

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830



Developer AR 600-50 neu

Material number AR 600-50 neu

Revision date: 12/2/2018
Version: 5

Language: en-GB,IE

Date of print: 20/2/2018
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Developer AR 600-50 neu

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

General use: Intermediate for electronic industry
Reserved for industrial and professional use.

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)

Flam. Liq. 2; H225 Highly flammable liquid and vapour.
Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 3; H336 May cause drowsiness or dizziness.

2.2 Label elements

Labelling (CLP)



Signal word: **Danger**

Hazard statements: H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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Precautionary statements: P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P370+P378	In case of fire: extinguishing powder, alcohol resistant foam, water fog, carbon dioxide.
P403+P235	Store in a well-ventilated place. Keep cool.

2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided. Inhaling can lead to irritations of the respiratory tract and mucous membrane. Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 203-539-1 CAS 107-98-2	1-Methoxy-2-propanol	>= 60 %	Flam. Liq. 3; H226. STOT SE 3; H336.
EC No. 200-661-7 CAS 67-63-0	Isopropyl alcohol	< 40 %	Flam. Liq. 2; H225. Eye Irrit. 2; H319. STOT SE 3; H336.

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	IF exposed or concerned: Get medical advice/attention. First aider: Pay attention to self-protection!
In case of inhalation:	Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Make sure he/she is warm and comfortable. If victim is at risk of losing consciousness, position and transport on their side. Seek medical attention.
Following skin contact:	Remove residues with soap and water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Never give anything by mouth to an unconscious person. Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Seek medical attention.

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4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. May cause drowsiness or dizziness.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water fog, extinguishing powder, carbon dioxide.
In case of large fires: water fog or alcohol resistant foam.

Extinguishing media which must not be used for safety reasons:

Full water jet.

5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapour.
With air, vapours form potentially explosive mixtures, which are heavier than air.
Vapours may proceed on the ground over great distances and cause fire and backflashes.
In case of fire may be liberated: carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Hazchem-Code: •3YE

Suppress gases/vapours/mists with water spray jet. Heating will lead to pressure increase: Danger of bursting and explosion. Move undamaged containers from immediate hazard area if it can be done safely. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. Avoid contact with the substance. Wear appropriate protective equipment. Keep unprotected people away. Provide adequate ventilation. Do not breathe vapour/aerosol/mist. Take off immediately all contaminated clothing and wash it before reuse. If possible, eliminate leakage. Cordon off downwind area at risk and warn inhabitants.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. Danger of explosion!
In case of release, notify competent authorities.

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6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).
Beware of reignition. Thoroughly clean surrounding area.
In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Explosion protection required.

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.
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. Do not breathe vapour/aerosol/mist. Wear appropriate protective equipment. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse. Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation. When handling large quantities, supply emergency spray.

Precautions against fire and explosion: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting equipment. Do not weld. In partially filled containers explosive mixtures may form.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers: Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Keep only in the original container. Protect from direct sunlight. Store containers in upright position. Explosion protection required. Avoid admission of air/oxygene (formation of peroxide).

Qualified materials: steel, polypropylene.
Unsuitable materials: copper, zinc.
Storage temperature: 10 - 22 °C

Hints on joint storage: Do not store together with strong oxidizing agents.
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
107-98-2	1-Methoxy-2-propanol	Europe: IOELV: STEL	568 mg/m ³ ; 150 ppm (may be absorbed through the skin)
		Europe: IOELV: TWA	375 mg/m ³ ; 100 ppm (may be absorbed through the skin)
		Great Britain: WEL-STEL	560 mg/m ³ ; 150 ppm
		Great Britain: WEL-TWA	375 mg/m ³ ; 100 ppm
		Ireland: 15 minutes	568 mg/m ³ ; 150 ppm
67-63-0	Isopropyl alcohol	Ireland: 8 hours	375 mg/m ³ ; 100 ppm
		Great Britain: WEL-STEL	1250 mg/m ³ ; 500 ppm
		Great Britain: WEL-TWA	999 mg/m ³ ; 400 ppm
		Ireland: 15 minutes	400 ppm
		Ireland: 8 hours	200 ppm

DNEL/DMEL:

Information about 1-Methoxy-2-propanol:

DNEL workers, long-term, inhalative, systemic: 369 mg/m³

DNEL workers, short-term, inhalative, systemic: 553.5 mg/m³

DNEL workers, long-term, dermal, systemic: 50.6 mg/kg bw/d

Information about Isopropyl alcohol:

DNEL long-term, workers, dermal, systemic: 888 mg/kg/d

DNEL long-term, workers, inhalative, systemic: 500 mg/m³

PNEC:

Information about 1-Methoxy-2-propanol:

PNEC water (freshwater): 10 mg/L

PNEC water (marine water): 1 mg/L

PNEC water (intermittent release): 100 mg/L

PNEC sediment (freshwater): 52.3 mg/kg dw

PNEC sediment (marine water): 52.2 mg/kg dw

PNEC floor: 5.49 mg/kg dw

PNEC sewage treatment plant: 100 mg/L

Information about Isopropyl alcohol:

PNEC water (freshwater): 140.9 mg/L

PNEC water (marine water): 140.9 mg/L

PNEC water (intermittent release): 140.9 mg/L

PNEC sediment: 552 mg/kg

PNEC soil: 28 mg/kg

PNEC sewage treatment plant (stp): 2251 mg/L

8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.

Personal protection equipment

Occupational exposure controls

Respiratory protection:

Respiratory protection must be worn whenever the WEL levels have been exceeded.

