Safety Data Sheet
AP-988 - P60641-NA

Safety Data Sheet dated 9/12/2018, version 3

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: AP-988

Other means of identification:

SDS code: P60641-NA

Recommended use of the chemical and restrictions on use

Recommended use:

Deoxidizer

Industrial uses

Professional uses

Restrictions on use:

No uses advised against are identified.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

Dysol Inc. - 791 Westport Parkway - Fort Worth, TX 76177 / Phone: 1-817-335-1826 / csr-na@socomore.com/ Fax Number: 817-335-2405

Distributor: SOCOMORE S.A.S. - Zone Industrielle du Prat - CS 23707 - 56037 VANNES CEDEX - France - Tel : +33 (0)2 97 43 76 83 - Fax : +33 (0)2 97 54 20 26

Distributor: Socomore Ltd - 5, Coe Avenue - Loughborough - Leicestershire - LE11 4SE - UK - Tel: +44 1509 262040 - Fax: +44 1509 262046

Distributor: Socomore Iberia - Calle Diputacio, 260 - 08007 Barcelona - Espana - Tel: +34 917 693 962 - Fax: +34 902 908 966

Distributor: MagChem Inc. 1271, rue Ampere, suite 101, Boucherville, QC, J4B 5Z5 Canada - Tel: 1-450 641 8500 - Fax: 1-450 655 1717

Distributor: Socomore GmbH - c/o MAZARS GmbH - Theodor-Stern-Kai 1 - 60596 Frankfurt am Main - Deutschland - Tel: +49 (0)89 20 70 28 83 - Fax: +49 (0) 89 88 91 98 16

Distributor: Socomore Trading Shangai - 355 East Kang Qiao Road - Kang Qiao Industrial Zone - Pudong - 201315 Shangai - Tel: 862158131133 - Fax: 862158131933

Dystrybutor : SOCOMORE SPzoo - Ul. Piekna 18, 00-549 Warszawa Polska - Tel : +48 608 454 114 - Fax : +48 (22) 621 61 09

Competent person responsible for the safety data sheet:

techdirsocomore@socomore.com

Emergency phone number

CHEMTEL: 1-800-255-3924 (USA) / CANUTEC: 1-613-996-6666 (CANADA)

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

Warning, Skin Irrit. 2, Causes skin irritation.

Warning, Eye Irrit. 2A, Causes serious eye irritation.

Warning, Skin Sens. 1, May cause an allergic skin reaction.

Label elements
Hazard pictograms:

Warning
Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
Precautionary statements:
P261 Avoid breathing spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves and eye/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with applicable regulations.
Special Provisions:
None
Hazards not otherwise classified identified during the classification process:
None
Ingredient(s) with unknown acute toxicity:
None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
N.A.
Mixtures
Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 25% - < 30% CITRIC ACID
CAS: 77-92-9, EC: 201-069-1

A.3/2A Eye Irrit. 2A H319

>= 12.5% - < 15% TRIAMMONIUM CITRATE
CAS: 3458-72-8, EC: 222-394-5

A.3/2A Eye Irrit. 2A H319

A.8/3 STOT SE 3 H335

A.2/2 Skin Irrit. 2 H315

>= 0.1% - < 0.25% 1,3-DIETHYL-2-THIOUREA
REACH No.: 01-2119974271-37, CAS: 105-55-5, EC: 203-308-5


A.1/4/Oral Acute Tox. 4 H302


A.4.2/1 Skin Sens. 1 H317


A.3/1 Eye Dam. 1 H318


A.8/3 STOT SE 3 H335

4. FIRST-AID MEASURES

Description of necessary measures
In case of skin contact:
Immediately take off all contaminated clothing.
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.
In case of eyes contact:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.
Protect uninjured eye.
In case of Ingestion:
Do not induce vomiting. Obtain a medical examination.
In case of Inhalation:
Remove casualty to fresh air and keep warm and at rest.
Most important symptoms/effects, acute and delayed
None
Indication of immediate medical attention and special treatment needed
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment:
No particular treatment.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Water.
Carbon dioxide (CO2).
Unsuitable extinguishing media:
None in particular.
Specific hazards arising from the chemical
Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
Hazardous combustion products:
None
Explosive properties: Not Relevant
Oxidizing properties: Not Relevant
Special protective equipment and precautions for fire-fighters
Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.
Remove all sources of ignition.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Remove persons to safety.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Do not use on extensive surface areas in premises where there are occupants.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
Storage temperature:
Store at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5

