4 EM

Printing date 01/22/2014 Reviewed on 01/22/2014

1 Identification

· Product identifier

· Trade name: Lettering Colours - Spray black and white

· Article number: 11419

· Relevant identified uses of the substance or mixture and uses

No further relevant information available. advised against

· Application of the substance / the

Lacquer mixture

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH

Tel. +49(0)911-642960 Fax. +49(0)911-644456 Lechstrasse 28 D 90451 Nürnberg e-mail info@akemi.de

· Information department: Laboratory

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH · Emergency telephone number:

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.

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Aerosol 1 H222 Extremely flammable aerosol.



Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Irritant

Irritating to eyes.



Extremely flammable

Extremely flammable.

Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

· Information concerning particular

hazards for human and

environment: Contact with skin and inhalation of aerosols/ vapours of the preparation should

be avoided.

Vapours of the product are heavier than air and may accumulate on the ground,

in mines, drains or cellars with higher concentration.

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version. At long or repeated contact with skin it may cause dermatitis due to the

degreasing effect of the solvent. Warning! Pressurized container.

Has a narcotizing effect.

· Classification system: The classification was made according to the latest editions of international

substances lists, and expanded upon from company and literature data.

(Contd. on page 2)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 1)

· Label elements

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with directives on hazardous materials.

· Code letter and hazard designation of product:





Xi Irritant

F+ Extremely flammable

· Risk phrases: Extremely flammable.

Irritating to eyes.

Repeated exposure may cause skin dryness or cracking

Vapours may cause drowsiness and dizziness

Keep out of the reach of children. · Safety phrases:

Keep container in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Do not breathe vapour/spray. Avoid contact with skin and eyes.

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

medical advice.

Do not empty into drains, dispose of this material and its container at hazardous

or special waste collection point

Take precautionary measures against static discharges.

Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment.

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

· Special labeling of certain

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

Do not spray on a naked flame or any incandescent material. Buildup of explosive mixtures possible without sufficient ventilation.

· Classification system:

· NFPA ratings (scale 0 - 4)

Health = 1Fire = 0Reactivity = 3

HMIS-ratings (scale 0 - 4)

0

Health = 1Fire = 0Reactivity = 3

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable. · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

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

· Dangerous components:

(Contd. on page 3)



Printing date 01/22/2014 Reviewed on 01/22/2014

de name: Lettering Colours	- Spray black and white	
	(Co	ontd. of page
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8	acetone	25-50%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1	n-butyl acetate R10-66-67 Flam. Liq. 3, H226; STOT SE 3, H336	12.5-25
CAS: 74-98-6 EINECS: 200-827-9	propane	12.5-25
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0	butane	<12.5%
CAS: 9004-70-0 Index number: 603-037-00-6	Nitrozellulose mit mehr als 12,6% Stickstoff → F R11 → Flam. Liq. 1, H224	1-5%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0	isobutane	1-5%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0	propan-2-ol	1-5%
CAS: 64742-94-5 EINECS: 265-198-5 Index number: 649-424-00-3	Solvent naphtha (petroleum), heavy arom. Xn R65 R66-67 ♦ Asp. Tox. 1, H304; ↑ STOT SE 3, H336	1-5%
CAS: 64742-95-6 EINECS: 265-199-0 Index number: 649-356-00-4	Solvent naphtha (petroleum), light arom. Xn R65; Xi R37; N R51/53 R10-66-67 → Flam. Liq. 3, H226; → Asp. Tox. 1, H304; → STOT SE 3, H335-H336	<1%

4 First-aid measures

· Additional information:

· Description of first aid measures

· General information: Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical

observation for at least 48 hours after the accident.

For the wording of the listed risk phrases refer to section 16.

Take affected persons out into the fresh air.

Position and transport stably on side.

Supply fresh air; consult doctor in case of complaints. · After inhalation:

Clean with water and soap. If possible, also wash with polyethylene glycol 400. · After skin contact:

If skin irritation continues, consult a doctor.

· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.

Do not induce vomiting; immediately call for medical help.

· 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, leukosis.

Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air;

in case of peroral intake administration of Carbo medicinalis; only after

(Contd. on page 4)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 3)

intubation conduct of gastrolavage in application of Carbo medicinalis; in case of

cramps administration of Diazepam 20 mg intravenously.

 Most important symptoms and effects, both acute and delayed

ed Breathing difficulty

Headache
Dizziness
Dizziness
Coughing
Profuse sweating

Pioluse swealii

Nausea

Danger Danger of impaired breathing.

 Indication of any immediate medical attention and special

ndication of any immediate

<u>treatment needed</u>

If swallowed, gastric irrigation with added, activated carbon.

If swallowed or in case of vomiting, danger of entering the lungs.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO2, sand, extinguishing powder. Do not use water.

· For safety reasons unsuitable

extinguishing agents:

Water with full jet

Water

· Special hazards arising from the

substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO) Nitrogen oxides (NOx)

Formation of toxic gases is possible during heating or in case of fire. In certain fire conditions, traces of other toxic gases cannot be excluded.

· Advice for firefighters

· Protective equipment:

Wear self-contained respiatory 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.

6 Accidental release measures

· Personal precautions, protective equipment and emergency

procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation Keep away from ignition sources

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

• Environmental precautions: Inform

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

Prevent seepage into sewage system, workpits and cellars. In case of seepage into the ground inform responsible authorities.

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

 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal

binders, sawdust).

Dispose of the collected material according to regulations. Do not flush with water or aqueous cleansing agents

Ensure adequate ventilation.

Dispose contaminated material as waste according to item 13.

(Contd. on page 5)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 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.

7 Handling and storage

· Handling:

· Precautions for safe handling Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Store in cool, dry place in tightly closed receptacles.

Prevent formation of aerosols.

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

than air).

Use only in well ventilated areas.

 Information about protection against explosions and fires:

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Wear shoes with conductive soles.

Pressurized 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.

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

· Conditions for safe storage, including any incompatibilities

Storage:

· Requirements to be met by

storerooms and receptacles: Store in a cool location.

Store only in the original receptacle. Prevent any seepage into the ground.

Observe official regulations on storing packagings with pressurized containers.

Information about storage in one

common storage facility:

Store away from oxidizing agents.

Store away from foodstuffs.

Further information about storage

conditions:

Do not gas tight seal receptacle.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight. Store receptacle in a well ventilated area.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

Additional information about

design of technical systems: No further data; see item 7.

· Control parameters

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

67-64-1 acetone

PEL Long-term value: 2400 mg/m³, 1000 ppm REL Long-term value: 590 mg/m³, 250 ppm

TLV Short-term value: (1782) NIC-1187 mg/m³, (750) NIC-500 ppm Long-term value: (1188) NIC-475 mg/m³, (500) NIC-200 ppm

