

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830



Article No.: 34501400
Print date: 14.10.2019
Version: 1.0

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

1.1. **Product identifier**

Trade name/designation Empire Clean

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

Relevant identified uses:
cleaner for textiles and shoes

1.3. **Details of the supplier of the safety data sheet**

supplier (manufacturer/importer/downstream user/distributor)

Nanogate Textile & Care Systems GmbH
Zum Schacht 3
D-66287 Göttingen

Telephone: +49 - (0)6825 / 9591 - 0
Telefax: +49 - (0)6825 / 9591 - 852
E-mail info@nanogate.com

Dept. responsible for information:

E-mail (competent person) msds@nanogate.com

1.4. **Emergency telephone number**

111 (England, Wales, Scotland)

SECTION 2: Hazards identification

2.1. **Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Aerosol 2 / H229

Aerosol

Pressurised container: May burst if heated.

Aerosol 1 / H222

Aerosol

Extremely flammable aerosol.

2.2. **Label elements**

The product is classified and labelled according to EC directives or corresponding national laws.

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Danger

Hazard statements

H229 Pressurised container: May burst if heated.

H222 Extremely flammable aerosol.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P260 Do not breathe aerosol.

P271 Use only outdoors or in a well-ventilated area.

Hazard components for labelling

not applicable

Supplemental Hazard information (EU)

not applicable

2.3. **Other hazards**

No information available.

SECTION 3: Composition / information on ingredients

3.2. **Mixtures**

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Hazardous ingredients

Classification according to Regulation (EC) No 1272/2008 [CLP]

EC No. CAS No. INDEX No.	REACH No. Designation classification: // Remark	Wt %
204-065-8 115-10-6 603-019-00-8	01-2119472128-37-xxxx dimethyl ether compressed gas H280 / Flam. Gas 1 H220	10 < 12,5
203-448-7 106-97-8 601-004-00-0	01-2119474691-32 butane compressed gas H280 / Flam. Gas 1 H220	7 < 10
200-857-2 75-28-5 601-004-00-0	01-2119485395-27 isobutane compressed gas H280 / Flam. Gas 1 H220	1 < 3

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3. Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

strong water jet

5.2. Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters

Provide a conveniently located respiratory protective device. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions

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Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

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). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use. Read label before use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

dimethyl ether

INDEX No. 603-019-00-8 / EC No. 204-065-8 / CAS No. 115-10-6

WEL, TWA: 766 mg/m³; 400 ppm

WEL, STEL: 958 mg/m³; 500 ppm

butane

INDEX No. 601-004-00-0 / EC No. 203-448-7 / CAS No. 106-97-8

WEL, TWA: 1450 mg/m³; 600 ppm

WEL, STEL: 1810 mg/m³; 750 ppm

Recommended Respiratory protection: Respiratory protective device with half mask filter material type A. The standards EN 136, 140 and 405 of the European Commission for Standardization (CEN) make recommendations to respirators, the standards EN 149 and EN 143 provide recommendations to respiratory filters.

Additional information

TWA : long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

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8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: nitrile rubber or butyl rubber with at least 0.7 mm thickness

Thickness of the glove material $\geq 0,7$ mm

Breakthrough time (maximum wearing time) > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Wear closely fitting protective glasses in case of splashes.,

Body protection

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical state: Liquid
Colour: colourless

Odour: after mild fragrance

Odour threshold: not determined

pH at 20 °C: 5
Method: DIN 19268

Melting point/freezing point: not determined

Initial boiling point and boiling range: -24 °C
Source: dimethyl ether

Flash point: = -60 °C
Method: DIN 51755 part 1

Evaporation rate: not determined

flammability

Burning time (s): not determined

Upper/lower flammability or explosive limits:

Lower explosion limit: 1,42 Vol-%
Upper explosion limit: 18,6 Vol-%
Source: dimethyl ether

Vapour pressure at 20 °C: 735,717 mbar

Vapour density: not determined

Relative density:

Density at 20 °C: 0,89 g/cm³
Method: DIN EN ISO 15212-1

Solubility(ies):

Water solubility (g/L) at 20 °C: not determined

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Partition coefficient: n-octanol/water:	see section 12
Auto-ignition temperature:	235 °C Source: dimethyl ether
Decomposition temperature:	not determined
Viscosity at 20 °C:	< 10 mPa*s Method: DIN 53019
Explosive properties:	not applicable
Oxidising properties:	not applicable

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. Incompatible materials

not applicable

10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation; Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

2-methyl-2H-isothiazol-3-one

Skin, Guinea pig: ; evaluation sensitising

Method: OECD 406

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Based on available data, the classification criteria are not met.

STOT-single exposure; STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Remark

There is no information available on the preparation itself .

SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

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12.1. Toxicity

2-methyl-2H-isothiazol-3-one

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 6 mg/l (96 h)

Method: OECD 203

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 1,68 mg/l (48 h)

Method: OECD 202

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 0,157 mg/l (72 h)

Method: OECD 201

Long-term Ecotoxicity

2-methyl-2H-isothiazol-3-one

Fish toxicity, NOEC, Pimephales promelas (fathead minnow): 2,38 mg/l (28 d)

Method: OECD 210

Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 0,55 mg/l (21 d)

Method: OECD 211

Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 0,03 mg/l (72 h)

Method: OECD 201

12.2. Persistence and degradability

2-methyl-2H-isothiazol-3-one

Biodegradation: 4,1 d ; evaluation Product is biodegradable.

Method: OECD 309

12.3. Bioaccumulative potential

2-methyl-2H-isothiazol-3-one

Partition coefficient: n-octanol/water: -0,32 ; evaluation Does not accumulate in organisms.

Method: OECD 117

Bioconcentration factor (BCF)

2-methyl-2H-isothiazol-3-one

Bioconcentration factor (BCF), calculated.: 3,16

Method: literature value

12.4. Mobility in soil

2-methyl-2H-isothiazol-3-one

Activated sludge, Activated sludge, EC20: 2,8 mg/l (3 h)

Method: DIN 38412

Activated sludge, Activated sludge, EC50: 34,6 mg/l (3 h)

Method: DIN 38412

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product

Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

List of proposed waste codes/waste designations in accordance with EWC

150110* packaging containing residues of or contaminated by dangerous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package

Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number

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UN 1950

14.2. UN proper shipping name

Land transport (ADR/RID): Aerosols, flammable
Sea transport (IMDG): AEROSOLS
Air transport (ICAO-TI / IATA-DGR): Aerosols, flammable

14.3. Transport hazard class(es)

2.1

14.4. Packing group

not applicable

14.5. Environmental hazards

Land transport (ADR/RID) not applicable
Marine pollutant not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

tunnel restriction code D

Sea transport (IMDG)

EmS-No. F-D, S-U

Air transport (ICAO-TI / IATA-DGR)

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

VOC Switzerland:

weight fraction in %: 20,00

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Full text of classification in section 3:

compressed gas / H280	Gases under pressure	Contains gas under pressure; may explode if heated.
Flam. Gas 1 / H220	flammable gases	Extremely flammable gas.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Aerosol 2	Aerosol	On basis of test data.
Aerosol 1	Aerosol	On basis of test data.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging

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CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, 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
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Further information

Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.