Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 23.01.2023 Version number 3 (replaces version 2) Revision: 23.01.2023

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

· **1.1 Product identifier**

· Trade name: **Lettering Colour Sprays special**

· Article number: 134xx

· UFI: MMG5-V07U-W00N-6YCA

· **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.

SECTION 2: Hazards identification

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

· Classification according to Regulation (EC) No 1272/2008

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.

· Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.

· Storage: Store in a well-ventilated place. Keep cool.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

· **2.2 Label elements**

· Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

· Hazard pictograms

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.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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· Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe 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.

· Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.
Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.
Buildup of explosive mixtures possible without sufficient ventilation.

· **2.3 Other hazards**

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 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 EUH066	25-50%
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 EUH066	25-50%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21	propane Flam. Gas 1A, H220 Press. Gas (Comp.), H280	12.5-25%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32	butane, pure Flam. Gas 1A, H220 Press. Gas (Comp.), H280	12.5-25%

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CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226 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. Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 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: Immediately remove any clothing soiled by the product.

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

· After skin contact: Rinse with warm water.
Generally the product does not irritate the skin.

· 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
Coughing
Profuse sweating
Nausea

· Hazards Danger of impaired breathing.

· **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.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· Suitable extinguishing agents: CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

· For safety reasons unsuitable extinguishing agents: Water with full jet

· **5.2 Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.

· **5.3 Advice for firefighters**

· Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Mount respiratory protective device.

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· **6.2 Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
Do not allow product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
Do not flush with water or aqueous cleansing agents
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.

· **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** 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.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
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.
Do not spray onto a naked flame or any incandescent material.

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

· Storage:

· Requirements to be met by storerooms and receptacles: Store in a cool location.
Observe official regulations on storing packagings with pressurised containers.

· Information about storage in one common storage facility: Not required.

· 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.

· Storage class: 2 B

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
67-64-1 acetone	
IOELV	Long-term value: 1210 mg/m³, 500 ppm
123-86-4 n-butyl acetate	
IOELV	Short-term value: 723 mg/m³, 150 ppm Long-term value: 241 mg/m³, 50 ppm

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108-65-6 2-methoxy-1-methylethyl acetate	
IOELV	Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm Skin

· 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)
		62 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	2,420 mg/m³ Air (ARB)
	DNEL (Langzeit-wiederholt)	1,210 mg/m³ Air (ARB)
		200 mg/m³ 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)	7 mg/kg bw/day (ARB)
		3.4 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	960 mg/m³ Air (ARB)
		859.7 mg/m³ Air (BEV)
	DNEL (Langzeit-wiederholt)	480 mg/m³ Air (ARB)
		102.34 mg/m³ 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/m³ Air (ARB)
		33 mg/m³ Air (BEV)
	DNEL (Langzeit-wiederholt)	275 mg/m³ Air (ARB)
		33 mg/m³ 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)
	3.04 mg/kg Trockengew (MWS)
	30.4 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)

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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)

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

· **8.2 Exposure controls**

· Appropriate engineering controls: No further data; see item 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.
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 dust / smoke / mist.
Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.

· Respiratory protection:

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.
Short term filter device:
Filter AX

· Hand protection

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
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 anylyses 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).

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· Material of gloves	Nitrile rubber, NBR Butyl rubber, BR 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.
· 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. Value for the permeation: Level ≤ 1, 10 min
· As protection from splashes gloves made of the following materials are suitable:	Nitrile rubber, NBR Camatril (KCL, 730, 731, 732, 733) Butyl rubber, BR Butoject (KCL, Art_No. 897, 898)
· Not suitable are gloves made of the following materials:	Chloroprene rubber, CR Neoprene gloves Natural rubber, NR Leather gloves Strong material gloves
· Eye/face 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	
· Colour:	According to product specification
· Odour:	Specific type
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	Not applicable, as aerosol.
· Lower and upper explosion limit	
· Lower:	1.5 Vol %
· Upper:	9.5 Vol %
· Flash point:	Not applicable, as aerosol.
· Ignition temperature:	>490 °C
· pH	Not determined. Not applicable
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· Vapour pressure at 20 °C:	4,000 hPa
· Density and/or relative density	
· Density at 20 °C:	0.79 g/cm³

· **9.2 Other information**	
· Appearance:	
· Form:	Aerosol
· Important information on protection of health and environment, and on safety.	
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	In use, may form flammable/explosive vapour-air mixture.