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(Contd. on page 6)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Sp	oray black and white
	(Contd. of page 5)
123-86-4 n-butyl acetate	(Conita. or page 3)
PEL Long-term value: 710 mg/m	³ , 150 ppm
REL Short-term value: 950 mg/m	³ , 200 ppm
Long-term value: 710 mg/m	
TLV Short-term value: 950 mg/m	
Long-term value: 713 mg/m	³ , 150 ppm
74-98-6 propane	
PEL Long-term value: 1800 mg/r	··
REL Long-term value: 1800 mg/r	··
TLV refer to Appendix F: minima	l oxygen content
106-97-8 butane	
REL Long-term value: 1900 mg/r	• •
TLV Short-term value: 2370 mg/i	m³, 1000 ppm
75-28-5 isobutane	
TLV Short-term value: 2370 mg/s	m³, 1000 ppm
67-63-0 propan-2-ol	
PEL Long-term value: 980 mg/m	· ·
REL Short-term value: 1225 mg/s	
Long-term value: 980 mg/m	• •
TLV Short-term value: 984 mg/m Long-term value: 492 mg/m	
BEI	, 200 pp
Ingredients with biological limit va	lues:
67-64-1 acetone	
BEI 50 mg/L	
Medium: urine	
Time: end of shift	ve \
Parameter: Acetone (nonspe	ecitic)
67-63-0 propan-2-ol	
BEI 40 mg/L Medium: urine	
Time: end of shift at end of w	vorkweek
Parameter: Acetone (backgr	
· Additional information:	The lists that were valid during the creation were used as basis.
· Exposure controls	
Personal protective equipment:	
General protective and hygienic	
<u>measures:</u>	The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed.
	Immediately remove all soiled and contaminated clothing.
	Wash hands before breaks and at the end of work.
	Avoid contact with the eyes and skin.
	Do not inhale gases / fumes / aerosols. Do not eat, drink, smoke or sniff while working.
	Apply solvent resistant skin cream before beginning work.
 Breathing equipment: 	In case of brief exposure or low pollution use respiratory filter device. In case of
	intensive or longer exposure use respiratory protective device that is
	independent of circulating air. Use suitable respiratory protective device in case of insufficient ventilation.
	Filter AX
 Protection of hands: 	Preventive skin protection by use of skin-protecting agents is recommended.



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 6)

After use of gloves apply skin-cleaning agents and skin cosmetics.

Akemi skin protection agent recommendation for preventive skin shelter without use of protective gloves:

STOKODERM (http://www.stoko.com) STOKO EMULSION (http://www.stoko.com)

Akemi skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (http://www.stoko.com)

Akemi skin protection recommendation for skin cleaning after product handling:

SOLOPOL (http://www.stoko.com)
SLIG SPEZIAL (http://www.stoko.com)

Akemi skin protection agent recommendation for skin aftercare:

STOKO VITAN (http://www.stoko.com)



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
 The selection of the suitable glove

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.

prior to the application.

Penetration time of glove material

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

· Not suitable are gloves made of the following materials:

Strong gloves Leather gloves

Natural rubber, NR

· Eye protection:



Tightly sealed goggles

- Body protection: Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Aerosol

Color: Different according to coloring

· Odor: Characteristic

· pH-value: Not applicable

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Not applicable, as aerosol.

· Flash point: Not applicable, as aerosol.

- Ignition temperature: 365 °C (689 °F)

(Contd. on page 8)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white		
		(Contd. of page 7)
· Auto igniting:	Product is not selfigniting.	
· Danger of explosion:	In use, may form flammable/explosive vapour-air mixture.	
Explosion limits:Lower:Upper:	1.5 Vol % 13.0 Vol %	
· Vapor pressure at 20 °C (68 °F):	8300 hPa (6226 mm Hg)	
· Density at 20 °C (68 °F):	0.78 g/cm³ (6.509 lbs/gal)	
· Specific gravity at 20 °C (68 °F):	0.78 g/cm³ (6.509 lbs/gal)	
Solubility in / Miscibility with Water:	Not miscible or difficult to mix.	
 Viscosity: Dynamic: Kinematic: 	Not determined. Not determined.	
Solvent content: Organic solvents: Other information	83.7 % No further relevant information available.	

10 Stability and reactivity

· Reactivity

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Possibility of hazardous

reactions

No dangerous reactions known.

 Conditions to avoid · Incompatible materials: No further relevant information available. No further relevant information available.

· Hazardous decomposition

products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· Primary irritant effect:

No irritant effect. · on the skin: Irritating effect. · on the eye:

No sensitizing effects known. Sensitization:

· Additional toxicological

information: Irritant

The product shows the following dangers according to internally approved

calculation methods for preparations:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer) 67-63-0 propan-2-ol 3

· NTP (National Toxicology Program)

None of the ingredients is listed.

