

1 Identification

- **Product identifier**
- **Trade name:** N 472 LUSTRE MOTHER OF PEARL
- **Article number:** 88030002
- **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: ifd-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.	25-50%
5593-70-4	titanium tetrabutanolate	10-25%
514-10-3	abietic acid, technical	10-25%
80-56-8	pin-2(3)-ene	5-10%
127-91-3	beta-Pinene	≤ 2.5%
7705-14-8	(+)-1-methyl-4-(1-methylvinyl)cyclohexene	≤ 1.0%

3 Hazard(s) identification

Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 Health hazard

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



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

(Contd. on page 2)

Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 1)



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness

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:

titanium tetrabutanolate
 Solvent naphtha (petroleum), light arom.
 pin-2(3)-ene
 beta-Pinene

Hazard statements

H226 *Flammable liquid and vapour.*
 H315 *Causes skin irritation.*
 H318 *Causes serious eye damage.*
 H317 *May cause an allergic skin reaction.*
 H335-H336 *May cause respiratory irritation. May cause drowsiness or dizziness.*
 H304 *May be fatal if swallowed and enters airways.*

Precautionary statements

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)



Health = 2
 Fire = 2
 Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = 2
	2	Fire = 2
REACTIVITY	0	Reactivity = 0

Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 2)

4 First-aid measures

- **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.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire-fighting measures

- **Suitable extinguishing agents:** CO₂, 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:** No special measures required.

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:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewer/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.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **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.
Protect from heat and direct sunlight.
Prevent from drying out.

(Contd. on page 4)

Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 3)

· *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:*

80-56-8 pin-2(3)-ene

TLV (j) Long-term value: 112 mg/m³, 20 ppm
(SEN) NIC-DSEN

127-91-3 beta-Pinene

TLV (j) Long-term value: 112 mg/m³, 20 ppm
(SEN) NIC-DSEN

· *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.
- Avoid contact with the skin.
- 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

USA

(Contd. on page 5)

Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 4)

9 Physical and chemical properties

General Information

Appearance:

Form:	Fluid
Color:	Dark 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: 255 °C (491 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Explosion limits:

Lower:	0.7 Vol %
Upper:	7.5 Vol %

Vapor pressure at 20 °C (68 °F): 5 hPa (4 mm Hg)

Density: Not determined.

Relative density: Not determined.

Vapour density: Not determined.

Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:

Organic solvents:	40 - 50 %
Water:	0.0 %

Solids content: 40 - 50 %

Other information: 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.

USA

(Contd. on page 6)

Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 5)

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)

5593-70-4 titanium tetrabutanolate

Oral	LD50	3122 mg/kg (rat)
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Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye:

Strong irritant with the danger of severe eye injury.

Irritating effect.

Sensitization: Sensitization possible through skin contact.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

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)

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 3 (in accordance with VwVwS from 15.05.1999): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely 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.

(Contd. on page 7)

Printing date 01/07/2014

Version number 11





Reviewed on 01/07/2014

Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 6)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1263
· UN proper shipping name	
· DOT	Paint
· ADR	1263 Paint, special provision 640E, ENVIRONMENTALLY HAZARDOUS
· IMDG	PAINT (Solvent naphtha (petroleum), light arom., alpha-PINENE), MARINE POLLUTANT
· IATA	PAINT
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids.
· Label	3
· ADR, IMDG	
 	
· Class	3 Flammable liquids.
· Label	3
· IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Product contains environmentally hazardous substances: pin-2(3)-ene, Solvent naphtha (petroleum), light arom.
· Marine pollutant:	Yes
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30
· EMS Number:	F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

(Contd. on page 8)

USA

Printing date 01/07/2014

Version number 11

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Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 7)

UN "Model Regulation":

UN1263, Paint, special provision 640E, ENVIRONMENTALLY HAZARDOUS, 3, III

15 Regulatory information

Sara
Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65
Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

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.

Carcinogenity categories
EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

80-56-8 | pin-2(3)-ene

A4

127-91-3 | beta-Pinene

A4

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.

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:

titanium tetrabutanolate

Solvent naphtha (petroleum), light arom.

pin-2(3)-ene

beta-Pinene

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

(Contd. on page 9)

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Version number 11

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Trade name: N 472 LUSTRE MOTHER OF PEARL

(Contd. of page 8)

- H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
 H304 May be fatal if swallowed and enters airways.
- Precautionary statements**
- 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.

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)

HMTS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

(calc.): calculated

* Data compared to the previous version altered.