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Version 4.3

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

### 1.1. product identifiers

Article No. (manufacturer/supplier): Verdünner VC

Identification of the substance or mixture

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

Relevant identified uses:

Printing aid

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

supplier (manufacturer/importer/downstream user/distributor)

TECA-PRINT AG

Bohlstrasse 17

8240 Thayngen

Schweiz

Telephone: +41 52 645 20 00

Telefax: +41 52 645 21 01

Dept. responsible for information:

E-mail

[info@teca-print.com](mailto:info@teca-print.com)

Further information obtainable from: Product safety department

### 1.4. Emergency telephone number: Tox Center Zürich: 0041 - 44 251 51 51

## 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].

Flam. Liq. 3 / H226

Flammable liquids

Flammable liquid and vapour.

Skin Irrit. 2 / H315

skin corrosion/irritation

Causes skin irritation.

Eye Dam. 1 / H318

Serious eye damage/eye irritation

Causes serious eye damage.

STOT SE 3 / H336

Specific target organ toxicity (single exposure)

May cause drowsiness or dizziness.

### 2.2. Label elements

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

Hazard pictograms



Danger

Hazard statements

H226

Flammable liquid and vapour.

H315

Causes skin irritation.

H318

Causes serious eye damage.

H336

May cause drowsiness or dizziness.

Precautionary statements

P210

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

P280

Wear protective gloves and eye/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.

P310

Immediately call a POISON CENTER or doctor/ physician.

P370 + P378

In case of fire, use sand, extinguishing powder or alcohol resistant foam.

P403 + P233

Store in a well-ventilated place. Keep container tightly closed.

contains:

Cyclohexanone

2-ethoxy-1-methylethyl acetate

Supplemental Hazard information (EU)

not applicable

### 2.3. Other hazards

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### SECTION 3: Composition / information on ingredients

#### 3.2. Mixtures

##### Product description / chemical characterization

**Description** Organic solvent or solvent mixture

##### Hazardous ingredients

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

EC No.	REACH No.	Wt %
CAS No.	Chemical name	
INDEX No.	classification: // Remark	
259-370-9	01-2119475116-39-XXXX	
54839-24-6	2-ethoxy-1-methylethyl acetate	50 - 100
603-177-00-8	Flam. Liq. 3 H226 / STOT SE 3 H336	
203-631-1	01-2119453616-35-XXXX	
108-94-1	Cyclohexanone	20 - 25
606-010-00-7	Flam. Liq. 3 H226 / Acute Tox. 4 H302 / Acute Tox. 4 H312 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Dam. 1 H318	
203-603-9	01-2119475791-29-XXXX	
108-65-6	2-methoxy-1-methylethyl acetate	15 - 20
607-195-00-7	Flam. Liq. 3 H226	

##### 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

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media:

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

##### Extinguishing media which must not be used for safety reasons:

strong water jet

#### 5.2. Special hazards arising from the substance or mixture

Inhaling hazardous decomposing products can cause serious health damage.

#### 5.3. Advice for firefighters

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

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## 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

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. 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.

#### Precautions against fire and explosion:

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 (TRBS 2153)".

#### 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 5 °C and 35 °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.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limit values

Cyclohexanone

INDEX No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1

WEL, TWA: 41 mg/m<sup>3</sup>; 10 ppm

WEL, STEL: 82 mg/m<sup>3</sup>; 20 ppm

BMGV, TWA: 2 mmol/mol creatinine

Remark: cyclohexano; urine; end of exposure or end of shift

2-methoxy-1-methylethyl acetate

INDEX No. 607-195-00-7 / EC No. 203-603-9 / CAS No. 108-65-6

WEL, TWA: 274 mg/m<sup>3</sup>; 50 ppm

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WEL, STEL: 548 mg/m<sup>3</sup>; 100 ppm

#### **Additional information**

TWA : long-term occupational exposure limit value  
STEL : short-term occupational exposure limit value  
Ceiling : peak limitation

#### **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.

#### **Occupational exposure controls**

##### **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: Butyl caoutchouc (butyl rubber)

Thickness of the glove material > 0,4 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 EN ISO 374

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

##### **Eye protection**

Wear closely fitting protective glasses in case of splashes.

