

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 1 of 11

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

### 1.1 Product identifier

Trade name: Developer series AR 300-40

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

General use: intermediate for electronic industry

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

Company name: Allresist  
Gesellschaft für chemische Produkte zur Mikrostrukturierung mbH  
Street/POB-No.: Am Biotop 14  
Postal Code, city: 15344 Strausberg  
Germany  
WWW: www.allresist.de  
E-mail: info@allresist.de  
Telephone: +49 (0)33 41-35 93-0  
Telefax: +49 (0)33 41-35 93-29  
Dept. responsible for information:  
Frau Feldt, Email: doerte.feldt@allresist.de

### 1.4 Emergency telephone number

Telephone: +49 (0)33 41-35 93-0  
Only available during office hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to EC regulation 1272/2008 (CLP)

Met. Corr. 1; H290 May be corrosive to metals.  
Acute Tox. 4; H302 Harmful if swallowed.  
Acute Tox. 4; H312 Harmful in contact with skin.  
Skin Irrit. 2; H315 Causes skin irritation.  
Eye Irrit. 2; H319 Causes serious eye irritation.  
STOT SE 2; H371 May cause damage to organs.  
STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure.

#### Classification according to Directive 67/548/EEC or 1999/45/EC

T; R24/25 Toxic in contact with skin and if swallowed.  
Xn; R48/21 Harmful: danger of serious damage to health by prolonged exposure in contact with skin.  
Xn; R68/21/22 Harmful: possible risk of irreversible effects in contact with skin and if swallowed.

### 2.2 Label elements

#### Labelling (CLP)



Signal word:

**Warning**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Date of print: 7/4/2015

Version: 7

Language: en-GB,IE

Page: 2 of 11

Hazard statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P260	Do not breathe vapours.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water/soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store only in corrosive resistant containers.

### Labelling (67/548/EEC or 1999/45/EC)



T

toxic

R phrase(s):

R 24/25	Toxic in contact with skin and if swallowed.
R 48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
R 68/21/22	Harmful: possible risk of irreversible effects in contact with skin and if swallowed.

S phrase(s):

S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### Special labelling

Text for labelling: Contains Tetramethylammonium hydroxide.

### 2.3 Other hazards

Special danger of slipping by leaking/spilling product.

## SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

### 3.2 Mixtures

Chemical characterisation:

aqueous solution

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## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 3 of 11

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 200-882-9 CAS 75-59-2	Tetramethylammonium hydroxide	< 2.5 %	DSD/DPD: T; R48/24. C; R34. N; R51-53. T+; R27/28. T+; R39/27/28. CLP: Met. Corr. 1; H290. Acute Tox. 2; H300. Acute Tox. 1; H310. Skin Corr. 1B; H314. STOT SE 1; H370. STOT RE 1; H372. Aquatic Chronic 2; H411.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General information: First aider: Pay attention to self-protection!  
Immediately remove any contaminated clothing, shoes or stockings.
- In case of inhalation: Provide fresh air. Seek medical attention.
- Following skin contact: After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Cover with sterile dressing material to protect against infection. Seek medical attention.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After swallowing: Never give anything by mouth to an unconscious person. Drink large quantities of water. Do not induce vomiting. Immediately get medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

- In case of inhalation:  
Mucous membrane irritation, cough, shortage of breath, damage of respiratory tract.  
Pulmonary edema is possible. Symptoms may occur with delay.
- In case of ingestion:  
Nausea, vomiting, shortage of breath, unconsciousness, apnea
- After contact with skin: May cause irritations.
- After eye contact: May cause irritations.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically. Treatment as in case of alkali cauterizations.
- On irritation of the respiratory system use an aerosol dispenser and treat with 5 doses of dexamethasone aerosol (e.g. Auxilison, Thomae) every 10 minutes until symptoms cease.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media:

- Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

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

- Fires in the immediate vicinity may cause the development of dangerous vapours. In case of fire may be liberated: nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 4 of 11

### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. Wear protective equipment.

Additional information: Hazchem-Code: 2X

Cool endangered containers with water spray and, if possible, remove from danger zone. Do not breathe fumes. Use water spray jet to knock down vapours. Do not allow fire water to penetrate into surface or ground water.

