

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 1 of 10

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

1.1 Product identifier

Trade name: Thinner AR 600-09

CAS-Number: 687-47-8

EC-number: 211-694-1

EU index number: 607-129-00-7

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)

Flam. Liq. 3; H226 Flammable liquid and vapour.

Eye Dam. 1; H318 Causes serious eye damage.

STOT SE 3; H335 May cause respiratory irritation.

2.2 Label elements

Labelling (CLP)



Signal word: **Danger**

Hazard statements: H226 Flammable liquid and vapour.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

SAFETY DATA SHEET

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Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 2 of 10

Precautionary statements: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing 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.
P310 Immediately call a POISON CENTER/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special labelling

Text for labelling: Contains Ethyl lactate.

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.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition / information on ingredients

3.1 Substances

Chemical characterisation: C₅H₁₀O₃ = CH₃-CH(OH)-COO-C₂H₅
Ethyl (S)-2-hydroxypropionate, Ethyl lactate

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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!
Immediately remove any contaminated clothing, shoes or stockings.

In case of inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Seek medical attention.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. 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 seek the immediate attention of an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

4.2 Most important symptoms and effects, both acute and delayed

May cause respiratory irritation. Causes serious eye damage.

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 3 of 10

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:

Foam, extinguishing powder, water fog, 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

Flammable liquid and vapour. With air, vapours form potentially explosive mixtures, which are heavier than air. Vapours are heavier than air and will spread at floor level. May form dangerous gases and vapours in case of fire. 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: •2Y

Heating will lead to pressure increase: Danger of bursting and explosion. Keep containers cool with water spray.

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. If possible, eliminate leakage.

Avoid contact with the substance. Do not breathe vapour/aerosol.

Ensure adequate ventilation, especially in confined areas.

Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.

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.

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).

Additional information:

Use explosion-proof equipment and non-sparking tools/utensils.

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 4 of 10

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.
Do not get in eyes, on skin, or on clothing. 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 sources of ignition - No smoking.
Take precautionary measures against static discharge.
Use only explosion-protected equipment/instruments. 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:

Store in a well-ventilated place. Keep container tightly closed.
Storage temperature 10 - 22 °C.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position. Explosion protection required.

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.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

PNEC: PNEC Water (freshwater): 0.32 mg/L
PNEC Water (marine water): 0.032 mg/L
PNEC Water (intermittent release): 3.2 mg/L
PNEC sediment (freshwater): 1.66 mg/kg dw
PNEC sediment (marine water): 0.166 mg/kg dw
PNEC soil: 0.145 mg/kg dw

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: When aerosols and vapours form: Use appropriate respiratory protection.
Use filter type A (= against vapours of organic substances) according to EN 14387.

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 5 of 10

- Hand protection: Protective gloves according to EN 374.
During full contact:
Glove material: Butyl caoutchouc (butyl rubber) - Layer thickness: 0.7 mm.
Breakthrough time: >480 min.
During splash contact:
Glove material: Nitrile rubber - Layer thickness: 0.4 mm.
Breakthrough time: >30 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 vapour/aerosol. Do not get in eyes, on skin, or on clothing. Take off 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. Danger of explosion!

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: fruity
Odour threshold: No data available
- pH value: at 20 °C, 50 g/L: approx. 4
- Melting point/freezing point: -25 °C
Initial boiling point and boiling range: 154 °C
Flash point/flash point range: 53 °C (c.c.)
Evaporation rate: No data available
- Flammability: Flammable liquid and vapour.
Explosion limits: LEL (Lower Explosion Limit): 1.50 Vol-%
UEL (Upper Explosive Limit): 16.40 Vol-%
- Vapour pressure: at 20 °C: 1.6 hPa
Vapour density: 4.07
Density: at 20 °C: 1.03 g/mL
Water solubility: at 25 °C: soluble
Partition coefficient: n-octanol/water: 0.06 log P(o/w)
Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
- Auto-ignition temperature: No data available
Decomposition temperature: No data available
- Viscosity, dynamic: at 20 °C: 2.8 mPa*s
Viscosity, kinematic: at 25 °C: 2.7 mm²/s
- Explosive properties: Product is not explosive. Vapours can form explosive mixtures with air.
Oxidizing characteristics: none

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 6 of 10

9.2 Other information

Ignition temperature: 400 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

Flammable liquid and vapour. Vapours can form explosive mixtures with air.
Sensitive to air, hydrolyzes with water.

