

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

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

### 1.1 Product identifier

Trade name: **Lettering Colours White**

Article number: 11418

### 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

Lacquer

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

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH  
Lechstrasse 28  
D 90451 Nürnberg

Tel. +49(0)911-642960  
Fax. +49(0)911-644456  
e-mail info@akemi.de

Further information obtainable from:

Laboratory

### 1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH  
Tel. +49(0)911-64296-59  
Reachable during the following office hours:  
Monday – Thursday from 07:30 a.m. to 16:30 p.m.  
Friday from 07:30 a.m. to 13:30 p.m.  
+44 (171) 635 91 91  
National Poison Inform. Centre  
Medical Toxicology Unit  
Avalonley Road  
London SE14 5ER

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.  
STOT SE 3 H336 May cause drowsiness or dizziness.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02 GHS07

Signal word

Danger

Hazard-determining components of labelling:

acetone  
n-butyl acetate  
2-methoxy-1-methylethyl acetate

Hazard statements

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

(Contd. on page 2)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 1)

<ul style="list-style-type: none"> <li>· <u>Precautionary statements</u></li> </ul>	H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. 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. P261 Avoid breathing spray. P280 Wear protective gloves / eye 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. P312 Call a POISON CENTER/doctor if you feel unwell. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
<ul style="list-style-type: none"> <li>· <u>Additional information:</u></li> </ul>	EUH066 Repeated exposure may cause skin dryness or cracking. Buildup of explosive mixtures possible without sufficient ventilation.
<ul style="list-style-type: none"> <li>· <b>2.3 Other hazards</b></li> <li>· <u>Results of PBT and vPvB assessment</u></li> <li>· <u>PBT:</u> Not applicable.</li> <li>· <u>vPvB:</u> Not applicable.</li> </ul>	

### SECTION 3: Composition/information on ingredients

#### · 3.2 Chemical characterisation: Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

#### · Dangerous components:

CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8 Reg.nr.: 01-2119471330-49	acetone ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	25-50%
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8 Reg.nr.: 01-2119472128-37	dimethyl ether ⚠ Flam. Gas 1, H220; Flam. Liq. 1, H224 Press. Gas (Comp.), H280	12.5-25%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21	propane ⚠ Flam. Gas 1, H220 Press. Gas (Comp.), H280	<12.5%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32	butane ⚠ Flam. Gas 1, H220; Flam. Liq. 1, H224 Press. Gas (Comp.), H280	<10%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate ⚠ Flam. Liq. 3, H226 ⚠ STOT SE 3, H336	<10%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-211947591-29	2-methoxy-1-methylethyl acetate ⚠ Flam. Liq. 3, H226 ⚠ STOT SE 3, H336	<10%

(Contd. on page 3)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 2)

CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg.nr.: 01-2119485395-27	isobutane ⚠ Flam. Gas 1, H220; Flam. Liq. 1, H224 Press. Gas (Comp.), H280	1-5%
CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43	ethanol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319	1-5%
CAS: 9004-70-0 Index number: 603-037-00-6	nitrocellulose solutions, with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose ⚠ Flam. Sol. 1, H228	1-5%
EC number: 905-588-0 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32; 01-2119486136-34	reaction mass of ethylbenzole and xylene ⚠ Flam. Liq. 3, H226 ⚠ STOT RE 2, H373; Asp. Tox. 1, H304 ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	1-5%

· 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: Take affected persons out into the fresh air.  
Position and transport stably in side position.  
Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.  
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: Drink plenty of water and provide fresh air. Call for a doctor immediately.

#### · 4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulty  
Headache  
Dizziness  
Dizziness  
Nausea  
Coughing  
Profuse sweating

- Information for doctor: Symptoms in intoxication with (aromatic) hydrocarbons (dosis letalis about 30 g)  
a) In acute intoxication: headache, dizziness, euphoria, gastro-intestinal dysfunction, state of excitement, coma.  
b) In chronic intoxication: myelotoxic damage, fatigue, dizziness, emaciation, cardiac palpitation after physical exercise, leucopenia, anemia, leucosis.  
Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of cramps administration of Diazepam 20 mg intravenously.  
Danger of impaired breathing.

#### · Hazards

#### · 4.3 Indication of any immediate medical attention and special treatment needed

If swallowed, gastric irrigation with added, activated carbon.  
If swallowed or in case of vomiting, danger of entering the lungs.

