

### 1 Identification

**Product identifier**

**Trade name:** LU 9405 LUSTRE GREEN

**Article number:** 88020195

**Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture**

Decoration materials or decoration aids for glass or porcelain ware.

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Heraeus Precious Metals GmbH & Co. KG

Heraeusstr. 12-14

D-63450 Hanau

**Information department:**

Electronic Materials Division

Telefon: 0049 6181-35 4217

Telefax: 0049 6181-35 16 4217

Mail: [tfd-msds@heraeus.com](mailto:tfd-msds@heraeus.com)

**Emergency telephone number:**

24-h-Number:

0049 6132-84463

### 2 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:** Chemical Mixture

**Dangerous components:**

64742-95-6	Solvent naphtha (petroleum), light arom.	10-25%
67874-71-9	Hexanoic acid, 2-ethyl-, bismuth(3+) salt	10-25%
514-10-3	abietic acid, technical	10-25%
91-17-8	Decahydronaphthalene	5-10%
8006-64-2	Turpentine, oil	5-10%
	Metal compound	5-10%
75-09-2	dichlormethane	2,5-5%
8000-25-7	Rosemary oil	2,5-5%
64741-44-2	Distillates (petroleum), straight-run middle	≤ 2,5%
98-55-5	p-menth-1-en-8-ol	≤ 2,5%
8000-41-7	Terpineol	≤ 2,5%
19583-54-1	Hexanoic acid, 2-ethyl-, iron salt	≤ 2,5%
64742-88-7	Solvent naphtha (petroleum), medium aliph.	≤ 2,5%
138-86-3	dipentene	≤ 2,5%
98-54-4	4-tert-butylphenol	≤ 1,0%
68603-83-8	Fatty acids, C6 - C19-branched, lead salts,basic	≤ 1,0%
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy	≤ 1,0%
7785-26-4	(-)-pin-2(3)-ene	≤ 0,5%
301-10-0	Hexanoic acid, 2-ethyl-, tin(2+) salt (2:1)	≤ 0,5%
586-62-9	Cyclohexene, 1-methyl-4-(1-methylethylidene)-	≤ 0,5%

USA

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Trade name: LU 9495 LUSTRE GREEN

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### 3 Hazard(s) identification

#### Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 1A H360 May damage fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

#### Label elements

##### GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

##### Hazard pictograms



GHS02



GHS05



GHS07



GHS08

#### Signal word Danger

#### Hazard-determining components of labeling:

Decahydronaphthalene

Solvent naphtha (petroleum), light arom.

Turpentine, oil

dichlormethane

#### Hazard statements

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

#### Precautionary statements

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.

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- P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.*
- P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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.*
- P310 *Immediately call a POISON CENTER or doctor/physician.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

**Classification system:**

**NFPA ratings (scale 0 - 4)**



**HMIS-ratings (scale 0 - 4)**



#### 4 First-aid measures

**General information:**

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

**After inhalation:**

*Supply fresh air and to be sure call for a doctor.*

*In case of unconsciousness place patient stably in side position for transportation.*

**After skin contact:**

*Immediately wash with water and soap and rinse thoroughly.*

*Immediately rinse with water.*

**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.*

#### 5 Fire-fighting measures

**Suitable extinguishing agents:** *CO<sub>2</sub>, sand, extinguishing powder. Do not use water.*

**For safety reasons unsuitable extinguishing agents:**

*Water*

*Water with full jet*

**Special hazards arising from the substance or mixture** *No further relevant information available.*

**Protective equipment:** *Mount respiratory protective device.*

#### 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

*Wear protective equipment. Keep unprotected persons away.*

*Ensure adequate ventilation*

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

*Wear protective clothing.*

**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.*

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- 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.  
Do not flush with water or aqueous cleansing agents
- 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

- Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- Storage:**  
**Requirements to be met by storerooms and receptacles:** No special requirements.  
**Information about storage in one common storage facility:** Store away from foodstuffs.  
**Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Prevent from drying out.  
**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.

- Components with limit values that require monitoring at the workplace:**

#### 8006-64-2 Turpentine, oil

PEL ()	Long-term value: 560 mg/m <sup>3</sup> , 100 ppm
REL ()	Long-term value: 560 mg/m <sup>3</sup> , 100 ppm
TLV ()	Long-term value: 112 mg/m <sup>3</sup> , 20 ppm (SEN) NIC-DSEN

#### 75-09-2 dichlormethane

PEL ()	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL ()	See Pocket Guide App. A
TLV ()	Long-term value: 174 mg/m <sup>3</sup> , 50 ppm BEI

#### 138-86-3 dipentene

WEEL ()	Long-term value: 30 ppm
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- Ingredients with biological limit values:**

#### 75-09-2 dichlormethane

BEI ()	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)
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- **Additional information:** The lists that were valid during the creation were used as basis.