(Contd. on page 9)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 8)

12 Ecological information

· Toxicity

Aquatic toxicity: No further relevant information available.
 Persistence and degradability No further relevant information available.

· Behavior in environmental systems:

Bioaccumulative potential
 Mobility in soil
 No further relevant information available.
 No further relevant information available.

· Additional ecological information:

• General notes: Do not allow undiluted product or large quantities of it to reach ground water,

water course or sewage system.

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

· Results of PBT and vPvB assessment

PBT: Not applicable.vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation: Must not be disposed of together with household garbage. Do not allow product

to reach sewage system.

· Uncleaned packagings:

• Recommendation: Disposal must be made according to official regulations.

Empty contaminated packagings thoroughly. They can be recycled after

thorough and proper cleaning.

14 Transport information

· <u>UN-Number</u>

- DOT, ADR, IMDG, IATA UN1950

· UN proper shipping name

 ⋅ DOT
 Aerosols, flammable

 ⋅ ADR
 1950 Aerosols

 ⋅ IMDG
 AEROSOLS

· IATA AEROSOLS, flammable

· Transport hazard class(es)

· DOT



• <u>Class</u> 2.1 • <u>Label</u> 2.1

ADR



· Class 2 5F Gases

(Contd. on page 10)



	acc. to OSHA HCS
rinting date 01/22/2014	Reviewed on 01/22/20
ade name: Lettering Colours - Spray bl	ack and white
	(Contd. of page
· <u>Label</u>	2.1
· IMDG, IATA	
· ·	
· <u>Class</u>	2.1
· Label	2.1
 Packing group DOT, ADR, IMDG, IATA 	Void
Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Gases
Danger code (Kemler): EMS Number:	-
	F-D,S-U
 Transport in bulk according to Annex MARPOL73/78 and the IBC Code 	<u>t II of</u> Not applicable.
· <u>UN "Model Regulation":</u>	UN1950, Aerosols, 2.1
 Safety, health and environmental regularies Sara Section 355 (extremely hazardous substitution) None of the ingredient is listed. 	ulations/legislation specific for the substance or mixture tances):
<u> </u>	inga):
 Section 313 (Specific toxic chemical listi 67-63-0 propan-2-ol 	1195).
TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
Proposition 65 Chemicals known to cause cancer:	
· Chemicals known to cause cancer.	
None of the ingredients is listed	
None of the ingredients is listed. Chemicals known to cause reproductive	to 1.9 for formula

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

- EPA (Environmental Protection Agency)

67-64-1 acetone

· TLV (Threshold Limit Value established by ACGIH)

67-64-1 acetone

67-63-0 propan-2-ol

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

(Contd. on page 11)

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AKEMI®

Safety Data Sheet

Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 10)

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Product related hazard

informations: The product has been classified and marked in accordance with directives on

hazardous materials.

· Hazard symbols:





Xi Irritant

F+ Extremely flammable

• Risk phrases: Extremely flammable.

Irritating to eyes.

Repeated exposure may cause skin dryness or cracking

Vapours may cause drowsiness and dizziness

· Safety phrases: Keep out of the reach of children.

Keep container in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Do not breathe vapour/spray. Avoid contact with skin and eyes.

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

medical advice.

Do not empty into drains, dispose of this material and its container at hazardous

or special waste collection point

Take precautionary measures against static discharges.

Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment.

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

· Special labeling of certain

preparations: Pressurized 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.

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

Buildup of explosive mixtures possible without sufficient ventilation.

· National regulations:

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

- VOC USA 387.2 g/l / 3.23 lb/gl

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

• Department issuing MSDS: Laboratory
• Contact: Laboratory

Fon ++49 (0)911 64296-59 @mail E.Hake@akemi.de

- Date of preparation / last revision 01/22/2014 / -

· Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de

fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

(Contd. on page 12)



Printing date 01/22/2014 Reviewed on 01/22/2014

Trade name: Lettering Colours - Spray black and white

(Contd. of page 11)

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

DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)