



Safety Data Sheet acc. to OSHA HCS

Printing date 02/07/2020

Reviewed on 02/07/2020

1 Identification

- **Product identifier**
- **Trade name:** VP404 ETCHING PRIMER
- **Article number:** VP404
- **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
- **Information department:** Product safety department
- **Emergency telephone number:**
24 Hrs Emergency Contact:
INFOTRAC
1-800-535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Acute 2 H401 Toxic to aquatic life.

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- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS02 GHS07 GHS08 GHS09

- **Signal word** Danger

- **Hazard-determining components of labeling:**

ethanol

butanone

titanium dioxide

propan-2-ol

- **Hazard statements**

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause cancer.

May cause drowsiness or dizziness.

Toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Collect spillage.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 3
Reactivity = 0

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



Health = *2
Fire = 3
Reactivity = 0

- **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:**

78-93-3	butanone	25-50%
67-63-0	propan-2-ol	10-25%
64-17-5	ethanol	10-25%
7779-90-0	trizinc bis(orthophosphate)	2.5-10%
13463-67-7	titanium dioxide	2.5-10%
110-43-0	heptan-2-one	2.5-10%

4 First-aid measures

- **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:** 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.
- **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.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

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- **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:**
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.
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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

78-93-3	butanone	200 ppm
67-63-0	propan-2-ol	400 ppm
64-17-5	ethanol	1,800 ppm
7779-90-0	trizinc bis(orthophosphate)	12 mg/m ³
13463-67-7	titanium dioxide	30 mg/m ³
110-43-0	heptan-2-one	150 ppm
27360-07-2	poly(vinyl butyral-co-vinyl alcohol-co-vinyl acet	30 mg/m ³
112926-00-8	Precipitated silica (Silica-Amorphous)	18 mg/m ³
1333-86-4	Carbon black	9 mg/m ³

· PAC-2:

78-93-3	butanone	2700* ppm
67-63-0	propan-2-ol	2000* ppm
64-17-5	ethanol	3300* ppm
7779-90-0	trizinc bis(orthophosphate)	36 mg/m ³
13463-67-7	titanium dioxide	330 mg/m ³
110-43-0	heptan-2-one	670 ppm
27360-07-2	poly(vinyl butyral-co-vinyl alcohol-co-vinyl acet	330 mg/m ³
112926-00-8	Precipitated silica (Silica-Amorphous)	200 mg/m ³
1333-86-4	Carbon black	99 mg/m ³

· PAC-3:

78-93-3	butanone	4000* ppm
67-63-0	propan-2-ol	12000** ppm
64-17-5	ethanol	15000* ppm
7779-90-0	trizinc bis(orthophosphate)	220 mg/m ³
13463-67-7	titanium dioxide	2,000 mg/m ³

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110-43-0	heptan-2-one	4000* ppm
27360-07-2	poly(vinyl butyral-co-vinyl alcohol-co-vinyl acet	2,000 mg/m ³
112926-00-8	Precipitated silica (Silica-Amorphous)	1,200 mg/m ³
1333-86-4	Carbon black	590 mg/m ³

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 protection against explosions and fires:**
 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 receptacle 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 systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
 At this time, the other constituents have no known exposure limits.

78-93-3 butanone

PEL	Long-term value: 590 mg/m ³ , 200 ppm
REL	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
TLV	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm BEI

67-63-0 propan-2-ol

PEL	Long-term value: 980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI

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64-17-5 ethanolPEL Long-term value: 1900 mg/m³, 1000 ppmREL Long-term value: 1900 mg/m³, 1000 ppmTLV Short-term value: 1880 mg/m³, 1000 ppm**110-43-0 heptan-2-one**PEL Long-term value: 465 mg/m³, 100 ppmREL Long-term value: 465 mg/m³, 100 ppmTLV Long-term value: 233 mg/m³, 50 ppm**Ingredients with biological limit values:****78-93-3 butanone**

BEI 2 mg/L

Medium: urine

Time: end of shift

Parameter: MEK

67-63-0 propan-2-ol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

- **Additional information:** The lists that were valid during the creation 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.

Avoid contact with the eyes and skin.

- **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.

- **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.