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· Solvent content:
· Organic solvents: 96.0 %

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Extremely flammable aerosol. Pressurised container: May burst if heated.
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

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 hazard classes as defined in Regulation (EC) No 1272/2008**
· Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

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)
		7,426-15,800 mg/kg (rbt)
Inhalative	LC50/4 h	76 mg/l (rat)
	NOAEL	22,500 mg/m³ (rat)
	LC50/48h	8,450 mg/l (cru)

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		2,262 mg/l (daphnia magna)
123-86-4 n-butyl acetate		
Oral	LD50	10,760 mg/kg (rat) (OECD 423)
Dermal	LD50	>14,112 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	23.4 mg/l (rat) (OECD 403)
	LC50	390 mg/m3 (rat)
	LC50/48h	64 mg/l (Brachydanio rerio)
74-98-6 propane		
Inhalative	LC50/4 h	>20 mg/l (rat)
106-97-8 butane, pure		
Inhalative	LC50/4 h	658 mg/l (rat)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	6,190 mg/kg (rat) (OECD 401)
	NOAEL-Werte	1,500 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)
		>2,000 mg/kg (rat)
Inhalative	LC50/4h	>10,000 mg/m3 (rat)
	LC50	>23.8 mg/l (rat)
	LC50/4 h	35.7 mg/l (rat)
	LC50/48h	100 mg/l (Desmodesmus subspicatus)
64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	LD50	>6,800 mg/kg (rat)
Dermal	LD50	>3,400 mg/kg (rabbit)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

· 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.
· 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.

· **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

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)

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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)
NOEC	1,700 mg/kg (pseudomonas putida)
	4,740 mg/kg (selenastrum capricornutum)
NOELR/28d	2,212 mg/l (daphnia magna)
EC50/48h	12,600 mg/l (Danio rerio.)
	8,800 mg/l (daphnia magna)
LC50/96h	8,300 mg/l (lem)
	8,300 mg/l (lepomis macrochirus)
	7,500 mg/l (Leuciscus idus)
	5,540 mg/l (Oncorhynchus mykiss)
	8,120 mg/l (Pimephales promelas)
123-86-4 n-butyl acetate	
EC50/24h	72.8 mg/l (daphnia magna) (DIN 38412)
EC50/96h	320 mg/l (green alge)
LC50/24h	205 mg/l (daphnia magna)
IC50/72h	648 mg/l (Desmodesmus subspicatus)
EC10/18h	959 mg/l (pseudomonas putida)
EC50/48h	44 mg/l (daphnia magna)
EC50/16h	959 mg/l (pseudomonas putida)
NOEC	200 mg/kg (Desmodesmus subspicatus)
NOEC/21d	23 mg/l (daphnia magna) (OECD 211)
EC50/72h	647.7 mg/l (Desmodesmus subspicatus) (Zellvermehrungshemmtest)
	674 mg/l (Scenedesmus subspicatus)
LC50/96h	62 mg/l (Danio rerio.)
	81 mg/l (piscis)
	100 mg/l (lepomis macrochirus)
	62 mg/l (Leuciscus idus) (DIN 38412)
	18 mg/l (pimephales promelas) (OECD 203)
108-65-6 2-methoxy-1-methylethyl acetate	
EC50	>100 mg/l (daphnia magna)
LC50	63.5 mg/l (Oryzias latipes)
EC50/48h	>500 mg/l (daphnia magna) (RL 67/548/EWG. Anhang V, C.2.)
ErC50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
EC20/0.5h	>1,000 mg/l (BES) (OECD 209)
NOEC	47.5 mg/l (Oryzias latipes)
NOEC/21d	≥100 mg/l (daphnia magna)
EC10	>1,000 mg/l (BES)
LC50/96h	180 mg/l (Oncorhynchus mykiss)
	>1,000 mg/l (Oryzias latipes)

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	161 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.
· **12.5 Results of PBT and vPvB assessment**
· PBT: Not applicable.
· vPvB: Not applicable.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· Additional ecological information:
· General notes: Do not allow product to reach ground water, water course or sewage system. Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· ADR, IMDG, IATA UN1950

· **14.2 UN proper shipping name**
· ADR 1950 AEROSOLS
· IMDG AEROSOLS
· IATA AEROSOLS, flammable

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· **14.3 Transport hazard class(es)**

· ADR

· Class	2 5F Gases.
· Label	2.1

· IMDG, IATA

· Class	2.1 Gases.
· Label	2.1

· **14.4 Packing group**

· ADR, IMDG, IATA	Void

· **14.5 Environmental hazards:**

· Marine pollutant:	No

· **14.6 Special precautions for user**	Warning: Gases.
· Hazard identification number (Kemler code):	-
· EMS Number:	F-D,S-U
· Stowage Code	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.

· 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

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· 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

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

67-64-1	acetone

· Regulation (EC) No 273/2004 on drug precursors

67-64-1	acetone	3

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

67-64-1	acetone	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 1 (Self-assessment): slightly hazardous for water.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU	758.4 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.

· Department issuing SDS:	Laboratory
· Contact:	Elke Hake Fon ++49 (0)911 64296-59 @mail E.Hake@akemi.de

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· Date of previous version: 23.01.2023
· Version number of previous version: 2
· 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)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: 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
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1A: Flammable gases – Category 1A
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2