(Contd. on page 4)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 3)

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:**

Water with full jet

**5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

Formation of toxic gases is possible during heating or in case of fire.

Under certain fire conditions, traces of other toxic gases cannot be excluded.

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

**Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Dispose of the material collected according to regulations.

Ensure adequate ventilation.

**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**

Keep receptacles tightly sealed.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Use only in well ventilated areas.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

**Information about fire - and explosion protection:**

Fumes can combine with air to form an explosive mixture.

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

(Contd. on page 5)

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 4)

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

· **7.2 Conditions for safe storage, including any incompatibilities**

· Storage:

· Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.  
Prevent any seepage into the ground.  
Store in a cool location.  
Observe official regulations on storing packagings with pressurised containers.

· Information about storage in one common storage facility:

Store away from oxidising agents.  
Store away from foodstuffs.

· Further information about storage conditions:

Keep container tightly sealed.  
Do not seal receptacle gas tight.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

· **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.

· **8.1 Control parameters**

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

**67-64-1 acetone**

WEL	Short-term value: 3620 mg/m <sup>3</sup> , 1500 ppm Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm
-----	--

**115-10-6 dimethyl ether**

WEL	Short-term value: 958 mg/m <sup>3</sup> , 500 ppm Long-term value: 766 mg/m <sup>3</sup> , 400 ppm
-----	---

**106-97-8 butane**

WEL	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
-----	---

**123-86-4 n-butyl acetate**

WEL	Short-term value: 966 mg/m <sup>3</sup> , 200 ppm Long-term value: 724 mg/m <sup>3</sup> , 150 ppm
-----	---

**108-65-6 2-methoxy-1-methylethyl acetate**

WEL	Short-term value: 548 mg/m <sup>3</sup> , 100 ppm Long-term value: 274 mg/m <sup>3</sup> , 50 ppm Sk
-----	--

**64-17-5 ethanol**

WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
-----	--

· DNELs

**67-64-1 acetone**

Oral	DNEL (Langzeit-wiederholt)	62 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	186 mg/kg bw/day (ARB)
Inhalative		62 mg/kg bw/day (BEV)
	DNEL (Kurzzeit-akut)	2,420 mg/m <sup>3</sup> Air (ARB)
	DNEL (Langzeit-wiederholt)	1,210-2,420 mg/m <sup>3</sup> Air (ARB)

(Contd. on page 6)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 5)

		200 mg/m <sup>3</sup> Air (BEV)
--	--	---------------------------------

**115-10-6 dimethyl ether**

Inhalative	DNEL (Langzeit-wiederholt)	1,894 mg/m <sup>3</sup> Air (ARB) 471 mg/m <sup>3</sup> Air (BEV)
------------	----------------------------	--

**123-86-4 n-butyl acetate**

Oral	DNEL (Kurzzeit-akut)	2 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	2 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	11 mg/kg bw/day (ARB) 6 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	11 mg/kg bw/day (ARB) 6 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	960 mg/m <sup>3</sup> Air (ARB) 859.7 mg/m <sup>3</sup> Air (BEV)
	DNEL (Langzeit-wiederholt)	480 mg/m <sup>3</sup> Air (ARB) 102.34 mg/m <sup>3</sup> Air (BEV)

**108-65-6 2-methoxy-1-methylethyl acetate**

Oral	DNEL (Langzeit-wiederholt)	1.67 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	153.5 mg/kg bw/day (ARB) 54.8 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	550 mg/m <sup>3</sup> Air (ARB)
	DNEL (Langzeit-wiederholt)	275 mg/m <sup>3</sup> Air (ARB) 33 mg/m <sup>3</sup> Air (BEV)

**64-17-5 ethanol**

Oral	DNEL (Langzeit-wiederholt)	87 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	950 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	343 mg/kg bw/day (ARB) 206 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	1,900 mg/m <sup>3</sup> Air (ARB) 950 mg/m <sup>3</sup> Air (BEV)
	DNEL (Langzeit-wiederholt)	950 mg/m <sup>3</sup> Air (ARB) 114 mg/m <sup>3</sup> Air (BEV)

**reaction mass of ethylbenzole and xylene**

Oral	DNEL (Langzeit-wiederholt)	1.6 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	180 mg/kg bw/day (ARB) 108 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	289-442 mg/m <sup>3</sup> Air (ARB) 260 mg/m <sup>3</sup> Air (BEV)
	DNEL (Langzeit-wiederholt)	77 mg/m <sup>3</sup> Air (ARB) 14.8-65.3 mg/m <sup>3</sup> Air (BEV)

