



SAFETY DATA SHEET

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

Revision date: 11/7/2019
Version: 3
Language: en-GB,IE
Date of print: 27/8/2020

Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 1 of 11

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

1.1 Product identifier

Trade name: Developer X AR 600-50/2

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

General use: Intermediate for electronic industry
For industrial purposes only

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
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
Department responsible for information:
Frau Dr. Zimmermann, Email: produktion@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.
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Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 2 of 11

Precautionary Statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P261 Avoid breathing vapours.
- 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: Use water spray, dry powder, foam or carbon dioxide for extinction.
- P403+P235 Store in a well-ventilated place. Keep cool.

Special labelling

Text for labelling: Contains isopropanol.

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. Higher doses may lead to a narcotic effect. 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
REACH 01-2119457610-43-xxxx EC No. 200-578-6 CAS 64-17-5	Ethanol	60 - 80 %	Flam. Liq. 2; H225. Eye Irrit. 2; H319.
REACH 01-2119457558-25-xxxx EC No. 200-661-7 CAS 67-63-0	Isopropyl alcohol	20 - 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. If medical advice is needed, have product container or label at hand. 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. Seek medical attention. If victim is at risk of losing consciousness, position and transport on their side.



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Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 3 of 11

- 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.

4.2 Most important symptoms and effects, both acute and delayed

May cause drowsiness or dizziness. Causes serious eye irritation. Inhaling can lead to irritations of the respiratory tract and mucous membrane. Higher doses may lead to a narcotic effect.

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:

Dry extinguishing powder, water spray jet, alcohol resistant foam or carbon dioxide.

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. On contact with air, potentially explosive mixtures may develop. Vapours may proceed on the ground over great distances and cause fire and backflashes.

On heating or in case of fire toxic gases may form. Furthermore, there may develop: 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

Heating will lead to pressure increase: Danger of bursting and explosion. Use fine water spray to cool endangered containers. 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.



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Revision date: 11/7/2019

Version: 3

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Date of print: 27/8/2020

Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 4 of 11

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

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.

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). Never return spills in original containers for re-use.

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 gas/fumes/vapour/spray. Do not get in eyes, on skin, or on clothing. Avoid the formation of aerosol. Wear appropriate protective equipment. 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 original container. Protect from heat and direct sunlight.
Explosion protection required.
Storage temperature: 10 °C up to 22 °C.

Hints on joint storage:

Do not store together with alkali metals, acetic anhydride, strong oxidizing agents or acids. Do not store together with combustible or self-igniting materials or any highly flammable solids. Keep away from food, drink and animal feedingstuffs.



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Revision date: 11/7/2019

Version: 3

Language: en-GB,IE

Date of print: 27/8/2020

Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 5 of 11

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
64-17-5	Ethanol	Great Britain: WEL-TWA Ireland: 15 minutes	1920 mg/m ³ ; 1000 ppm 1000 ppm
67-63-0	Isopropyl alcohol	Great Britain: WEL-STEL Great Britain: WEL-TWA Ireland: 15 minutes Ireland: 8 hours	1250 mg/m ³ ; 500 ppm 999 mg/m ³ ; 400 ppm 400 ppm 200 ppm

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 combination filter type A/P 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.

Hand protection: Protective gloves according to EN 374.
Glove material:
butyl caoutchouc (butyl rubber) - Layer thickness 0.5 mm.
Fluororubber (Viton) - Layer thickness 0.4 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:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe gas/fumes/vapour/spray. Do not get in eyes, on skin, or on clothing. Contaminated work clothing should not be allowed out of the workplace. Take off immediately all contaminated clothing and wash it before reuse. When using do not eat or drink. Wash hands thoroughly after handling. When handling large quantities, supply emergency spray.