Use filter type A (= against vapours of organic substances) according to EN 14387. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

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Hand protection: Protective gloves according to EN 374.
Glove material: butyl caoutchouc (butyl rubber) - Layer thickness \geq 0.7 mm.
Breakthrough time: \geq 480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Flame retardant, antistatic and chemical resistant protective clothing.

General protection and hygiene measures:
Use only non-sparking tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Do not breathe vapour/aerosol/mist. Wash hands before breaks and after work. When using do not eat, drink or smoke. Do not get in eyes, on skin, or on clothing. Contaminated work clothing should not be allowed out of the workplace. When handling large quantities, supply emergency spray.

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: liquid
Colour: colourless

Odour: alcoholic

Odour threshold: No data available

pH value: 4 - 7 (1-Methoxy-2-propanol)

Melting point/freezing point: -95 °C (1-Methoxy-2-propanol)

Initial boiling point and boiling range: 119 - 122 °C (1-Methoxy-2-propanol)

Flash point/flash point range: 21 °C

Evaporation rate: No data available

Flammability: Highly flammable liquid and vapour.

Explosion limits: LEL (Lower Explosion Limit): 1.70 Vol-% (1-Methoxy-2-propanol)
UEL (Upper Explosive Limit): 11.50 Vol-% (1-Methoxy-2-propanol)

Vapour pressure: at 20 °C: 13 hPa (1-Methoxy-2-propanol)

Vapour density: No data available

Density: at 20 °C: 0.922 g/mL (1-Methoxy-2-propanol)

Water solubility: complete miscible

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity, dynamic: at 20 °C: 1.90 mPa*s (1-Methoxy-2-propanol)

Explosive properties: On contact with air, potentially explosive mixtures may develop.

Oxidizing characteristics: No data available

9.2 Other information

Ignition temperature: 270 °C (1-Methoxy-2-propanol)

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SECTION 10: Stability and reactivity

10.1 Reactivity

Highly flammable liquid and vapour.
Vapours can form explosive mixtures with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Heating will lead to pressure increase: Danger of bursting and explosion.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames.
Protect against direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide
Thermal decomposition: No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
ATEmix (calculated): ATE > 5000 mg/kg.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
ATEmix (calculated): ATE > 5000 mg/kg.

Acute toxicity (inhalative): Lack of data.
ATEmix calculated (Vapours): > 20 mg/L

Skin corrosion/irritation: Lack of data.

Serious 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 3; H336 = May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

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Other information: Information about 1-Methoxy-2-propanol:
LD50 Rat, oral: 5900 mg/kg
LD50 Rabbit, dermal: 13000 mg/kg
LC0 Rat, inhalative (vapours): 54.6 mg/L/4h
Information about Isopropyl alcohol:
LD50 Rat, oral: 4570 mg/kg.
LD50 Rabbit, dermal: 13400 mg/kg.
LC50 Rat, inhalative: 30 mg/L/4h

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Information about 1-Methoxy-2-propanol:
LC50 Daphnia magna (Big water flea): 23300 mg/L/48h. (static)
EC50 bacteria: > 1000 mg/L/3h
LC50 Leuciscus idus: > 6800 mg/L/96h. (static)

12.2 Persistence and degradability

Further details: Biodegradability:
Information about 1-Methoxy-2-propanol:
Degree of elimination: > 70 % (DOC; OECD 301E).
Easily bio-degradable
Information about Isopropyl alcohol:
BSB/CSB: 62 %
Easily bio-degradable

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

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 03 05* = organic wastes containing hazardous substances
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.
Do not dispose of with household waste.

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Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled. Handle empty containers with care. Incineration may cause explosion.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:
UN 1993

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:
UN 1993, FLAMMABLE LIQUID, N.O.S. (1-Methoxy-2-propanol and Isopropyl alcohol)

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1
IMDG: Class 3, Subrisk -
IATA-DGR: Class 3



14.4 Packing group

ADR/RID, IMDG, IATA-DGR:
II

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 33, UN number UN 1993
Hazard label: 3
Special provisions: 274 601 640D
Limited quantities: 1 L
EQ: E2
Contaminated packaging - Instructions: P001 IBC02 R001
Special provisions for packing together: MP19
Portable tanks - Instructions: T7
Portable tanks - Special provisions: TP1 TP8 TP28
Tank coding: LGBF
Tunnel restriction code: D/E

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Sea transport (IMDG)

EmS: F-E, S-E
Special provisions: 274
Limited quantities: 1 L
Excepted quantities: E2
Contaminated packaging - Instructions: P001
Contaminated packaging - Provisions: -
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T7
Tank instructions - Provisions: TP1, TP8, TP28
Stowage and handling: Category B.
Properties and observations: -
Segregation group: none

Air transport (IATA)

Hazard label: Flamm. liquid
Excepted Quantity Code: E2
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special provisions: A3
Emergency Response Guide-Code (ERG): 3H

14.7 Transport in bulk according to Annex II of Marpol 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: •3YE
No data available

National regulations - EC member states

Volatile organic compounds (VOC):
100 % by weight

Labelling of packaging with <= 125mL content



Signal word: **Danger**
Hazard statements: not applicable
Precautionary statements: not applicable
Further regulations, limitations and legal requirements:
Use restriction according to REACH annex XVII, no.: 3

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

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SECTION 16: Other information

Further information

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

H225 = Highly flammable liquid and vapour.

H226 = Flammable liquid and vapour.

H303 = May be harmful if swallowed.

H319 = Causes serious eye irritation.

H336 = May cause drowsiness or dizziness.

Reason of change: Changes in section 2: labelling
Changes in section 15: Regulatory information
General revision

Date of first version: 4/3/2015

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.

