## Safety Data Sheet dated 6/3/2018, version 3

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

1.1. Product identifier

Mixture identification:

Trade name: MULTINET SPRAY 400ml
V60-17-0012

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

Recommended use:

PRODUCTS FOR AIR CONDITIONING SYSTEMS

Uses advised against:

do not use on humans and animals

1.3. Details of the supplier of the safety data sheet

Company:

VIEROL AG, Karlstraße 19, D-26123 Oldenburg

Tel. n. +49 (0)441 – 210 20 - 0

Competent person responsible for the safety data sheet:

info@vierol.de

1.4. Emergency telephone number

Giftinformationszentrum Nord (Göttingen) + 49 (0)551/19240

## SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

Danger, Aerosols 1, Extremely flammable aerosol. Pressurized container: may burst if heated.

Warning, STOT SE 3, May cause drowsiness or dizziness.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Danger

Hazard statements:

H222+H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

H336 May cause drowsiness or dizziness.

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.

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

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

Contains

Naphtha (petroleum) hydrotreated heavy

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

section 10.3

## SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

| Qty | Name | Ident. Number | | Classification |
|---|---|---|---|---|
| >= 60% - < 70% | Naphtha (petroleum) hydrotreated heavy | CAS:<br>EC: | 64742-48-9<br>919-857-5 | 2.6/3 Flam. Liq. 3 H226<br>3.8/3 STOT SE 3 H336<br>3.10/1 Asp. Tox. 1 H304 |
| >= 30% - < 40% | GPL | CAS:<br>EC:<br>REACH No.: | 68476-40-4<br>270-681-9<br>01-2119486557-22-XXXX | 2.5/C Compr. Gas H280<br>2.2/1 Flam. Gas 1 H220<br>DECLK (CLP)* |
| >= 3% - < 5% | 1,2-dichloropropane; propylene dichloride | Index number:<br>CAS:<br>EC: | 602-020-00-0<br>78-87-5<br>201-152-2 | 2.6/2 Flam. Liq. 2 H225<br>3.1/4/Oral Acute Tox. 4 H302<br>3.1/4/Inhal Acute Tox. 4 H332 |

## SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed
For symptoms and effects due to the contained substances see chapter 11
4.3. Indication of any 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:
Follow the doctor's instructions.

## SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
CO2 or Dry chemical fire extinguisher.
Extinguishing media which must not be used for safety reasons:
Water jets.
5.2. Special hazards arising from the substance or mixture
Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
5.3. Advice for firefighters
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.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under point 7 and 8.
6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand
6.3. Methods and material for containment and cleaning up
Wash with plenty of water.
6.4. Reference to other sections
See also section 8 and 13

## SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
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.
7.2. Conditions for safe storage, including any incompatibilities
store in a cool, well ventilated place, away from heat, flames, sparks or other sources of ignition
keep only in the original container away from sunlight neighborhoods
avoid contact with skin and eyes, inhalation of vapours/mists/dusts.

do not use empty containers before they are cleaned.
contaminated clothing must be replaced before entering the dining areas.
at work do not eat or drink.
do not smoke
avoid the accumulation of electrostatic charges.
Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Cool and adequately ventilated.

7.3. Specific end use(s)
surface degreasing agent

## SECTION 8: Exposure controls/personal protection

8.1. Control parameters
1,2-dichloropropane; propylene dichloride - CAS: 78-87-5
ACGIH - TWA(8h): 10 ppm - Notes: DSEN, A4 - URT irr, body weight eff
DNEL Exposure Limit Values
Naphtha (petroleum) hydrotreated heavy - CAS: 64742-48-9
Worker Professional: 208 mg/kg/d - Consumer: 125 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term (repeated)
Worker Professional: 871 mg/kg/d - Consumer: 185 mg/kg/d - Exposure: Human Inhalation - Frequency: Long Term (repeated)
Consumer: 125 mg/kg/d - Exposure: Human Oral - Frequency: Long Term (repeated)
PNEC Exposure Limit Values
N.A.
8.2. Exposure controls
Eye protection:
Not needed for normal use. Anyway, operate according good working practices.
Protection for skin:
No special precaution must be adopted for normal use.
Protection for hands:
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.
Respiratory protection:
Use adequate protective respiratory equipment.
Thermal Hazards:
Do not expose to temperatures exceeding 50° c.
Environmental exposure controls:
None
Appropriate engineering controls:
None

## SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Properties | Value | Method: | Notes: |
|---|---|---|---|
| Appearance and colour: | Spray can | -- | -- |
| Odour: | of solvent | -- | -- |
| Odour threshold: | Not Relevant | -- | -- |

| | | | |
|---|---|---|---|
| pH: | Not Relevant | -- | -- |
| Melting point / freezing point: | <-20°C liqiuid phase | -- | -- |
| Initial boiling point and boiling range: | >200°C liquid phase | -- | -- |
| Flash point: | < 0 ° C aerosol | -- | -- |
| Evaporation rate: | Not Relevant | -- | -- |
| Solid/gas flammability: | Not Relevant | -- | -- |
| Upper/lower flammability or explosive limits: | Not Relevant | -- | -- |
| Vapour pressure: | 4 bar +/- | -- | -- |
| Vapour density: | >2 | -- | -- |
| Relative density: | 0.790 kg/l +/- 0.05 | -- | -- |
| Solubility in water: | undissolvable | -- | -- |
| Solubility in oil: | complete | -- | -- |
| Partition coefficient (n-octanol/water): | Not Relevant | -- | -- |
| Auto-ignition temperature: | 400° C gas | -- | -- |
| Decomposition temperature: | Not Relevant | -- | -- |
| Viscosity: | Not Relevant | -- | -- |
| Explosive properties: | section 10.3 | -- | -- |
| Oxidizing properties: | Not Relevant | -- | -- |