- **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.

- **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A2B2P3

- **Protection of hands:**



Protective gloves

Only use chemical-protective gloves with CE-labeling of category III.

Check protective gloves prior to each use for their proper condition.

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

- **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.

For short use and minimal soiling we recommend disposable protective gloves made of special nitrile.

For longer use and stronger soiling we recommend 4H-Chemicals-Protective-Gloves from the company SETON.

- **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.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

- **General Information**

- **Appearance:**

Form: Fluid

Color: Brown

- **Odor:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- **Flash point:** < 55 °C (< 131 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 220 °C (428 °F)

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- <b>Decomposition temperature:</b>	Not determined.
- <b>Auto igniting:</b>	Product is not selfigniting
- <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- <b>Explosion limits:</b>	
<b>Lower:</b>	0.7 Vol %
<b>Upper:</b>	7.5 Vol %
- <b>Vapor pressure at 20 °C (68 °F):</b>	5 hPa (4 mm Hg)
- <b>Density:</b>	Not determined.
- <b>Relative density</b>	Not determined.
- <b>Vapour density</b>	Not determined.
- <b>Evaporation rate</b>	Not determined.
- <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
- <b>Partition coefficient (n-octanol/water):</b>	Not determined.
- <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
- <b>Solvent content:</b>	
<b>Organic solvents:</b>	27.7 %
<b>Water:</b>	0.0 %
<b>Solids content:</b>	45.6 %
- <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications, (< 100 °C)
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

**Acute toxicity:**
**- LD/LC50 values that are relevant for classification:**
**64742-95-6 Solvent naphtha (petroleum),light arom.**

Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 3160 mg/kg (rabbit)
Inhalative	LC50/4 h	> 5.2 mg/l (rat)

**91-17-8 Decahydronaphthalene**

Oral	LD50	4170 mg/kg (rat)
Dermal	LD50	5900 mg/kg (rbt)
Inhalative	LC50/1h	1.08 mg/l (rat)

**8006-64-2 Turpentine, oil**

Oral	LD50	5760 mg/kg (rat)
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**75-09-2 dichlormethane**

Oral LD50 1600 mg/kg (rat)

Inhalative LC50/4 h 88 mg/l (rat)

**98-55-5 p-menth-1-en-8-ol**

Oral LD50 4300 mg/kg (rat)

**8000-41-7 Terpineol**

Oral LD50 4300 mg/kg (rat)

Dermal LD50 &gt; 5000 mg/kg (rabbit)

**64742-88-7 Solvent naphtha (petroleum), medium aliph.**

Oral LD50 &gt; 6500 mg/kg (rat)

Dermal LD50 &gt; 3000 mg/kg (rabbit)

Inhalative LC50/4 h &gt; 14 mg/l (rat)

**138-86-3 dipentene**

Oral LD50 5300 mg/kg (rat) (RTECS)

Dermal LD50 &gt; 2000 mg/kg (kan)

**64742-48-9 Naphtha (petroleum), hydrotreated heavy**

Oral LD50 &gt; 5000 mg/kg (rat)

Dermal LD50 &gt; 3000 mg/kg (rabbit)

**7785-26-4 (-)-pin-2(3)-ene**

Oral LD50 3700 mg/kg (rat)

**586-62-9 Cyclohexene, 1-methyl-4-(1-methylethylidene)-**

Oral LD50 4390 mg/kg (rat)

Dermal LD50 &gt; 5000 mg/kg (rabbit)

**Primary irritant effect:**

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: Sensitization possible through skin contact.

**Additional toxicological information:**
**Carcinogenic categories**
**IARC (International Agency for Research on Cancer)**

75-09-2 dichlormethane	2B
108-88-3 toluene	3
1330-20-7 xylene	3
108-94-1 cyclohexanone	3
68457-13-6 Cobalt, borate neodecanoate complexes	2B
50-00-0 Methanal	1

**NTP (National Toxicology Program)**

75-09-2 dichlormethane	R
50-00-0 Methanal	R

## 12 Ecological information

**Aquatic toxicity:**
**64742-95-6 Solvent naphtha (petroleum), light arom.**

EC50/96h 19 mg/l (algae)

LC50/48h 6.14 mg/l (daphnia)

LC50/96h 9.22 mg/l (fish)

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Trade name: LU 9405 LUSTRE GREEN