· PNECs

**67-64-1 acetone**

PNEC (wässrig)	100 mg/l (KA) 1.06 mg/l (MW) 10.6 mg/l (SW) 21 mg/l (WAS)
PNEC (fest)	29.5 mg/kg Trockengew (BO)

(Contd. on page 7)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 6)

	3.04 mg/kg Trockengew (MWS) 30.4 mg/kg Trockengew (SWS)
--	--

**115-10-6 dimethyl ether**

PNEC (wässrig)	160 mg/l (KA) 0.016 mg/l (MW) 0.155 mg/l (SW)
PNEC (fest)	0.045 mg/kg Trockengew (BO) 0.0681 mg/kg Trockengew (MWS) 0.681 mg/kg Trockengew (SWS)

**123-86-4 n-butyl acetate**

PNEC (wässrig)	35.6 mg/l (KA) 0.018 mg/l (MW) 0.18 mg/l (SW) 0.36 mg/l (WAS)
PNEC (fest)	0.0903 mg/kg Trockengew (BO) 0.0981 mg/kg Trockengew (MWS) 0.981 mg/kg Trockengew (SWS)

**108-65-6 2-methoxy-1-methylethyl acetate**

PNEC (wässrig)	100 mg/l (KA) 0.0635 mg/l (MW) 0.635 mg/l (SW) 6.35 mg/l (WAS)
PNEC (fest)	0.29 mg/kg Trockengew (BO) 0.329 mg/kg Trockengew (MWS) 3.29 mg/kg Trockengew (SWS)

**64-17-5 ethanol**

PNEC (wässrig)	580 mg/l (KA) 0.79 mg/l (MW) 0.96 mg/l (SW) 2.75 mg/l (WAS)
PNEC (fest)	0.63 mg/kg Trockengew (BO) 0.72 mg/kg Trockengew (FUT) 2.9 mg/kg Trockengew (MWS) 3.6 mg/kg Trockengew (SWS)

**reaction mass of ethylbenzole and xylene**

PNEC (wässrig)	6.58 mg/l (KA) 0.327 mg/l (MW) 0.327 mg/l (SW)
PNEC (fest)	2.31 mg/kg Trockengew (BO) 12.46 mg/kg Trockengew (MWS) 12.46 mg/kg Trockengew (SWS)

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

· **8.2 Exposure controls**

- Personal protective equipment:
- General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.  
Use skin protection cream for skin protection.

(Contd. on page 8)

## Safety data sheet

according to 1907/2006/EC, Article 31


Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 7)

- Clean skin thoroughly immediately after handling the product.  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing  
 Wash hands before breaks and at the end of work.  
 Do not inhale gases / fumes / aerosols.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.
- Respiratory protection: Short term filter device:  
 Filter A/P2  
 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: Preventive skin protection by use of skin-protecting agents is recommended.  
 After use of gloves apply skin-cleaning agents and skin cosmetics.  
 Skin protection agent recommendation for preventive skin shelter without use of protective gloves:  
 STOKO EMULSION (<http://www.stoko.com>)  
 STOKODERM (<http://www.stoko.com>)  
 Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:  
 STOKO EMULSION (<http://www.stoko.com>)  
 Skin protection recommendation for skin cleaning after product handling:  
 SOLOPOL (<http://www.stoko.com>)  
 Kresto Classic (<http://debstoko.com>)  
 Skin protection agent recommendation for skin aftercare:  
 STOKO VITAN (<http://www.stoko.com>)  
 The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.  
 This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).
-  Protective gloves
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves Nitrile rubber, NBR  
 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 Value for the permeation: Level  $\leq$  1, 10 min  
 The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 9)

GB



## Safety data sheet

according to 1907/2006/EC, Article 31


Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 8)

- For the permanent contact gloves made of the following materials are suitable: Nitrile rubber, NBR  
Camatril (KCL, Art\_No. 730, 731, 732, 733)
- As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR  
Camatril (KCL, 730, 731, 732, 733)
- Not suitable are gloves made of the following materials: Natural rubber, NR  
Chloroprene rubber, CR  
Leather gloves  
Strong material gloves
- 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:	Aerosol
Colour:	White
Odour:	Specific type

· pH-value: Not applicable· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Not applicable, as aerosol.