- OEL Type: National - TWA: 2.5 mg/m3 - Notes: France, INRS

DNEL Exposure Limit Values

1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5

Worker Industry: 0.14 mg/m3 - Consumer: 0.04 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Industry: 2.08 mg/kg - Consumer: 1.04 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 0.02 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

CITRIC ACID - CAS: 77-92-9

Target: Fresh Water - Value: 440 mg/l
Target: Freshwater sediments - Value: 34.6 mg/kg
Target: Marine water sediments - Value: 3.46 mg/kg
Target: Soil (agricultural) - Value: 33.1 mg/kg

1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5

Target: Fresh Water - Value: 0.056 mg/l
Target: Marine water - Value: 0.0056 mg/l
Target: Microorganisms in sewage treatments - Value: 0.2 mg/l
Target: Freshwater sediments - Value: 0.42 mg/kg dw

Target: Marine water sediments - Value: 0.042 mg/kg dw
Target: Soil (agricultural) - Value: 0.0511 mg/kg dw
Target: Water (intermittent discharge) - Value: 0.560 mg/l

Appropriate engineering controls:
None

Individual protection measures

Eye protection:
Face protection umbrella. Face protection shield. (EN 166)
Face protection shield.
Use close fitting safety goggles, don't use eye lens.

Protection for skin:
Chemical protection clothing. (type 3 - EN14605)
Chemical protection clothing. (type 6 - EN13034)

Protection for hands:
Suitable gloves type: NF EN374
NBR (nitrile rubber).
PVC (polyvinyl chloride).
NR (natural rubber, natural latex).
Butyl rubber (isobutylene-isoprene copolymer)

Respiratory protection:
Not needed for normal use.

Thermal Hazards:
None

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Value	Method:	Notes
Appearance and colour:	Clear Colourless liquid	--	--
Odour:	N.A.	--	--
Odour threshold:	N.A.	--	--
pH:	3	ISO 4316, ASTM E70	--
Melting point / freezing point:	Not Relevant	--	--
Initial boiling point and boiling range:	100°C / 212°F	--	--
Flash Point (°F):	N.A.	--	--
Flash point (°C):	Not Relevant	--	--
Evaporation rate:	Not Relevant	--	--
Solid/gas flammability:	Not Relevant	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	17.5 mmHg@20°C /68°F	--	--
Vapour density:	0.67	--	--
Relative density:	1	--	--
Solubility in water:	N.A.	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--

Auto-ignition temperature:	Not Relevant	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	Not Relevant	--	--
Oxidizing properties:	Not Relevant	--	--

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

10. STABILITY AND REACTIVITY

Reactivity
Stable under normal conditions
Chemical stability
Stable under normal conditions
Possibility of hazardous reactions
None
Conditions to avoid
Stable under normal conditions.
Incompatible materials
None in particular.
Hazardous decomposition products
None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Toxicological information of the product:
N.A.
Toxicological information of the main substances found in the product:
CITRIC ACID - CAS: 77-92-9
a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Oral - Species: Mouse = 5400 mg/kg
Test: LD50 - Route: Oral - Species: Rat = 3000 mg/kg
Test: LD50 - Route: Inhalation - Species: Rat = 725 mg/kg
Test: LD50 - Route: Inhalation - Species: Mouse = 940 mg/kg
i) STOT-repeated exposure:
Test: NOAEL - Route: Oral - Species: Rat = 1200 mg/kg - Notes: mg/kg/day, etude de toxicite chronique 2 ans
1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Mouse = 930 mg/kg
Test: LD50 - Route: Skin - Species: Rat = 2.000 mg/kg - Notes: OCDE (402)
i) STOT-repeated exposure:
Test: NOAEL - Route: Oral - Species: Rat < 6.25 mg/kg

