

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Developer for Photoresist ma-D 330 - 337

Print date: 01.05.2013

Product code: R811XX0

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

Product identifier

Developer for Photoresist ma-D 330 - 337

Product group: Entwickler

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

Use of the substance/mixture

Chemical Speciality

Details of the supplier of the safety data sheet

Company name: micro resist technology GmbH

Street: Koepenicker Str. 325

Place: D-12555 Berlin

Telephone: +49 30 641670-100

Telefax: +49 30 641670-200

e-mail: safety@microresist.de

Internet: www.microresist.de

Emergency telephone: +49 30 641670-100

Further Information

This number is serviced during office hours.

SECTION 2: Hazards identification

Classification of the substance or mixture

Indications of danger : Irritant

R-phrases:

Irritating to eyes and skin.

GHS classification

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

Label elements

Hazardous components which must be listed on the label

caustic soda, sodium hydroxide

Signal word: Warning

Pictograms: GHS07



Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P332+P313 If skin irritation occurs: Get medical advice/attention.

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P362	Take off contaminated clothing and wash before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
215-185-5	caustic soda, sodium hydroxide	< 2%
1310-73-2	C R35	
011-002-00-6	Skin Corr. 1A; H314	

Full text of R- and H-phrases: see section 16.

SECTION 4: First aid measures

Description of first aid measures

General information

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

After inhalation

Provide fresh air. In case of breathing difficulties administer oxygen. If victim is at risk of losing consciousness, position and transport on their side. In case of irritation of the respiratory tract seek medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink large quantities of water.
Caution if victim vomits: Risk of aspiration!
Medical treatment necessary.

Most important symptoms and effects, both acute and delayed

Causes serious eye irritation.
Causes skin irritation.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Extinguishing materials should be selected according to the surrounding area. The product itself is not combustible.

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 Water. Carbon dioxide (CO₂). Dry extinguishing powder. Foam.

Extinguishing media which must not be used for safety reasons

No data available

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

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

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eye and clothing. Wear personal protection equipment.

Environmental precautions

Do not empty into drains or the aquatic environment.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed containers for disposal. Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

 Treat the assimilated material according to the section on waste disposal.
See protective measures under point 7 and 8.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Do not breathe vapour or spray. Avoid contact with skin, eye and clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place. Keep container dry. Protect against: UV-radiation/sunlight. Suitable material for floor covering: Leachate-proof.

Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits (EH40)

CAS No	Chemical name	ml/m ³	mg/m ³	F/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	-		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

Additional advice on limit values

No data available

Exposure controls

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Occupational exposure controls

In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray. Wear personal protection equipment. Provide adequate ventilation.

Protective and hygiene measures

Take off immediately all contaminated clothing. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Respiratory protection

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. Respiratory protection required in case of: aerosol or mist generation. Filter respirator (full mask or mouth-piece) with filter: A

Hand protection

Tested protective gloves are to be worn: Single-use gloves.
German Industry Norms (DIN) / European Norms (EN): DIN EN 374

Duration of wearing with permanent contact:

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.11 mm

penetration time (maximum wearing period): > 480 min

Recommended protective gloves brand: KCL 741 Dermatril, Manufacturer: KCL GmbH, D-36124 Eichenzell, Source of supply: www.kcl.de

Duration of wearing with occasional contact (splashes):

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.11 mm

penetration time (maximum wearing period): > 480 min

Recommended protective gloves brand: KCL 741 Dermatril, Manufacturer: KCL GmbH, D-36124 Eichenzell, Source of supply: www.kcl.de

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Eye protection

Suitable eye protection: Tightly sealed safety glasses.

Skin protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Take off immediately all contaminated clothing.

Environmental exposure controls

Do not empty into drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid
Colour: colourless

pH-Value (at 25 °C):

Test method
>11

Changes in the physical state

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Boiling point:	~100 °C
Flash point:	Non-flammable.
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Vapour pressure:	No data available
Vapour pressure:	No data available
Density (at 25 °C):	~1 g/cm ³
Water solubility:	miscible.
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available

Other information

No data available

SECTION 10: Stability and reactivity**Reactivity**

Response: Do not mix with acids. Oxidizing agents, strong.

Chemical stability

No data available

Possibility of hazardous reactions

Response: Do not mix with acids. Oxidizing agents, strong.

Conditions to avoid

No data available

Incompatible materialsStrong acid
Oxidizing agents.**Hazardous decomposition products**

No data available

SECTION 11: Toxicological information**Information on toxicological effects****Irritation and corrosivity**

Irritating to eyes. After skin contact: irritant.

Empirical data on effects on humans

No data available

SECTION 12: Ecological information

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Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	h	Species	Source
1310-73-2	caustic soda, sodium hydroxide					
	Acute fish toxicity	LC50	45,4 mg/l	96	Onchorhynchus mykiss	

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

Other adverse effects

No data available

Further information

Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

Waste disposal according to official state regulations.

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

No dangerous good in sense of this transport regulation.

Marine transport

Other applicable information (marine transport)

No dangerous good in sense of this transport regulation.

Air transport

Other applicable information (air transport)

No dangerous good in sense of this transport regulation.

Environmental hazards

Dangerous for the environment: no

Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available

SECTION 15: Regulatory information

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

EU regulatory information

1999/13/EC (VOC): 0 %

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National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): - - not water contaminating

Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

chapter: 1; 2; 4; 5; 6; 7; 8; 9; 10; 11; 12; 14; 15; 16

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

35 Causes severe burns.
36/38 Irritating to eyes and skin.

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

H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Further 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.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)