splashed in the eyes may cause irritation and reversible damage.

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Acute toxicity:

LD/LC₅₀-values important for the classification:

111-46-6 Diethylene glycol

Oral LD₅₀ 12565 mg/kg (rat)
Dermal LD₅₀ 11890 mg/kg (rbt)

107-41-5 2-methyl-2,4-pentanediol

Oral LD₅₀ 3700 mg/kg (rat)
Dermal LD₅₀ 8000 mg/kg (rbt)

Subacute to chronic toxicity:

Sensitization test (guinea-pig): negative; bacterial mutagenicity: Ames test: negative; mutagenicity (mammal cell test): chromosome aberration negative

12. Ecological information

2-methyl-2,4-pentanediol:

Biologic degradation:

Biodegradability: >70 %/28 d Zahn-Wellens test.

Easily eliminable.

Ecotoxic effects:

Biological effects:

Fish toxicity: *Gambusia affinis* LC₅₀: 8510 mg/l 96 h.

Daphnia toxicity: *Daphnie magna* EC₅₀: 3200 mg/l 48 h.

Bacteria toxicity: *Photobacterium phospherum* EC₅₀: 3028 mg/l 5 min.

Diethylene glycol:

Biologic degradation:

Biodegradability: 91,8 %/28 d Easily biodegradable.

Ecotoxic effects:

Biological effects:

Fish toxicity: *Gambusia affinis* LC₅₀: 8510 mg/l 96 h.

Daphnia toxicity: *Daphnie magna* EC₅₀: >10000 mg/l 24 h.

Algae toxicity: *Scenedesmus quadricauda* IC₀: 2700 mg/l /7 d.

Bacteria toxicity: *Pseudomonas putida* EC₀: 8000 mg/l 16 h.

Protozoa: *Entosiphon sulcatum* EC₀: 10745 mg/l /72 h.

The product may not enter waters, sewerage systems and soil.

13. Disposal considerations

Product:

Recommendation: Do not allow to enter sewerage systems

European waste products catalogue

08 03 12 printing inks waste products which contain hazardous substances

Uncleaned packaging:

Recommendation: Not emptied containers and ink residues are hazardous waste.

Emptied containers should be supplied to scrap utilisation resp. recycling.

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14. Transport information

The product is not subject to transport regulations for dangerous goods.

Maritime transport IMDG/GGVSea:

Marine pollutant: No

15. Regulatory information

Designation according to EEC guidelines:

Code letter and hazard designation of the product:

Xn Injurious to health; Xi Irritant

Hazard components determinant for the labelling:

Diethylene glycol / 2-methyl-2,4-pentanediol

R-phrases:

22 Injurious to health when swallowed.

36/38 Irritating to eyes and skin.

S-phrases:

26 After eye contact immediately irrigate thoroughly with plenty of water and seek medical advice.

29/35 Do not allow to enter sewerage system; waste products and containers have to be eliminated in a safe way.

36/37 Use suitable protective clothing and gloves while working in application area.

National regulations:

Classification according to VbF: not applicable.

Swiss toxic class: 4

German regulations:

Water pollution class:

Water pollution class: 1 (slightly hazardous to waters) VwVwS app. 2 ref. no. 79 resp. app. 3 ref. no. 5025

16. Other information

The information of this safety data sheet is based on the present state of our knowledge and corresponds to the valid EU and national laws.

It is always the responsibility of the user to take all necessary steps in order to fulfil the demands laid down in the local rules and legislation.

The information in this safety data sheet is meant as a description of safety requirements of our product; it is not to be considered as a guarantee of the product's properties.