

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.12.2018

Version number 1

Revision: 06.09.2018

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

- **1.1 Product identifier**
- **Trade name:** *AGITAN® DF 6420*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Defoamers, Anti-foaming agent*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*MÜNZING CHEMIE GmbH
Münzingstrasse 2
74232 Abstatt, Germany
E-Mail: info@munzing.com
Tel.: +49 7131 987-100*
- **Further information obtainable from:**
*Product Safety Department
E-mail (MSDS): msds@munzing.com*
- **1.4 Emergency telephone number:** *For Chemical Emergencies: CHEMTREC: +1 703 741 5970*

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
*Flam. Liq. 3 H226 Flammable liquid and vapour.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Dam. 1 H318 Causes serious eye damage.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.*

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
*cyclohexanone
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics*
- **Hazard statements**
*H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H304 May be fatal if swallowed and enters airways.*
- **Precautionary statements**
*P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see on this label).
P331 Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

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P362+P364 *Take off contaminated clothing and wash it before reuse.*
P405 *Store locked up.*
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** None.
- **vPvB:** None.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

EC number: 926-141-6 Reg.nr.: 01-2119456620-43	Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics Asp. Tox. 1, H304	50-75%
CAS: 108-94-1 EINECS: 203-631-1 Reg.nr.: 01-2119453616-35	cyclohexanone Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	20-50%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Take affected persons into fresh air and keep quiet.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** Can form explosive gas-air mixtures.

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- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Keep away from ignition sources.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Fumes can combine with air to form an explosive mixture.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 108-94-1 cyclohexanone

WEL Short-term value: 82 mg/m³, 20 ppm
Long-term value: 41 mg/m³, 10 ppm
Sk, BMGV

· **DNELs**

CAS: 108-94-1 cyclohexanone

Oral	consumer, long-term exposure, systemic effects	5 mg/kg bw/day (human)
Dermal	worker, long-term exposure, systemic effects	10 mg/kg bw/day (human)
	consumer, long-term exposure, systemic effects	20 mg/kg bw/day (human)
Inhalative	worker, long-term exposure, systemic effects	100 mg/m ³ (human)
	worker, short-term exposure, local effects	100 mg/m ³ (human)
	consumer, long-term exposure, systemic effects	20 mg/m ³ (human)
	consumer, short-term exposure, local effects	50 mg/m ³ (human)

· **PNECs**

CAS: 108-94-1 cyclohexanone

fresh water	0.0329 mg/l (not specified)
marine water	0.00329 mg/l (not specified)
aqua - intermittent release	0.329 mg/l (not specified)
soil	0.0143 mg/kg (not specified)
sediment (fresh water)	0.0951 mg/kg (not specified)
sewage treatment plant	10 mg/l (not specified)

· **Ingredients with biological limit values:**

CAS: 108-94-1 cyclohexanone

BMGV 2 mmol/mol creatinine
Medium: urine
Sampling time: post shift
Parameter: cyclohexanol

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.5 mm

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Neoprene gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed goggles

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid
Colour: Colourless

· **Odour:** Solvent-like

· **Odour threshold:** Not determined.

· **pH-value (20 g/l) at 20 °C:** ≈ 6.5 (DIN ISO 976)

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: > 150 °C

· **Flash point:** ≈ 45 °C (DIN EN ISO 2719)

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower: ≈ 0.6 Vol % (01-2119456620-43)

Upper: ≈ 9.4 Vol % (01-2119453616-35)

· **Oxidising properties** None.

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** ≈ 0.84 g/cm³ (DIN EN ISO 2811-1)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Insoluble.

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- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
 Kinematic at 40 °C: < 7 mm²/s (DIN EN ISO 51562)
- **Solvent separation test:** Not determined
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Flammable vapour-air mixtures may develop if stored in large receptacles and above room temperature.
Can react violently with oxygen rich (oxidising) material. Danger of Explosion.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)

CAS: 108-94-1 cyclohexanone

Oral	LD50	1,620 mg/kg (rat)
Dermal	LD50	1,100 mg/kg (rabbit)
Inhalative	LC50/4h	11 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics

LL0 1,000 mg/l (fish) (*Oncorhynchus mykiss* / 96 h)

EL0 1,000 mg/l (alga) (green alga / 72 h)

1,000 mg/l (daphnia) (*Daphnia magna* / 48 h)

CAS: 108-94-1 cyclohexanone

EC50 32.9 mg/l (alga) (*Chlamydomonas reinhardtii* / 72 h)

820 mg/l (daphnia) (*Daphnia magna* / 48 h)

LC50 >500 mg/l (fish) (*Pimephales promelas* / 96 h)

· **12.2 Persistence and degradability** biodegradable

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Behaviour in sewage processing plants:**

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

· **Additional ecological information:**

· **General notes:**

Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage of the environment is unlikely.

According to the criteria of the EU-classification and labelling "dangerous for environment"(93/21/EWG) the substance/ the product has to be classified as non-hazardous for the environment.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

16 03 05* organic wastes containing dangerous substances

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

· 14.1 UN-Number · ADR/RID/ADN, IMDG, IATA	UN1993
· 14.2 UN proper shipping name · ADR/RID/ADN · IMDG, IATA	1993 FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANONE) FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANONE)
· 14.3 Transport hazard class(es) · ADR/RID/ADN, IMDG, IATA	 · Class 3 Flammable liquids. · Label 3
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Flammable liquids. 30 F-E, S-E A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN · Limited quantities (LQ) · Transport category · Tunnel restriction code	5L 3 D/E
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANONE), 3, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Information about limitation of use:
Employment restrictions concerning juveniles must be observed.

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Employment restrictions concerning pregnant and lactating women must be observed.

- **Waterhazard class:** Water hazard class 1 (German AwSV, Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations**
The restrictions in marketing and using of nonylphenol ethoxylates mentioned in REACH, Annex XVII and the regulation 689/2008/EC concerning the export and import of dangerous chemicals have to be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.

· **Department issuing SDS:**

Product Safety Department
E-Mail: msds@munzing.com

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Asp. Tox. 1: Aspiration hazard – Category 1