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.
Reacts with strong oxidizing agents.

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, various plastics

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: LD50 Rat, oral: > 2000 mg/kg (OECD 401)
LC50 Rat, inhalative: > 5.4 mg/L/4h (OECD 403)

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 7 of 10

Toxicological effects:

- Acute toxicity (oral): Based on available data, the classification criteria are not met.
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Specific symptoms in animal studies (Rabbit): Does not cause irritation. (OECD 404)
- Eye damage/irritation: Eye Dam. 1; H318 = Causes serious eye damage.
- Sensitisation to the respiratory tract: Lack of data.
- Skin sensitisation: Based on available data, the classification criteria are not met.
- Specific symptoms in animal studies (Mouse): not sensitising (EU Method B.42)
- Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Lack of data.
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.
- Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
- NOAEL Rat, inhalative: 200 mg/m³ (OECD 412)
- Aspiration hazard: Lack of data.

Symptoms

In case of inhalation: Mucous membrane irritation, cough, shortage of breath.
In case of ingestion:
Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
After contact with skin: Mild irritant.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

- Algae toxicity:
IC50 *Pseudokirchneriella subcapitata* (green algae): 2200 mg/L/70h
- Daphnia toxicity:
EC50 *Daphnia magna* (Big water flea): 683 mg/L/48h
- Fish toxicity:
LC50 *Brachydanio rerio* (zebra-fish): 320 mg/L/96h

12.2 Persistence and degradability

Further details: Biodegradability: 86 % / 28 d.
Product is readily biodegradable.

Oxygen demand: COD: 1,62

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
0.06 log P(o/w)
Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 8 of 10

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: 07 01 04* = Organic solvents, halogen-free
* = Evidence for disposal must be provided.

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

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.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:
UN 1192

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:
UN 1192, ETHYL LACTATE

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:
III

14.5 Environmental hazards

Marine pollutant: no

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 9 of 10

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 30, UN number UN 1192
Hazard label: 3
Limited quantities: 5 L
EQ: E1
Contaminated packaging - Instructions: P001 IBC03 LP01 R001
Special provisions for packing together: MP19
Portable tanks - Instructions: T2
Portable tanks - Special provisions: TP1
Tank coding: LGBF
Tunnel restriction code: D/E

Sea transport (IMDG)

EmS: F-E, S-D
Special provisions: -
Limited quantities: 5 L
Excepted quantities: E1
Contaminated packaging - Instructions: P001, LP01
Contaminated packaging - Provisions: -
IBC - Instructions: IBC03
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T2
Tank instructions - Provisions: TP1
Stowage and handling: Category A.
Properties and observations: Colourless liquid. Flashpoint: 46°C c.c. Explosive limits: 1,5% to 11,4%.
Miscible with water.
Segregation group: none

Air transport (IATA)

Hazard label: Flamm. liquid
Excepted Quantity Code: E1
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L
Passenger and Cargo Aircraft: Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L
Cargo Aircraft only: Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L
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: •2Y
No data available

National regulations - EC member states

Volatile organic compounds (VOC):
100 % by weight = 1030 g/L

SAFETY DATA SHEET

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



Thinner AR 600-09

Material number AR 600-09

Revision date: 3/5/2017
Version: 8

Language: en-GB,IE

Date of print: 9/5/2017
Page: 10 of 10

Labelling of packaging with <= 125mL content



Signal word:

Danger

Hazard statements:

H318

Causes serious eye damage.

Precautionary statements:

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.

P310

Immediately call a POISON CENTER/doctor.

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Further information

Reason of change:

Changes in section 2: Labelling

Changes in section 3: Composition / information on ingredients

General revision

Date of first version:

19/8/2010

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.



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