Substance(s) listed on the NTP report on Carcinogens:
None.
Substance(s) listed on the IARC Monographs:
1,3-DIETHYL-2-THIOUREA - Group 3.
Substance(s) listed as OSHA Carcinogen(s):
None.
Substance(s) listed as NIOSH Carcinogen(s):
None.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Adopt good working practices, so that the product is not released into the environment.
CITRIC ACID - CAS: 77-92-9
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Daphnia = 1535 mg/l - Notes: Daphnia magna
Endpoint: LC50 - Species: Fish = 440 mg/l - Notes: Leuciscus idus
Endpoint: EC50 - Species: Daphnia = 120 mg/l
b) Aquatic chronic toxicity:
Endpoint: EC0 - Species: Algae = 425 mg/l - Notes: Scenedesmus quadricauda
c) Bacteria toxicity:
Endpoint: EC50 - Species: bacteria > 10000 mg/l - Notes: Pseudomonas putida
1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia = 56 mg/l - Duration h: 48 - Notes: Daphnia magna
Endpoint: LC50 - Species: Fish = 910 mg/l - Duration h: 96 - Notes: Brachydanio rerio
Endpoint: EC50 - Species: Algae = 310 mg/l - Duration h: 72 - Notes: Pseudokirchneriella subcapitata
b) Aquatic chronic toxicity:
Endpoint: NOEC - Species: Fish = 31.3 mg/l - Duration h: 1440 - Notes: Oncorhynchus mykiss
Endpoint: NOEC - Species: Algae = 73 mg/l - Duration h: 72 - Notes: Pseudokirchneriella subcapitata
c) Bacteria toxicity:
Endpoint: NOEC - Species: bacteria = 2 mg/l - Duration h: 672 - Notes: Boue activee
Persistence and degradability
CITRIC ACID - CAS: 77-92-9
Biodegradability: Readily biodegradable - Test: N.A. - Duration: 28 days - %: 97 - Notes: OCDE, 301B
Biodegradability: Readily biodegradable - Test: N.A. - Duration: 19 days - %: 100 - Notes: OCDE, 301E
Biodegradability: Biological oxygen demand (BOD) - Test: N.A. - Duration: N.A. - %: N.A. - Notes: 526 mg/g
Biodegradability: Chemical Oxygen Demand (COD) - Test: N.A. - Duration: N.A. - %: N.A. - Notes: 725 mg/g
TRIAMMONIUM CITRATE - CAS: 3458-72-8
Biodegradability: Biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes: N.A.
1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5
Biodegradability: Biodegradability rate - Test: N.A. - Duration: 28 days - %: 3 - Notes: N.A.
Bioaccumulative potential
1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5
Log Kow - Test: N.A. 0.57 - Duration: N.A. - Notes: N.A.

Mobility in soil
TRIAMMONIUM CITRATE - CAS: 3458-72-8
low-polluting - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.
1,3-DIETHYL-2-THIOUREA - CAS: 105-55-5
Surface tension - Test: N.A. 76,1 mN/m - Duration: N.A. - Notes: mg/l 21,5 °C /1.000 mg/l (OCDE, 115)
Other adverse effects
No harmful effects expected.

13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.

14. TRANSPORT INFORMATION

UN number
Not classified as dangerous in the meaning of transport regulations.
UN proper shipping name
N.A.
Transport hazard class(es)
N.A.
Packing group
N.A.
Environmental hazards
ADR-Enviromental Pollutant: No
IMDG-Marine pollutant: No
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)
N.A.

Special precautions
N.A.

15. REGULATORY INFORMATION

USA - Federal regulations
TSCA - Toxic Substances Control Act
TSCA inventory: all the components are listed on the TSCA inventory.
TSCA listed substances:
CITRIC ACID is listed in TSCA Section 8b
TRIAMMONIUM CITRATE is listed in TSCA Section 8b
1,3-DIETHYL-2-THIOUREA is listed in TSCA Section 8b.
SARA - Superfund Amendments and Reauthorization Act
Section 302 - Extremely Hazardous Substances: no substances listed.
Section 304 - Hazardous substances: no substances listed.
Section 313 - Toxic chemical list: no substances listed.
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
No substances listed.
CAA - Clean Air Act
CAA listed substances:
CITRIC ACID is listed in CAA Section 111.
CWA - Clean Water Act
CWA listed substances:
None.

USA - State specific regulations
California Proposition 65
Substance(s) listed under California Proposition 65:
None.
Massachusetts Right to know
Substance(s) listed under Massachusetts Right to know:
1,3-DIETHYL-2-THIOUREA.
New Jersey Right to know
Substance(s) listed under New Jersey Right to know:
No substances listed.
Pennsylvania Right to know
Substance(s) listed under Pennsylvania Right to know:
No substances listed.
The following substance(s) in this product has/have an identification by CAS number either in countries not affected by the REACH regulation or in regulations not yet updated to reflect the new naming convention for hydrocarbon solvents:

16. OTHER INFORMATION

Full text of phrases referred to in Section 3:
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H315 Causes skin irritation.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

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Disclaimer:
The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.
This Safety Data Sheet cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.

INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average