· Flash point: Not applicable, as aerosol.· Ignition temperature: 240 °C· Auto-ignition temperature: Product is not selfigniting.· Explosive properties: In use, may form flammable/explosive vapour-air mixture.· Explosion limits:

Lower:	1.2 Vol %
Upper:	26.2 Vol %

· Vapour pressure at 20 °C: 8,300 hPa· Density at 20 °C: 0.76 g/cm<sup>3</sup>· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 91.6 %

· **9.2 Other information** No further relevant information available.

(Contd. on page 10)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 9)

**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 according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **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:****ATE (Acute Toxicity Estimates)**

Dermal	LD50	146,573 mg/kg
Inhalative	LC50/4 h	465-491 mg/l (rat)

**67-64-1 acetone**

Oral	LD50	5,800 mg/kg (rat) (OECD 401)
	NOEL	900 mg/kg (rat)
Dermal	LD50	15,688 mg/kg (rat)
		>15,800 mg/kg (rbt)
Inhalative	LC50/4 h	76 mg/l (rat)
	NOAEL	22,500 mg/m <sup>3</sup> (rat)
	LC50/48h	8,450 mg/l (cru)
		2,262 mg/l (daphnia magna)

**115-10-6 dimethyl ether**

Inhalative	LC50/4h	164,000 mg/m <sup>3</sup> (rat)
	LC50/4 h	308 mg/l (rat)
	LC50/48h	>4,000 mg/l (daphnia magna)

**106-97-8 butane**

Inhalative	LC50/4 h	658 mg/l (rat)
------------	----------	----------------

**123-86-4 n-butyl acetate**

Oral	LD50	10,800 mg/kg (rat) (OECD 423)
Dermal	LD50	>17,600 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	>21 mg/l (rat) (OECD 403)
	LC50	390 mg/m <sup>3</sup> (rat)
	LC50/48h	64 mg/l (Brachydanio rerio)

**108-65-6 2-methoxy-1-methylethyl acetate**

Oral	LD50	8,532 mg/kg (rat)
	NOAEL-Werte	1,500 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
		>2,000 mg/kg (rat)
Inhalative	LC50/4h	>10,000 mg/m <sup>3</sup> (rat)

(Contd. on page 11)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 10)

	LC50	>23.8 mg/l (rat)
	LC50/4 h	35.7 mg/l (rat)
	LC50/48h	100 mg/l (Desmodesmus subspicatus)

**75-28-5 isobutane**

Inhalative	LC50/4 h	>50 mg/l (rat)
------------	----------	----------------

**64-17-5 ethanol**

Oral	LD50	10,470 mg/kg (rat) (OECD 401)
	NOAEL-Werte	>3,000 mg/kg (rat) (OECD 451)
Dermal	LD50	>2,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4h	20,000 mg/m <sup>3</sup> (rat)
	LC50/4 h	120 mg/l (rat) (OECD 403)
	LC50/48h	5,012 mg/l (ceriodaphnia Dubai) 12,340 mg/l (daphnia magna) 8,150 mg/l (Leuciscus idus)

**reaction mass of ethylbenzole and xylene**

Oral	LD50	3,523 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4h	29,000 mg/m <sup>3</sup> (rat)
	LC50/4 h	6.35-6.7 mg/l (rat)

- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Causes serious eye irritation.
- 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 May cause drowsiness or dizziness.
- 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.

**SECTION 12: Ecological information**· **12.1 Toxicity**· Aquatic toxicity:**67-64-1 acetone**

EC50/96h	7,200 mg/l (green alge)
	8,300 mg/l (piscis)
	8,300 mg/l (lepomis macrochirus)
	7,500 mg/l (selenastrum capricornutum)
EC50	1,700 mg/l (bacteria)
LC50	6,368 mg/l (piscis)
EC5/16h	1,700 mg/l (pseudomonas putida)
EC5/72h	28 mg/l (Entosiphon sulcatum)
EC5/8d	530 mg/l (Microcystis aeruginosa)
IC5/8d	7,500 mg/l (Scenedesmus quadricauda)
EC50/48h	3,400 mg/l (green alge)
	8,800 mg/l (daphnia magna)

(Contd. on page 12)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name: Lettering Colours White**

(Contd. of page 11)