Environmental exposure controls

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



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Revision date: 11/7/2019

Version: 3

Language: en-GB,IE

Date of print: 27/8/2020

Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 6 of 11

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
Odour:	alcoholic
Odour threshold:	No data available
pH value:	No data available
Melting point/freezing point:	approx. -114 °C (Ethanol)
Initial boiling point and boiling range:	78 °C (Ethanol)
Flash point/flash point range:	12 °C (Ethanol)
Evaporation rate:	No data available
Flammability:	highly flammable liquid and vapour
Explosion limits:	LEL (Lower Explosion Limit): 3.50 Vol-% (Ethanol) UEL (Upper Explosive Limit): 15.00 Vol-% (Ethanol)
Vapour pressure:	at 20 °C: 85.5 hPa (Ethanol)
Vapour density:	No data available
Density:	at 20 °C: 0.79 g/mL (Ethanol)
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	363 °C (Ethanol)
Decomposition temperature:	No data available
Viscosity, dynamic:	at 20 °C: 1.19 mPa*s (Ethanol)
Explosive properties:	Vapours can form explosive mixtures with air.
Oxidizing characteristics:	No data available

9.2 Other information

Additional information: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Flammable liquid and vapour. On contact with air, potentially explosive mixtures may develop.

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 from direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents, alkali metals, acetic anhydride and acids.



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Revision date: 11/7/2019

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Date of print: 27/8/2020

Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 7 of 11

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): Based on available data, the classification criteria are not met.

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.

Other information: Information about ethanol:

LD50 Rat, oral: 10470 mg/kg. (OECD 401)

LD50 Rabbit, dermal: > 2000 mg/kg. (OECD 402)

LC50 Rat, inhalative (vapour): 51 mg/L/4h (OECD 403)

Information about isopropanol:

LD50 Rat, oral: 4570 mg/kg.

LD50 Rabbit, dermal: 13400 mg/kg.

LC50 Rat, inhalative: 30 mg/L/4h

Symptoms

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

Other symptoms: depression of central nervous system, dizziness and vomiting.



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Revision date: 11/7/2019
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Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 8 of 11

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Information about ethanol:
Fish toxicity:
LC50 *Oncorhynchus mykiss*: 13000 mg/L/96h. (OECD 203)
Daphnia toxicity:
EC50 *Daphnia magna* (Big water flea), semistatic: 12340 mg/L/48h (ASTM E 729-80)
EC50 *Artemia salina*: 858 mg/L/24h (OECD 202)
Algae toxicity:
EC50 *Chlorella vulgaris*, static: 275 mg/L/72h (OECD 201)
Bacterial toxicity:
EC50 *Paramecium caudatum*, static: 5800 mg/L/4h

12.2 Persistence and degradability

Further details: Biodegradability:
Information about Ethanol:
97 % /28 d (OECD 301 B).
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. Do not empty into drains.

Contaminated packaging

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



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Revision date: 11/7/2019
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Language: en-GB,IE
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Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 9 of 11

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:

UN 1987

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 1987, ALCOHOLS, N.O.S. (Ethanol and isopropanol.)

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 1987
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

Sea transport (IMDG)

EmS: F-E, S-D
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



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Revision date: 11/7/2019
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Date of print: 27/8/2020

Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 10 of 11

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 A180
Emergency Response Guide-Code (ERG): 3L

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.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:
H225 = Highly flammable liquid and vapour.
H319 = Causes serious eye irritation.
H336 = May cause drowsiness or dizziness.



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Developer X AR 600-50/2

Material number X AR 600-50/2

Page: 11 of 11

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL: Occupational Exposure Limit Value
AS/NZS: Australian Standards/New Zealand Standards
ATEmix: Acute Toxicity Estimate of mixture
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC50: Effective Concentration 50%
EC: European Community
EN: European Standard
EU: European Union
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
LC50: Median lethal concentration
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
UN: United Nations
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: General revision

Date of first version: 10/1/2018

Department issuing data sheet

Contact person: see section 1: Department responsible for information

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.