

Material Safety Data Sheet

According to 91/155 EC

Printing date 04.02.2004

Reviewed on 04.02.2004

1 Identification of substance:

- **Product details:**
- **Trade name:** LP-CITRODUR
- **Application of the substance / the preparation** Solution for photographic processing
- **Manufacturer/Supplier:**
HANS O. MAHN & CO. KG
Brookstieg 4
D 22145 Stapelfeld
- **Informing department:** Tel: +49 (0)40 23700888
- **Emergency information:** Tel: +49 (0)40 23700888

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 55965-84-9	a mixture of: 5-chloro-2-methyl-2 H -isothiazol-3-one [EC No 247-500-7] and 2-methyl-2 H -isothiazol-3-one [EC No 220-239-6] (3:1) T, N; R 23/24/25-34-43-50/53	< 0.5%
CAS: 5949-29-1 EINECS: 201-069-1	Citronensäure-Monohydrat Xi; R 36	25-50%
CAS: 7664-93-9 EINECS: 231-639-5	sulphuric acid C; R 35	0.5-2.0%
CAS: 10043-01-3 EINECS: 233-135-0	aluminium sulphate Xi; R 41	2.0-5.0%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard designation:**



Xi Irritant

- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 36/38 Irritating to eyes and skin.
R 43 May cause sensitisation by skin contact.
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing** In case of persistent symptoms consult doctor.

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5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** None
- **Special hazards caused by the material, its products of combustion or resulting gases:**
 - Can be released in case of fire
 - Carbon monoxide (CO)
 - Sulphur oxides (SO_x)
- **Protective equipment:**
 - No special measures required.
 - Do not inhale explosion gases or combustion gases.
- **Additional information** The product is not flammable

6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.
- **Measures for environmental protection:**
 - Do not allow to enter drainage system, surface or ground water.
- **Measures for cleaning/collecting:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** See Section 13 for information on disposal.

7 Handling and storage

- **Handling**
- **Information for safe handling:** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:**
 - No special measures required.
 - The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Store in a cool place.
 - (5 - 30°C)
- **Storage class** LGK 12 (VCI-Concept)

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

10043-01-3 aluminium sulphate	
OES	Long-term value: 2 mg/m ³

- **Additional information:** The lists that were valid during the compilation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures**

The usual precautionary measures should be adhered to general rules for handling chemicals.

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.

- **Protection of hands:**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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- **Material of gloves**
Natural rubber, NR
Nitrile rubber, NBR
PVC gloves
- **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Light weight protective clothing

9 Physical and chemical properties:

· General Information

Form:	Fluid
Colour:	Light yellow Clear
Odour:	Odourless

· Change in condition

Melting point/Melting range:	< 5°C
Boiling point/Boiling range:	> 100°C

· **Flash point:** > 100°C

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· Critical values for explosion:

Oxidizing properties None

· **Vapour pressure at 20°C:** 23 hPa

· **Density at 20°C** 1.193 g/cm³

· Solubility in / Miscibility with

Water: Fully miscible

· **pH-value at 25°C:** < 1

· Viscosity:

dynamic: Not determined
kinematic: Not determined

· Solvent content:

Organic solvents: 0.1 %
Water: 62.1 %

· **Solids content:** 32.3 %

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known

· **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· **on the skin:** Irritant to skin and mucous membranes.

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- **on the eye:** Irritant effect.
- **Sensitization:** Sensitization possible by skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant

12 Ecological information:

- **Information about elimination (persistence and degradability):** Not determined
- **Behaviour in environmental systems:** Not determined
- **Mobility and bioaccumulation potential:** Not determined
- **Ecotoxicological effects:** Not determined
- **Aquatic toxicity:** Not determined
- **Behaviour in sewage processing plants:** Not determined
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated under adherence to official regulations.

- **European waste catalogue**

09 01 99	wastes not otherwise specified
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- **Uncleaned packagings:**
- **Recommendation:**
Non contaminated packagings can be used for recycling.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

14 Transport information

- **Land transport ADR/RID (cross-border)**

- **ADR/RID-GGVS/E Class:** -

- **Maritime transport IMDG:**

- **IMDG Class:** -

- **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** -

- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Designation according to EC guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

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Code letter and hazard designation of product:

Xi Irritant

Hazard-determining components of labelling:

a mixture of: 5-chloro-2-methyl-2 H -isothiazol-3-one [EC No 247-500-7] and 2-methyl-2 H -isothiazol-3-one [EC No 220-239-6] (3:1)

Risk phrases:

36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.

Safety phrases:

24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37 Wear suitable gloves.
46 If swallowed, seek medical advice immediately and show this container or label.

National regulations

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant R-phrases

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
34 Causes burns.
35 Causes severe burns.
36 Irritating to eyes.
41 Risk of serious damage to eyes.
43 May cause sensitisation by skin contact.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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