NOEC	1,700 mg/kg ( <i>pseudomonas putida</i> ) 4,740 mg/kg ( <i>selenastrum capricornutum</i> )
NOELR/28d	2,212 mg/l ( <i>daphnia magna</i> )
EC50/48h	12,600 mg/l ( <i>Danio rerio.</i> ) 6,100 mg/l ( <i>daphnia magna</i> )
LC50/96h	8,300 mg/l ( <i>lem</i> ) 8,300 mg/l ( <i>lepomis macrochirus</i> ) 7,500 mg/l ( <i>Leuciscus idus</i> ) 5,540 mg/l ( <i>Oncorhynchus mykiss</i> ) 8,120 mg/l ( <i>Pimephales promelas</i> )

**115-10-6 dimethyl ether**

EC50/96h	154.9 mg/l (green alge) >4,000 mg/l ( <i>poecilia reticulata</i> ) 154.917 mg/l ( <i>Pseudokirchneriella subcapitata</i> )
EC50/48h	>4,000 mg/l ( <i>daphnia magna</i> )
LC50/96h	>4,000 mg/l ( <i>poecilia reticulata</i> )

**123-86-4 n-butyl acetate**

EC50/24h	72.8 mg/l ( <i>daphnia magna</i> ) (DIN 38412)
EC50/96h	320 mg/l (green alge)
LC50/24h	205 mg/l ( <i>daphnia magna</i> )
IC50/72h	648 mg/l ( <i>Desmodesmus subspicatus</i> )
EC10/18h	959 mg/l ( <i>pseudomonas putida</i> )
EC50/48h	44 mg/l ( <i>daphnia magna</i> )
EC50/16h	959 mg/l ( <i>pseudomonas putida</i> )
NOEC	200 mg/kg ( <i>Desmodesmus subspicatus</i> )
EC50/72h	647.7 mg/l ( <i>Desmodesmus subspicatus</i> ) (Zellvermehrungshemmtest) 674 mg/l ( <i>Scenedesmus subspicatus</i> )
LC50/96h	62 mg/l ( <i>Danio rerio.</i> ) 81 mg/l ( <i>piscis</i> ) 100 mg/l ( <i>lepomis macrochirus</i> ) 62 mg/l ( <i>Leuciscus idus</i> ) (DIN 38412) 18 mg/l ( <i>pimephales promelas</i> ) (OECD 203)

**108-65-6 2-methoxy-1-methylethyl acetate**

EC50	>100 mg/l ( <i>daphnia magna</i> )
LC50	63.5 mg/l ( <i>Oryzias latipes</i> )
EC50/48h	408 mg/l ( <i>daphnia magna</i> ) (RL 67/548/EWG. Anhang V, C.2.)
ErC50/72h	>1,000 mg/l ( <i>Pseudokirchneriella subcapitata</i> ) (OECD 201)
EC20/0.5h	>1,000 mg/l (BES) (OECD 209)
NOEC	47.5 mg/l ( <i>Oryzias latipes</i> )
NOEC/21d	≥100 mg/l ( <i>daphnia magna</i> )
EC10	>1,000 mg/l (BES)
LC50/96h	134 mg/l ( <i>Oncorhynchus mykiss</i> ) 161 mg/l ( <i>Pimephales promelas</i> )

**64-17-5 ethanol**

LC50/24h	11,200 mg/l ( <i>Salmo gairdneri</i> )
EC50/48h	9,268-14,221 mg/l ( <i>daphnia magna</i> )

(Contd. on page 13)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 12)

EC0	12,900 mg/l (Senastrum capricornutum) (OECD 201) 6,500 mg/l (pseudomonas putida) 5,000 mg/l (scenedesmus quadricauda)
EC10	11.5 mg/l (CHV)
EC50/72h	275 mg/l (CHV) (OECD 201)
LC50/96h	13,000 mg/l (Oncorhynchus mykiss) (OECD 203) 15,300 mg/l (pimephales promelas)

**reaction mass of ethylbenzole and xylene**

LC50/24h	1 mg/l (daphnia magna)
EC50/48h	3.2-9.5 mg/l (daphnia magna)
NOEC	16 mg/l (BES) 1.3 mg/l (piscis)
NOELR/72h	0.44 mg/l (green alge)
NOELR/28d	16 mg/l (bacteria)
EC50/72h	2.2 mg/l (senastrum capricornutum)
LC50/96h	2.6 mg/l (Oncorhynchus mykiss) 8.9-16.4 mg/l (pimephales promelas)

- **12.2 Persistence and degradability**

No further relevant information available.

