

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015
Version: 6

Language: en-GB,IE

Date of print: 24/2/2015
Page: 1 of 10

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

1.1 Product identifier

Trade name: Remover AR 600-71

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. 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.

SAFETY DATA SHEET

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Remover AR 600-71

Revision date: 24/2/2015

Date of print: 24/2/2015

Version: 6

Language: en-GB,IE

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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P405	Store locked up.

Special labelling

Text for labelling: Contains 1,3-Dioxolane and 1-Methoxy-2-propanol.

2.3 Other hazards

Vapours of organic solvents may have a narcotic effect.

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 211-463-5 CAS 646-06-0	1,3-Dioxolane	>= 70 %	CLP: Flam. Liq. 2; H225. Eye Irrit. 2; H319.
EC No. 203-539-1 CAS 107-98-2	1-Methoxy-2-propanol	< 30 %	CLP: Flam. Liq. 3; H226. STOT SE 3; H336.

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 3 of 10

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information: If you feel unwell, seek medical advice (show the label where possible).
Take off immediately all contaminated clothing.
- In case of inhalation: Provide fresh air. Seek medical treatment in case of troubles.
- Following skin contact: Wash with plenty of water. In case of skin irritation, consult a physician.
- 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: Rinse mouth immediately and drink plenty of water. Immediately get medical attention.
Do not induce vomiting. Do not give fatty oils and milk. As a laxative, affected person should drink sodium sulfate (1 tablespoon in 1/4 L water).

4.2 Most important symptoms and effects, both acute and delayed

- In case of inhalation: Headache, drowsiness
Vapours of organic solvents may have a narcotic effect.
- In case of ingestion: Gastrointestinal complaints.
After absorption of large quantities: narcosis.
Systemic effects: vomiting, dizziness, Fatigue, Diarrhoea, unconsciousness. When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation.
- After contact with skin:
Has degreasing effect on the skin. Danger of cutaneous absorption.

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, foam, extinguishing powder, carbon dioxide

5.2 Special hazards arising from the substance or mixture

- Highly flammable. In case of fire may be liberated: Carbon monoxide and carbon dioxide.
Vapours form explosive mixtures with air. The vapours of the product are heavier than air. Beware of reignition.

5.3 Advice for firefighters

Special protective equipment for firefighters:

- Wear self-contained breathing apparatus. To avoid contact with skin, keep safety distance and wear suitable protective clothing.

Additional information:

Hazchem-Code: •3YE

- Use water spray jet to knock down vapours. Do not allow fire water to penetrate into surface or ground water. Move container away or cool with water from a protected position.

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 4 of 10

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Provide adequate ventilation. Do not breathe vapour/aerosol.
Wear protective equipment. Avoid contact with the substance.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains. Danger of explosion!

6.3 Methods and material for containment and cleaning up

Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may backflash over great distances when ignited.
Use only spark proof tools.
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Final cleaning.

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 generation of vapours/aerosols. Do not breathe vapour/aerosol.
Wear protective equipment. Avoid contact with the substance.

Precautions against fire and explosion:

Highly flammable. Vapours form explosive mixtures with air.
Keep away from sources of ignition. - No smoking. Use only explosion-proof equipment.
Take precautionary measures against static discharges.

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 away from heat sources, sparks and open flames.
Provide solvent resistant flooring.
Handle empty containers with care. Incineration may cause explosion.
Storage temperature: 10 °C up to 18 °C.

Storage class: 3 = Flammable liquids

7.3 Specific end use(s)

No information available.

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 5 of 10

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
646-06-0	1,3-Dioxolane	Ireland: 8 hours	20 ppm
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
		Ireland: 8 hours	375 mg/m ³ ; 100 ppm

DNEL/DMEL: Information about 1,3-Dioxolane:
Systemic effects:
DNEL workers, long-term, inhalative: 19 mg/m³
DNEL workers, long-term, dermal: 4,1 mg/kg bw/d
DNEL consumers, long-term, inhalative: 5,7 mg/m³
DNEL consumers, long-term, dermal: 0,8 mg/kg bw/d
DNEL consumers, long-term, oral: 75 mg/kg bw/d

PNEC: Information about 1,3-Dioxolane:
PNEC water (freshwater): 19,7 mg/L
PNEC water (marine water): 1,97 mg/L
PNEC water (intermittent release): 0,95 mg/L
PNEC sewage treatment plant: 1 mg/L
PNEC sediment (freshwater): 77,7 mg/kg dw
PNEC sediment (marine water): 7,77 mg/kg dw
PNEC floor: 2,62 mg/kg dw

8.2 Exposure controls

When aerosols and vapours form: Withdraw by suction. Execute works under fume hood.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
Use filter type A according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: Fluororubber (Viton) - Layer thickness: 0,7 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: In case of handling larger quantities: Flame-resistant antistatic protective clothing

General protection and hygiene measures:

Take off immediately all contaminated clothing.
Avoid contact with skin and eyes. Do not breathe vapour/aerosol.
When using do not eat, drink or smoke.
Work place should be equipped with a shower and an eye rinsing apparatus.
After work, wash hands and face.