9.2. Other information

| **Properties** | **Value** | **Method:** | **Notes:** |
|---|---|---|---|
| kinematic viscosity: | kv > 2,05 mm2/s (a 40°C) | -- | -- |
| Miscibility: | Not Relevant | -- | -- |
| Fat Solubility: | complete | -- | -- |
| Conductivity: | Not Relevant | -- | -- |
| Substance Groups relevant properties | Not Relevant | -- | -- |

## SECTION 10: Stability and reactivity

10.1. Reactivity
avoid contact with strong acids and bases and oxidizing agents.
10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
may form explosive vapor / air mixtures in places not well ventilated
avoid mixing the product with strong oxidizers and strong acids
10.4. Conditions to avoid
avoid the accumulation of electrostatic charges.
keep away from heat, sources of ignition
10.5. Incompatible materials
oxidizing agents
strong acids and flammable liquids
10.6. Hazardous decomposition products

the product is flammable, following combustion can lead to the formation of dangerous decomposition products
gas can be formed by thermal decomposition of hydrogen chloride, phosgene, chlorine
by thermal decomposition can rid COx

## SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

Naphtha (petroleum) hydrotreated heavy - CAS: 64742-48-9

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 4951 mg/m3
Test: LD50 - Route: Oral - Species: Rat > 15000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg
Test: NOAEL - Route: Oral - Species: Rat > 30000 Ppm

g) reproductive toxicity:

Test: NOAEL - Species: Rat > 5220 mg/m3

GPL - CAS: 68476-40-4

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 658 mg/l

1,2-dichloropropane; propylene dichloride - CAS: 78-87-5

LD50 (RABBIT) SKIN: 8750 MG/KG

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

## SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Naphtha (petroleum) hydrotreated heavy - CAS: 64742-48-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 1000 mg/l - Duration h: 24
Endpoint: EC50 - Species: Daphnia > 1000 mg/l - Duration h: 24
Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 72

GPL - CAS: 68476-40-4

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish Negative 19 mg/l - Duration h: 96
Endpoint: LC50 - Species: Daphnia Negative 14.2 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae Negative 7.7 mg/l - Duration h: 96

12.2. Persistence and degradability

None
N.A.

12.3. Bioaccumulative potential
N.A.
12.4. Mobility in soil
N.A.
12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
12.6. Other adverse effects
None

## SECTION 13: Disposal considerations

13.1. Waste treatment methods
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.
Additional disposal information:
contaminated packaging should be sent for recovery or disposal in compliance with national regulations on waste management
reuse if possible. Product residues are to be considered hazardous waste. disposal must be entrusted to authorised waste management, in compliance with national and, where appropriate, local.

## SECTION 14: Transport information

14.1. UN number

| | |
|---|---|
| ADR-UN number: | 1950 |
| IATA-Un number: | 1950 |
| IMDG-Un number: | 1950 |

14.2. UN proper shipping name
14.3. Transport hazard class(es)

| | |
|---|---|
| ADR-Class: | 2.5°F CAP. 2.2.2.1.6 UN1950 |
| IATA-Class: | 2.1 |
| IMDG-Class: | 2 Aerosols UN 1950 |

14.4. Packing group
14.5. Environmental hazards

| | |
|---|---|
| Marine pollutant: | No |

14.6. Special precautions for user

| | |
|---|---|
| IMDG-Page: | 2102 |

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No

## SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: P3a

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

## SECTION 16: Other information

Text of phrases referred to under heading 3:

H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
H280 Contains gas under pressure; may explode if heated.
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H332 Harmful if inhaled.

| **Hazard class and hazard category** | **Code** | **Description** |
|---|---|---|
| Flam. Gas 1 | 2.2/1 | Flammable gas, Category 1 |
| Aerosols 1 | 2.3/1 | Aerosol, Category 1 |
| Compr. Gas | 2.5/C | Compressed gas |
| Flam. Liq. 2 | 2.6/2 | Flammable liquid, Category 2 |
| Flam. Liq. 3 | 2.6/3 | Flammable liquid, Category 3 |
| Acute Tox. 4 | 3.1/4/Inhal | Acute toxicity (inhalation), Category 4 |
| Acute Tox. 4 | 3.1/4/Oral | Acute toxicity (oral), Category 4 |
| Asp. Tox. 1 | 3.10/1 | Aspiration hazard, Category 1 |
| STOT SE 3 | 3.8/3 | Specific target organ toxicity - single exposure, Category 3 |

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking
SECTION 2: Hazards identification
SECTION 3: Composition/information on ingredients
SECTION 4: First aid measures
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 9: Physical and chemical properties
SECTION 10: Stability and reactivity
SECTION 11: Toxicological information
SECTION 12: Ecological information
SECTION 13: Disposal considerations
SECTION 14: Transport information
SECTION 15: Regulatory information
SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| **Classification according to Regulation (EC) Nr. 1272/2008** | **Classification procedure** |
|---|---|
| Aerosols 1, H222+H229 | On basis of test data |
| STOT SE 3, H336 | Calculation method |

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

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.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS 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. |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| 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. |
| 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 |
| WGK: | German Water Hazard Class. |