- **12.3 Bioaccumulative potential**

No further relevant information available.

- **12.4 Mobility in soil**

No further relevant information available.

- Additional ecological information:

- General notes:

Danger to drinking water if even extremely small quantities leak into the ground.  
Do not allow product to reach ground water, water course or sewage system.  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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

- PBT: Not applicable.

- vPvB: Not applicable.

- **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

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 04	metallic packaging
15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

(Contd. on page 14)

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5


Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 13)

- Uncleaned packaging:
- Recommendation: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- Recommended cleansing agents: Alcohol  
acetone

### \* SECTION 14: Transport information

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <u>ADR, IMDG, IATA</u></li> </ul>  | UN1950   |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <u>ADR</u></li> <li>· <u>IMDG</u></li> <li>· <u>IATA</u></li> </ul>  | 1950 AEROSOLS<br>AEROSOLS<br>AEROSOLS, flammable   |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <u>ADR</u></li> </ul>   | <div style="text-align: center;">  </div>  |
| <ul style="list-style-type: none"> <li>· <u>Class</u></li> <li>· <u>Label</u></li> </ul>   | 2.1<br>2.1   |
| <ul style="list-style-type: none"> <li>· <u>IMDG, IATA</u></li> </ul>  | <div style="text-align: center;">  </div>   |
| <ul style="list-style-type: none"> <li>· <u>Class</u></li> <li>· <u>Label</u></li> </ul>   | 2.1<br>2.1   |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <u>ADR, IMDG, IATA</u></li> </ul>  | Void   |
| <ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> <li>· <u>Marine pollutant:</u></li> </ul>   | No   |
| <ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <u>Danger code (Kemler):</u></li> <li>· <u>EMS Number:</u></li> <li>· <u>Stowage Code</u></li> <br/> <li>· <u>Segregation Code</u></li> </ul> | Warning: Gases.<br>-<br>F-D,S-U<br>SW1 Protected from sources of heat.<br>SW22 For AEROSOLS with a maximum capacity of 1 litre:<br>Category A. For AEROSOLS with a capacity above 1 litre:<br>Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.<br>SG69 For AEROSOLS with a maximum capacity of 1 litre:<br>Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.<br>For AEROSOLS with a capacity above 1 litre:<br>Segregation as for the appropriate subdivision of class 2.<br>For WASTE AEROSOLS:<br>Segregation as for the appropriate subdivision of class 2. |
| <ul style="list-style-type: none"> <li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>   | Not applicable.  |

(Contd. on page 15)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 14)

· Transport/Additional information:

- ADR
- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E0  
Not permitted as Excepted Quantity
- Transport category 2
- Tunnel restriction code D

- IMDG
- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E0  
Not permitted as Excepted Quantity

- UN "Model Regulation": UN 1950 AEROSOLS, 2.1

### 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 P3a FLAMMABLE AEROSOLS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 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.  
Employment restrictions concerning pregnant and lactating women must be observed.
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- VOC EU 688.6 g/l
- **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 H220 Extremely flammable gas.  
H224 Extremely flammable liquid and vapour.  
H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H228 Flammable solid.  
H280 Contains gas under pressure; may explode if heated.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.

(Contd. on page 16)

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.06.2019

Version number 5

Revision: 27.06.2019

**Trade name:** Lettering Colours White

(Contd. of page 15)

- Recommended restriction of use
  - Department issuing SDS:
  - Contact:
  - Abbreviations and acronyms:
  - \* Data compared to the previous version altered.
- H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs through prolonged or repeated exposure.  
refer to Technical Data Sheet (TDS)
- Laboratory  
Dieter Zimmermann  
Elke Hake  
Fon ++49 (0)911 64296-59  
@mail E.Hake@akemi.de
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
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  
ATA: 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. Gas 1: Flammable gases – Category 1  
Aerosol 1: Aerosols – Category 1  
Press. Gas (Comp.): Gases under pressure – Compressed gas  
Flam. Liq. 1: Flammable liquids – Category 1  
Flam. Liq. 2: Flammable liquids – Category 2  
Flam. Liq. 3: Flammable liquids – Category 3  
Flam. Sol. 1: Flammable solids – Category 1  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Asp. Tox. 1: Aspiration hazard – Category 1
- Adaptation in accordance with REACH directive 1907/2006/EC