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Light brown
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value: Not determined (pH N/A in solvent coatings)

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	78 °C (172.4 °F)

· Flash point: -4 °C (24.8 °F)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 425 °C (797 °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:	1.8 Vol %
Upper:	15 Vol %

· Vapor pressure at 20 °C (68 °F): 105 hPa (78.8 mm Hg)

· Density at 20 °C (68 °F): 0.835 g/cm³ (6.9681 lbs/gal)

· Relative density: Not determined.

· Vapor 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:	74.5 %
VOC content:	74.51 %
	787.4 g/l / 6.57 lb/gal

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Solids content: 31.3 %
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:**

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

7779-90-0 trizinc bis(orthophosphate)

Oral LD50 >5,000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

67-63-0	propan-2-ol	3
64-17-5	ethanol	1
13463-67-7	titanium dioxide	2B
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	3
112926-00-8	Precipitated silica (Silica-Amorphous)	3
1333-86-4	Carbon black	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

12 Ecological information

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

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- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **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.

14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UN1263
- **UN proper shipping name**
- **DOT** Paint
- **IMDG** PAINT (trizinc bis(orthophosphate)), MARINE POLLUTANT
- **IATA** PAINT
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 3 Flammable liquids
- **Label** 3

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· **IMDG**

· **Class** 3 Flammable liquids
 · **Label** 3

· **IATA**

· **Class** 3 Flammable liquids
 · **Label** 3

· **Packing group**
 · **DOT, IMDG, IATA** II

· **Environmental hazards:**
 · **Marine pollutant:** Yes
 Symbol (fish and tree)

· **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 MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 5 L
 On cargo aircraft only: 60 L

· **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, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 · **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 | propan-2-ol

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7779-90-0 trizinc bis(orthophosphate)

· TSCA (Toxic Substances Control Act):

78-93-3	butanone	ACTIVE
67-63-0	propan-2-ol	ACTIVE
64-17-5	ethanol	ACTIVE
7779-90-0	trizinc bis(orthophosphate)	ACTIVE
13463-67-7	titanium dioxide	ACTIVE
110-43-0	heptan-2-one	ACTIVE
27360-07-2	poly(vinyl butyral-co-vinyl alcohol-co-vinyl acet	ACTIVE
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	ACTIVE
51274-00-1	ALPHA-IRON(III) OXIDE	ACTIVE
1333-86-4	Carbon black	ACTIVE
8002-74-2	Paraffin waxes and Hydrocarbon waxes	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65
· Chemicals known to cause cancer:

13463-67-7	titanium dioxide
1333-86-4	Carbon black

· 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:

64-17-5	ethanol
---------	---------

· Carcinogenic categories
· EPA (Environmental Protection Agency)

78-93-3	butanone	I
7779-90-0	trizinc bis(orthophosphate)	D, I, II

· TLV (Threshold Limit Value established by ACGIH)

67-63-0	propan-2-ol	A4
64-17-5	ethanol	A3
13463-67-7	titanium dioxide	A4
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
1333-86-4	Carbon black	A4

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

13463-67-7	titanium dioxide
1333-86-4	Carbon black

· GHS label elements

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

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- **Hazard pictograms**



GHS02 GHS07 GHS08 GHS09

- **Signal word** Danger

- **Hazard-determining components of labeling:**

ethanol
 butanone
 titanium dioxide
 propan-2-ol

- **Hazard statements**

Highly flammable liquid and vapor.
 Causes serious eye irritation.
 May cause cancer.
 May cause drowsiness or dizziness.
 Toxic to aquatic life.
 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Avoid release to the environment.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF exposed or concerned: Get medical advice/attention.
 Call a poison center/doctor if you feel unwell.
 If eye irritation persists: Get medical advice/attention.
 In case of fire: Use for extinction: CO₂, powder or water spray.
 Collect spillage.
 Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **National regulations:**

- **Additional classification according to Decree on Hazardous Materials:**

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.

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· **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 SDS:** Environment protection department.
- **Contact:** Product Safety Dept.
- **Date of preparation / last revision** 02/07/2020 / 3
- **Abbreviations and acronyms:**
 - 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)
 - 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
 - NIOSH: National Institute for Occupational Safety
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - BEL: Biological Exposure Limit
 - Flam. Liq. 2: Flammable liquids – Category 2
 - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 - Carc. 1A: Carcinogenicity – Category 1A
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
 - Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- *** Data compared to the previous version altered.**

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