



SAFETY DATA SHEET

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

Revision date: 23/1/2019
Version: 10
Language: en-GB,IE
Date of print: 27/8/2020

Remover AR 300-70 & AR 300-72 (NEP)

Material number AR 300-70 & AR 300-72 (NEP)

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

1.1 Product identifier

Trade name: Remover AR 300-70 & AR 300-72 (NEP)

REACH registration No.: 01-2119472138-36-XXXX

Chemical name: 1-Ethylpyrrolidin-2-one

CAS-Number: 2687-91-4

EC-number: 220-250-6

EU index number: 616-208-00-5

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

General use: Specific analysis.
Only for specialists for purposes of research and analysis.

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)

Eye Dam. 1; H318 Causes serious eye damage.

Repr. 1B; H360Df May damage the unborn child. Suspected of damaging fertility.

2.2 Label elements

Labelling (CLP)



Signal word: **Danger**

Hazard statements: H318

Causes serious eye damage.

H360Df

May damage the unborn child. Suspected of damaging fertility.



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Precautionary Statements:

- P201 Obtain special instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face 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.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER/doctor.
P501 Dispose of contents/container to hazardous or special waste collection point.

Special labelling

Text for labelling: 1-Ethylpyrrolidin-2-one. Restricted to professional users.

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition / information on ingredients

3.1 Substances

Chemical characterisation: C6 H11 N O

1-Ethylpyrrolidin-2-one, N-Ethyl-2-pyrrolidon $\geq 99,5\%$ - $\leq 99,9\%$

CAS-Number: 2687-91-4

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RTECS-Number: UY5769250

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information: If medical advice is needed, have product container or label at hand. Take off immediately all contaminated clothing. Obtain special instructions before use.
- In case of inhalation: Move victim to fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. Consult physician.
- 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. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage.



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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 spray jet, foam, extinguishing powder, 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

Combustible. The vapours of the product are heavier than air. In case of strong heating: Vapours can form explosive mixtures with air.

On heating or in case of fire toxic gases may form. In case of fire may be liberated: nitrogen oxides (NO_x), 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: -

Use water spray to cool unopened containers. Do not allow fire water to penetrate into surface or ground water. Contaminated fire-fighting water must be collected separately.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid exposure. Avoid contact with the substance. Do not breathe vapour/aerosol. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse. Keep unprotected people away.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. If necessary notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Final cleaning.

6.4 Reference to other sections

Refer additionally to section 8 and 13.



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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Do not breathe vapour/aerosol. Provide adequate ventilation, and local exhaust as needed. Take off immediately all contaminated clothing and wash it before reuse. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Work place should be equipped with a shower and an eye rinsing apparatus.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharge.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place. Keep container dry. Keep only in the original container. Store containers in upright position. Storage temperature 10 - 22 °C.

Protect from heat and direct sunlight.

Average shelf life of 24 months. In case of prolonged storage: discoloration

Hints on joint storage:

Do not store together with oxidizing agents, bases or strong acids.
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.

8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed.

Personal protection equipment

Occupational exposure controls

Respiratory protection: If vapours form, use respiratory protection.

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. If the concentration is exceeded, closed-circuit breathing apparatus must be used!

Hand protection:

Protective gloves according to EN 374.

Glove material: Butyl caoutchouc (butyl rubber) - 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:

Wear suitable protective clothing.



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General protection and hygiene measures:

Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Do not breathe vapour/aerosol. Wash hands before breaks and after work. Take off immediately all contaminated clothing and wash it before reuse. When using do not eat, drink or smoke. Work place should be equipped with a shower and an eye rinsing apparatus.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Form: liquid Colour: colourless up to yellow
Odour:	amine-like
Odour threshold:	No data available
pH value:	at 20 °C, 100 g/L: 8 - 9
Melting point/freezing point:	-75 °C (1 ATM)
Initial boiling point and boiling range:	212.5 °C (84/449/EEC, A.2)
Flash point/flash point range:	91 °C (DIN EN 22719; c.c.)
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit) at 85 °C: 1.30 Vol-% UEL (Upper Explosive Limit) at 126 °C: 7.70 Vol-%
Vapour pressure:	at 20 °C: < 100 Pa
Vapour density:	No data available
Density:	at 20 °C: 0.9974 g/mL (92/69/EEC, A.3)
Solubility:	soluble (organic solvents)
Water solubility:	at 23 °C: > 1000 g/L (soluble)
Partition coefficient: n-octanol/water:	at 23 °C: -0.2 log P(o/w) (84/449/EEC, A.8) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Auto-ignition temperature:	not self-igniting
Decomposition temperature:	30 - 500 °C (DSC; DIN 51007)
Viscosity, dynamic:	at 20 °C: 2.09 mPa*s (OECD 114) at 40 °C: 1.5 mPa*s (OECD 114)
Viscosity, kinematic:	at 20 °C: 2.1 mm ² *s (DIN 51562)
Explosive properties:	No data available
Oxidizing characteristics:	No data available

9.2 Other information

Ignition temperature:	245 °C (DIN 51794)
Molecular weight	113.16 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapours can form explosive mixtures with air.



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10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with strong bases and strong acids.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames.

10.5 Incompatible materials

Oxidizing agents, bases, strong acids.

10.6 Hazardous decomposition products

Nitrogen oxides (NO_x), carbon monoxide and carbon dioxide.

Thermal decomposition: 30 - 500 °C (DSC; DIN 51007)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: LD50 Rat, oral: 3200 mg/kg (OECD 401)
LD50 Rat, dermal: > 2000 mg/kg (OECD 402)
LC50 Rat, inhalative (Aerosol): > 5.1 mg/L/4h (OECD 403)

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met.
Acute toxicity (dermal): Based on available data, the classification criteria are not met.
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): Not an irritant (OECD 404).
Serious eye damage/irritation: Eye Dam. 1; H318 = Causes serious eye damage.
Specific symptoms in animal studies (Rabbit): Strongly irritant (OECD 405).
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 (OECD 429).
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: Repr. 1B; H360Df = May damage the unborn child. Suspected of damaging fertility.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): Lack of data.
Specific target organ toxicity (repeated exposure): Lack of data.
Aspiration hazard: Lack of data.

Symptoms

Narcotic effect possible. (dizziness or Fatigue)



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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No negative effects on water organisms.
Algae toxicity:
EC50 *Desmodesmus subspicatus*: > 101 mg/L/72h (OECD 201)
Daphnia toxicity:
EC50 *Daphnia magna*: > 104 mg/L/48h (OECD 202)
Bacterial toxicity:
EC50 *Pseudomonas putida*: > 1000 mg/L/16h (DIN 38412)
Fish toxicity:
LC50 *Danio rerio* (zebrafish): 446 - 999 mg/L/96h (OECD 203; ISO 7346; 84/449/EEC, C.1).

12.2 Persistence and degradability

Further details: Biodegradation:
90 - 100 % /28 d (OECD 301 A).
Product is readily biodegradable.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
at 23 °C: $-0.2 \log P(o/w)$ (84/449/EEC, A.8)
Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

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 05 06* = organic solvents, halogen-free
* = Evidence for disposal must be provided.

Recommendation: Send to a hazardous waste incinerator facility under observation of official regulations.

Contaminated packaging

Waste key number: 15 01 07 = Glass packaging.

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.



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SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:

not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:

not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

not applicable

14.5 Environmental hazards

Marine pollutant:

no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

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:

-

No data available

15.2 Chemical Safety Assessment

No data available



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SECTION 16: Other information

Further information

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
AS/NZS: Australian Standards/New Zealand Standards
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
log P(o/w): Partition coefficient: octanol/water
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
vPvB: Very persistent and very bioaccumulative

Reason of change: Changes in section 1.3: Department responsible for information

Date of first version: 19/8/2010

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.