##### **Protective clothing**

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 chapter 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:** refer to label

**Odour:** characteristic

**Odour threshold:** not determined

**pH at 20 °C::** not applicable

**Melting point/freezing point:** not determined

**Initial boiling point and boiling range:** 145 °C

**Flash point:** 44 °C

**Evaporation rate:** not determined

##### **Flammability (solid, gas):**

**Burning time (s):** not applicable

##### **Upper/lower flammability or explosive limits:**

**Lower explosion limit:** 1 Vol-%

**Upper explosion limit:** 10,8 Vol-%

**Vapour pressure at 20 °C::** 5 mbar

**Vapour density:** not determined

##### **Relative density:**

**Density at 20 °C::** 0,95 g/cm<sup>3</sup>

##### **Solubility(ies):**

**Water solubility (g/L) at 20 °C::** partially soluble

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<b>Partition coefficient: n-octanol/water:</b>	<b>see section 12</b>
<b>Ignition temperature in °C</b>	<b>315 °C</b>
<b>Decomposition temperature:</b>	<b>not applicable</b>
<b>Viscosity at 20 °C::</b>	<b>11 s 4 mm</b> Method: DIN 53211
<b>Explosive properties:</b>	<b>not applicable</b>
<b>Oxidising properties:</b>	<b>not applicable</b>
<b>9.2. Other information</b>	
<b>Solid content (%):</b>	<b>0 Wt %</b>
<b>solvent content:</b>	
<b>Organic solvents:</b>	<b>100 Wt %</b>
<b>Water:</b>	<b>0 Wt %</b>
<b>Solvent separation test (%):</b>	<b>&lt; 3 Wt % (ADR/RID)</b>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not applicable.

### 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]  
No data on preparation itself available.

### 11.1. Information on toxicological effects

#### Acute toxicity

Toxicological data are not available.

#### skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye damage.

#### Respiratory or skin sensitisation

Toxicological data are not available.

#### Specific target organ toxicity

May cause drowsiness or dizziness.

:

#### Aspiration hazard

Toxicological data are not available.

#### Practical experience/human evidence

Other observations:

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are:

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headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

**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.

**SECTION 12: Ecological information**

**overall evaluation**

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

There is no information available on the preparation itself .

Do not allow to enter into surface water or drains.

**12.1. Toxicity**

Toxicological data are not available.

**12.2. Persistence and degradability**

Toxicological data are not available.

**12.3. Bioaccumulative potential**

Toxicological data are not available.

**12.4. Mobility in soil**

Toxicological data are not available.

**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**

**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**

140603\* other solvents and solvent mixtures

**packaging**

**Recommendation**

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

**SECTION 14: Transport information**

**14.1. UN number**

UN 1263

**14.2. UN proper shipping name**

Land transport (ADR/RID):

Paint related material

Sea transport (IMDG):

PAINT RELATED MATERIAL

Air transport (ICAO-TI / IATA-DGR):

Paint related material

**14.3. Transport hazard class(es)**

3

**14.4. Packing group**

III

**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

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### Further information

#### Land transport (ADR/RID)

tunnel restriction code D/E

#### Sea transport (IMDG)

EmS-No. F-E, S-E

#### 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

##### Directive 2010/75/EU on industrial emissions

VOC-value (in g/L): 947,582

##### 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).

##### Other regulations, restrictions and prohibition regulations

HMIS-Code: 1-2-0-C

#### 15.2. Chemical Safety Assessment

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

### SECTION 16: Other information

#### Full text of classification in section 3:

Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
STOT SE 3 / H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.
Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.

#### Remark

n.a. = not applicable

#### 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 chapter 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.

\* Data changed compared with the previous version