## SECTION 6: Accidental release measures

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

Avoid contact with the substance. Do not breathe vapours. Wear protective equipment. Ensure adequate ventilation, especially in confined areas. Remove persons to safety.

### 6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.

### 6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Final cleaning.

Additional information: Special danger of slipping by leaking/spilling product.

### 6.4 Reference to other sections

Refer additionally to section 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.

Avoid contact with skin, eyes, and clothing. Do not breathe vapour.

Wear protective equipment. When using do not eat, drink or smoke.

Do not allow containers to stand open. Handle and open container with care.

Precautions against fire and explosion:

Usual measures for fire prevention.

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

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.

Unsuitable materials: Bronze, aluminium, tin, zinc.

Storage temperature: 10 °C up to 22 °C.

Only trained personnel may be allowed to enter storage area.

Hints on joint storage:

Avoid contact with aluminium, tin, zinc, acids, oxidizing agents and ammonium compounds. Keep away from food, drink and animal feedingstuffs.

Storage class:

8B = Non-combustible corrosive substances

### 7.3 Specific end use(s)

No information available.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 5 of 11

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

When aerosols and vapours form: Withdraw by suction.

### Personal protection equipment

#### Occupational exposure controls

Respiratory protection: When aerosols and vapours form: Use filter type K according to EN 14387.

Hand protection: Protective gloves according to EN 374.

Glove material:

Polychloroprene 0.5 mm, Nitrile rubber 0.35 mm, Butyl caoutchouc (butyl rubber) 0.5 mm

Breakthrough time: > 480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:

Avoid contact with skin, eyes, and clothing. Take off immediately all contaminated clothing.

Do not breathe vapour. Wear protective equipment.

Safety shower and eye wash station should be easily accessible to the work area.

When using do not eat, drink or smoke.

Wash hands before breaks and after work.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Form: liquid Colour: colourless
Odour:	weak amine-like
Odour threshold:	no data available
pH value:	no data available
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point/flash point range:	non-flammable
Evaporation rate:	no data available
Flammability:	This product is non-flammable.
Explosion limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Density:	at 25 °C: approx. 1 g/mL
Water solubility:	at 20 °C: soluble
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Viscosity, dynamic:	no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 6 of 11

Explosive properties: no data available

Oxidizing characteristics: no data available

### 9.2 Other information

Additional information: no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

May be corrosive to metals.  
Reactions with base metals under hydrogen development.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Violent reaction with strong oxidizing agents, acids.  
Reacts with ammonium compounds.

### 10.4 Conditions to avoid

Excessive heating.

### 10.5 Incompatible materials

Caution! With nitrosic agents (such as nitric salts or nitric oxides) under special conditions may form nitrosamines.

### 10.6 Hazardous decomposition products

Fires in the immediate vicinity may cause the development of dangerous vapours.  
In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 7 of 11

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Toxicological effects: Acute toxicity (oral): Acute Tox. 4; H302 = Harmful if swallowed.  
Acute toxicity (dermal): Acute Tox. 4; H312 = Harmful in contact with skin.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.  
Eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Lack of data.  
Germ cell mutagenicity/Genotoxicity: Lack of data.  
Carcinogenicity: Lack of data.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure): STOT SE 2; H371 = May cause damage to organs.  
Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure.  
Aspiration hazard: Lack of data.

Other information: Information about Tetramethylammonium hydroxide:  
LD50 Rat, oral: 7-50 mg/kg.  
LD50 Rat, dermal: 25 -50 mg/kg.  
Systemic effects:  
Nausea, vomiting, shortage of breath, unconsciousness, apnea, death.  
With nitrosic agents (such as nitric salts or nitric oxides) under special conditions may form nitrosamines. In animal experiments nitrosamines were carcinogenic.

### Symptoms

In case of inhalation:  
Mucous membrane irritation, cough, shortage of breath, damage of respiratory tract.  
Pulmonary edema is possible. Symptoms may occur with delay.  
In case of ingestion:  
Nausea, vomiting, shortage of breath, unconsciousness, apnea  
After contact with skin: May cause irritations.  
After eye contact: May cause irritations.

## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Forms corrosive mixtures with water even if diluted. Harmful effects on water organisms by modification of pH-value.