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 6 of 10

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Form: liquid Colour: colourless
Odour:	characteristic
Odour threshold:	no data available
pH value:	no data available
Melting point/freezing point:	(1,3-Dioxolane) -95 °C
Initial boiling point and boiling range:	(1,3-Dioxolane) 74 - 75 °C (1013 hPa)
Flash point/flash point range:	(1,3-Dioxolane) -6 °C
Evaporation rate:	no data available
Flammability:	no data available
Explosion limits:	LEL (Lower Explosion Limit): (1,3-Dioxolane) 2.10 Vol-% UEL (Upper Explosive Limit): (1,3-Dioxolane) 20.50 Vol-%
Vapour pressure:	at 20 °C: 133 h/Pa ((1,3-Dioxolane))
Vapour density:	no data available
Density:	at 20 °C: 1.0 - 1.1 g/mL
Water solubility:	completely 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
Explosive properties:	no data available
Oxidizing characteristics:	no data available

9.2 Other information

Ignition temperature: (1,3-Dioxolane) 274 °C (DIN 51794)

SECTION 10: Stability and reactivity

10.1 Reactivity

Danger of explosion with: perchlorate

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

see section 10.1

10.4 Conditions to avoid

Access of air and oxygen (Peroxide formation!)
Keep away from sources of ignition. - No smoking. Danger of bursting of closed cans.

10.5 Incompatible materials

oxidizing agents (ignition hazard)

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 7 of 10

10.6 Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50 Rat, oral: (1,3-Dioxolane) > 2000 mg/kg (OECD 401)

LC50 Rat, inhalative: (1,3-Dioxolane) 68.4 mg/L/4h (OECD 403)

Toxicological effects:

Acute toxicity (oral): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data.

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.

Symptoms

In case of inhalation: Headache, drowsiness

Vapours of organic solvents may have a narcotic effect.

In case of ingestion: Gastrointestinal complaints.

After absorption of large quantities: narcosis.

Systemic effects: vomiting, dizziness, Fatigue, Diarrhoea, unconsciousness. When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation.

After contact with skin:

Has degreasing effect on the skin. Danger of cutaneous absorption.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

Information about 1,3-Dioxolane:

Fish toxicity:

LC50 *Lepomis macrochirus* (bluegill): >95,4 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 *Daphnia magna* (Big water flea): >772 mg/L/48h (OECD 202)

Algae toxicity:

EC50 *Pseudokirchneriella subcapitata* (green algae): >877 mg/L/72h (OECD 201)

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 8 of 10

12.2. Persistence and degradability

Further details: no data available

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):

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: 07 01 04* = Other organic solvents, washing liquids and mother liquors
* = Evidence for disposal must be provided.

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

Contaminated packaging

Recommendation: Handle empty containers with care. Incineration may cause explosion.
Dispose of waste according to applicable legislation.
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: UN 1993

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 1993, FLAMMABLE LIQUID, N.O.S. (1,3-Dioxolane, 1-Methoxy-2-propanol solution)

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1

IMDG: Class 3, Subrisk -

IATA: Class 3

14.4 Packing group

ADR/RID, IMDG, IATA: II

14.5 Environmental hazards

Marine pollutant: No



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



Remover AR 600-71

Revision date: 24/2/2015
Version: 6

Language: en-GB,IE

Date of print: 24/2/2015
Page: 9 of 10

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 33, UN number 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

Sea transport (IMDG)

EmS: F-E, S-E
Special provisions: 274
Limited quantities: 1 L
EQ: 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: -

Air transport (IATA)

Hazard: Flammable liquid
EQ: E2
Passenger Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special Provisioning: A3
ERG: 3H

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: •3YE

SAFETY DATA SHEET

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



Remover AR 600-71

Revision date: 24/2/2015

Version: 6

Language: en-GB,IE

Date of print: 24/2/2015

Page: 10 of 10

National regulations - EC member states

Labelling of packaging with <= 125mL content



Signal word:

Danger

Hazard statements:

H336

May cause drowsiness or dizziness.

Precautionary statements:

P261

Avoid breathing vapours.

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312

Call a POISON CENTER/doctor if you feel unwell.

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:

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: General revision (Regulation (EU) Nr. 2015/830)

Date of first version: 29/10/2010

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.