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**8006-64-2 Turpentine, oil**

EC50 14.1 mg/l (daphnia)

**138-86-3 dipentene**

EC50/48h 17 mg/l (daphnia) (ECOTOX Database)

LC50/96h 80 mg/l (fish) (Regenbogenforelle, ECOTOX Database)

**64742-82-1 Naphtha (petroleum), hydrodesulfurized heavy**

LC50/96h 2.6 mg/l (daphnia)

**Persistence and degradability** No further relevant information available.

**Bioaccumulative potential** No further relevant information available.

**Ecotoxicological effects:**

**Remark:** Toxic for fish

**Additional ecological information:**

**General notes:**

Water hazard class 2 (in accordance with VwVwS from 15.05.1999): 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.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

### 13 Disposal considerations

**Waste treatment methods**

**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

**Uncleaned packagings:**

**Recommendation:** Contact manufacturer for recycling information.

### 14 Transport information

**UN-Number**

**DOT, ADR, IMDG, IATA** UN3470

**UN proper shipping name**

**DOT** Paint, corrosive, flammable

**ADR** 3470 Paint, corrosive, flammable, ENVIRONMENTALLY HAZARDOUS

**IMDG** PAINT, CORROSIVE, FLAMMABLE (Solvent naphtha (petroleum), light arom., TURPENTINE), MARINE POLLUTANT

**IATA** PAINT, CORROSIVE, FLAMMABLE

**Transport hazard class(es)**

**DOT**



**Class**



8 Corrosive substances.

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· <b>Label</b>	8+3
· <b>ADR, IMDG</b>	
	
· <b>Class</b>	8 Corrosive substances
· <b>Label</b>	8+3
· <b>IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8+3
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Product contains environmentally hazardous substances: dipentene
· <b>Marine pollutant:</b>	Yes Symbol (fish and tree)
· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Danger code (Kemler):</b>	83
· <b>EMS Number:</b>	F-E,S-C
· <b>Segregation groups</b>	Heavy metals and their salts (including their organometallic compounds)
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	UN3470, Paint, corrosive, flammable, ENVIRONMENTALLY HAZARDOUS, 8 (3), II

### 15 Regulatory information

· <b>Sara</b>	
· <b>Section 355 (extremely hazardous substances):</b>	None of the ingredient is listed.
· <b>Section 313 (Specific toxic chemical listings):</b>	
75-09-2	dichlormethane
108-88-3	toluene
1330-20-7	xylene
· <b>TSCA (Toxic Substances Control Act):</b>	All ingredients are listed.
· <b>Proposition 65</b>	
· <b>Chemicals known to cause cancer:</b>	
75-09-2	dichlormethane
· <b>Chemicals known to cause reproductive toxicity for females:</b>	
108-88-3	toluene

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**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

149-57-5 2-ethylhexanoic acid

108-88-3 toluene

**Carcinogenity categories**
**EPA (Environmental Protection Agency)**

75-09-2	dichlormethane	B2
108-88-3	toluene	II
1330-20-7	xylene	I
50-00-0	Methanal	B1

**TLV (Threshold Limit Value established by ACGIH)**

75-09-2	dichlormethane	A3
76-22-2	bornan-2-one	A4
108-88-3	toluene	A4
1330-20-7	xylene	A4
108-94-1	cyclohexanone	A3
80-56-8	pin-2(3)-ene	A4
50-00-0	Methanal	A2
127-91-3	beta-Pinene	A4

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

75-09-2 dichlormethane

50-00-0 Methanal

**OSHA-Ca (Occupational Safety & Health Administration)**

75-09-2 dichlormethane

50-00-0 Methanal

**GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**


GHS02   GHS05   GHS07   GHS08

**Signal word Danger**
**Hazard-determining components of labeling:**

 Decahydronaphthalene  
 Solvent naphtha (petroleum), light arom.  
 Turpentine, oil  
 dichlormethane

**Hazard statements**

 H226 Flammable liquid and vapour.  
 H332 Harmful if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H351 Suspected of causing cancer.  
 H360 May damage fertility or the unborn child.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H304 May be fatal if swallowed and enters airways.

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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 label before use.*
- P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.*
- P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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.*
- P310 *Immediately call a POISON CENTER or doctor/physician.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

**Information about limitation of use:**

- Employment restrictions concerning young persons must be observed.*
- Employment restrictions concerning pregnant and lactating women must be observed.*

**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: TFD-MSDS**

**Contact: Mr. Hesse**

**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*

*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)*

*HMS: Hazardous Materials Identification System (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*(calc.): calculated*

**\* Data compared to the previous version altered.**