### 12.2. Persistence and degradability

Further details: no data available

### 12.3 Bioaccumulative potential

Bioconcentration factor (BCF):  
no data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 8 of 11

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste key number: 16 10 01\* = Aqueous liquid wastes containing dangerous substances

\* = Evidence for disposal must be provided.

Recommendation: Dispose of as special waste in compliance with local and national regulations.

#### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID, IMDG, IATA: UN 1835

### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 1835, Tetramethylammonium hydroxide, solution

### 14.3 Transport hazard class(es)

ADR/RID: Class 8, Code: C7

IMDG: Class 8, Subrisk -

IATA: Class 8

### 14.4 Packing group

ADR/RID, IMDG, IATA: III

### 14.5 Environmental hazards

Marine pollutant: No





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## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 9 of 11

### 14.6 Special precautions for user

#### Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 80, UN number 1835  
Hazard label: 8  
Limited quantities: 5 L  
EQ: E1  
Contaminated packaging - Instructions: P001 IBC03 LP01 R001  
Special provisions for packing together: MP19  
Portable tanks - Instructions: T7  
Portable tanks - Special provisions: TP2  
Tank coding: L4BN  
Tunnel restriction code: E

#### Sea transport (IMDG)

EmS: F-A, S-B  
Special provisions: 223  
Limited quantities: 5 L  
EQ: E1  
Contaminated packaging - Instructions: P001, LP01  
Contaminated packaging - Provisions: -  
IBC - Instructions: IBC03  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T7  
Tank instructions - Provisions: TP2  
Stowage and handling: Category A.  
Segregation: SG35  
Properties and observations: Miscible with water. Reacts violently with acids.  
Segregation group: 2, 18

#### Air transport (IATA)

Hazard: Corrosive  
EQ: E1  
Passenger Ltd.Qty.: Pack.Instr. Y841 - Max. Net Qty/Pkg. 1 L  
Passenger: Pack.Instr. 852 - Max. Net Qty/Pkg. 5 L  
Cargo: Pack.Instr. 856 - Max. Net Qty/Pkg. 60 L  
Special Provisioning: A3 A803  
ERG: 8L

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

## SECTION 15: Regulatory information

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

#### National regulations - Great Britain

Hazchem-Code: 2X

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Version: 7

Language: en-GB,IE

Date of print: 7/4/2015

Page: 10 of 11

### National regulations - EC member states

#### Labelling of packaging with <= 125mL content



Signal word:

**Warning**

Hazard statements:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P260	Do not breathe vapours.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P405	Store locked up.

### 15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

## SECTION 16: Other information

### Further information

Wording of the H-phrases under paragraph 2 and 3:

H290 = May be corrosive to metals.  
H300 = Fatal if swallowed.  
H302 = Harmful if swallowed.  
H310 = Fatal in contact with skin.  
H312 = Harmful in contact with skin.  
H314 = Causes severe skin burns and eye damage.  
H315 = Causes skin irritation.  
H319 = Causes serious eye irritation.  
H370 = Causes damage to organs.  
H371 = May cause damage to organs.  
H372 = Causes damage to organs through prolonged or repeated exposure.  
H373 = May cause damage to organs through prolonged or repeated exposure.  
H411 = Toxic to aquatic life with long lasting effects.

Wording of the R-phrases under section 2 and 3:

R 24/25 = Toxic in contact with skin and if swallowed.  
R 27/28 = Very toxic in contact with skin and if swallowed.  
R 34 = Causes burns.  
R 39/27/28 = Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed.  
R 48/21 = Harmful: danger of serious damage to health by prolonged exposure in contact with skin.  
R 48/24 = Toxic: danger of serious damage to health by prolonged exposure in contact with skin.  
R 51/53 = Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R 68/21/22 = Harmful: possible risk of irreversible effects in contact with skin and if swallowed.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 453/2010



## Developer series AR 300-40

Revision date: 23/3/2015

Date of print: 7/4/2015

Version: 7

Language: en-GB,IE

Page: 11 of 11

Reason of change: Changes in section 1: product name Gb  
Changes in section 8.2: Glove material  
Changes in section 14: IMDG 2015

Date of first version: 25/8/2010

### Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.