

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** L2.1.K1 ENAMEL BINDER
- **Article number:** L2.1.K1
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
LUSID TECHNOLOGIES
4725 S CAMP KEARNS ROAD
KEARNS, UT 84118
USA
www.lusidtechnologies.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
Emergency US – 1-800-535-5053 Outside US - +1-352-323-3500 InfoTrac Contract 89244

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

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

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 1)

- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

methyl acetate

Solvent naphtha (petroleum), light arom.

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H336 May cause drowsiness or dizziness.

- **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

Contains 2-butanone oxime. May produce an allergic reaction.

Restricted to professional users.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 79-20-9 EINECS: 201-185-2 Index number: 607-021-00-X RTECS: AI 9100000	methyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
--	---	--------

(Contd. on page 3)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 2)

CAS: 98-56-6 EINECS: 202-681-1 Reg.nr.: 01-2119857280-40	4-chloro-alpha,alpha,alpha-trifluorotoluene ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	10-25%
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8 RTECS: AL 3150000 Reg.nr.: 01-2119471330-49	acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-10%
CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 RTECS: ZE 2100000 Reg.nr.: 01-2119488216-32	xylene ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2.5-10%
CAS: 107-87-9 EINECS: 203-528-1 Index number: 606-007-00-0 RTECS: SA 7875000	pentan-2-one ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H302	2.5-10%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 RTECS: AF 7350000 Reg.nr.: 01-2119485493-29	n-butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	2.5-10%
CAS: 110-43-0 EINECS: 203-767-1 Index number: 606-024-00-3 Reg.nr.: 01-2119902391-49-0000	heptan-2-one ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	≤2.5%
CAS: 64742-95-6 EINECS: 265-199-0 Index number: 649-356-00-4 Reg.nr.: 01-2119455851-35	Solvent naphtha (petroleum), light arom. ⚠ Flam. Liq. 3, H226; ⚠ Muta. 1B, H340; Carc. 1B, H350; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332	≤2.5%
CAS: 96-29-7 EINECS: 202-496-6 Index number: 616-014-00-0	2-butanone oxime ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Sens. 1, H317	≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** 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:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

EU

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 3)

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
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 contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 4)

- **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

1330-20-7 xylene

IOELV Short-term value: 442 mg/m³, 100 ppm
 Long-term value: 221 mg/m³, 50 ppm
 Skin

123-86-4 n-butyl acetate

IOELV Short-term value: 723 mg/m³, 150 ppm
 Long-term value: 241 mg/m³, 50 ppm

110-43-0 heptan-2-one

IOELV Short-term value: 475 mg/m³, 100 ppm
 Long-term value: 238 mg/m³, 50 ppm
 Skin

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

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Avoid contact with the eyes and skin.

- **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.

- **Protection of hands:**



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 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**

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

(Contd. on page 6)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 5)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Liquid
· Colour:	Amber coloured
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	55.8-56.6 °C

· Flash point: <-18 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 465 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· Lower:	3.1 Vol %
· Upper:	16 Vol %

· Vapour pressure at 20 °C: 220 hPa

· Density at 20 °C:	1.02 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water: Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	44.9 %
· VOC (EC)	≥60.24-60.25 %

· Solids content: 40.5 %

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 6)

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

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **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** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD50	>6,800 mg/kg (rat)
Dermal	LD50	>3,400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

96-29-7 2-butanone oxime

Oral	LD50	3,700 mg/kg (rat)
Dermal	LD50	200-2,000 mg/kg (rat)
Inhalative	LC50/4 h	20 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **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**
May cause genetic defects.
- **Carcinogenicity**
May cause cancer.
- **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.

12 Ecological information

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

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER


(Contd. of page 7)

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **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 together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|---|-----------------------------|
| · UN-Number | |
| · ADR, IMDG, IATA | UN1263 |
| · UN proper shipping name | |
| · ADR | 1263 PAINT |
| · IMDG, IATA | PAINT |
| · Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids. |
| · Label | 3 |
| · Packing group | |
| · ADR, IMDG, IATA | II |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Flammable liquids. |
| · Hazard identification number (Kemler code): | 33 |
| · EMS Number: | F-E, S-E |
| · Stowage Category | B |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 8)

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1263 PAINT, 3, II

15 Regulatory information

· **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 P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 28, 29

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials, Annex II:**

Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **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.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Version number 4

Revision: 31.03.2020

Trade name: L2.1.K1 ENAMEL BINDER

(Contd. of page 9)

H340 May cause genetic defects.

H350 May cause cancer.

H351 Suspected of causing cancer.

· **Department issuing SDS:** Environment protection department.

· **Contact:** Mr. Roberts

· **Abbreviations and acronyms:**

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

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity - dermal – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 1B: Germ cell mutagenicity – Category 1B

Carc. 1B: Carcinogenicity – Category 1B

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Asp. Tox. 1: Aspiration hazard – Category 1