

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

| ULTRA Black Paste | | GSLA_ULTRA Black Paste 1000g | |
|--------------------------|---------------------|-------------------------------------|-------------------|
| Product specification | RS_FP_606723 | Revision Date | 01/27/2026 |
| Version | 1.4 | Print Date | 01/27/2026 |
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SECTION 1. IDENTIFICATION

Product name : **ULTRA Black Paste**
 GSLA_ULTRA Black Paste 1000g
 Product code : **1436352**

Manufacturer or supplier's details

Company name of supplier : Vibrantz Performance Coatings
 S.A. de C.V
 Address : Carretera Celaya Salamanca Km. 12.5
 Villagran GUA 38260
 Telephone : +524111551125
 Telefax : +524111604218
 E-mail address of person responsible for the SDS : PS.Request.americas@vibrantz.com

Emergency telephone number

In-Country Number : (800)424-9300
 CHEMTREC Global Number : +(1)-703-527-3887 (Call Collect)

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids : Category 2
 Eye irritation : Category 2A
 Skin sensitisation : Category 1
 Carcinogenicity : Category 2
 Specific target organ toxicity - single exposure : Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H351 Suspected of causing cancer.
 H370 Causes damage to organs.

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| | | |
|--------------------------|----------------------|--|
| Precautionary statements | : Prevention: | |
| | P201 | Obtain special instructions before use. |
| | P202 | Do not handle until all safety precautions have been read and understood. |
| | P210 | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. |
| | P233 | Keep container tightly closed. |
| | P240 | Ground/bond container and receiving equipment. |
| | P241 | Use explosion-proof electrical/ ventilating/ lighting equipment. |
| | P242 | Use only non-sparking tools. |
| | P243 | Take precautionary measures against static discharge. |
| | P260 | Do not breathe mist or vapours. |
| | P264 | Wash skin thoroughly after handling. |
| | P270 | Do not eat, drink or smoke when using this product. |
| | P272 | Contaminated work clothing must not be allowed out of the workplace. |
| | P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| | Response: | |
| | P303 + P361 + P353 | IF ON SKIN (or hair): 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. |
| | P307 + P311 | IF exposed: Call a POISON CENTER or doctor/ physician. |
| | P333 + P313 | If skin irritation or rash occurs: Get medical advice/ attention. |
| | P337 + P313 | If eye irritation persists: Get medical advice/ attention. |
| | P363 | Wash contaminated clothing before reuse. |
| | P370 + P378 | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. |
| | Storage: | |
| | P403 + P235 | Store in a well-ventilated place. Keep cool. |
| | Disposal: | |
| | P501 | Dispose of contents/ container to an approved waste disposal plant. |

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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
 Chemical nature : organic solvent
 inorganic pigment
 inorganic metal-nonmetal compound
 silicatic material
 metal/metal compound
 water
 carbonic acid/ester/anhydride
 alcohol
 glycol ether/-acetate

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|----------------------|-------------|-----------------------|
| ethanol | 64-17-5 | >= 30 - < 50 |
| Molybdenum(VI) oxide | 1313-27-5 | >= 5 - < 10 |
| mica | 12001-26-2 | >= 5 - < 10 |
| silicon | 7440-21-3 | >= 5 - < 10 |
| manganese | 7439-96-5 | >= 1 - < 5 |
| ethyl acetate | 141-78-6 | >= 1 - < 5 |
| methanol | 67-56-1 | >= 1 - < 5 |
| 2-butoxyethanol | 111-76-2 | >= 1 - < 5 |
| boron orthophosphate | 13308-51-5 | >= 1 - < 5 |
| Silica, amorphous | 112945-52-5 | >= 0.1 - < 1 |
| kaolin | 1332-58-7 | >= 0.1 - < 1 |
| 4-methylpentan-2-one | 108-10-1 | >= 0.1 - < 1 |
| quartz | 14808-60-7 | >= 0.1 - < 1 |
| polyaminoamide | 162627-17-0 | >= 0.1 - < 1 |

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.
 Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
 If skin irritation persists, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.
 Remove contact lenses.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.

If swallowed : Rinse mouth immediately with plenty of water and seek medical advice.
 Keep respiratory tract clear.

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Do NOT induce vomiting.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
 Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
 Causes serious eye irritation.
 Suspected of causing cancer.
 Causes damage to organs.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Alcohol-resistant foam
 Carbon dioxide (CO2)
 Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
 Do not use a solid water stream as it may scatter and spread fire.

Hazardous combustion products : No hazardous combustion products are known

Further information : Use a water spray to cool fully closed containers.
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
 For safety reasons in case of fire, cans should be stored separately in closed containments.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Material can create slippery conditions.
 Use personal protective equipment.
 Ensure adequate ventilation.
 Remove all sources of ignition.
 Evacuate personnel to safe areas.

Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform respective authorities.

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Methods and materials for containment and cleaning up : Clean contaminated floors and objects thoroughly while observing environmental regulations. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Do not spray on a naked flame or any incandescent material.

Advice on safe handling : Avoid release to the environment. Avoid formation of aerosol. Do not breathe vapours/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|----------------------|-----------|-------------------------------|--|-----------|
| ethanol | 64-17-5 | STEL | 1,000 ppm | ACGIH |
| | | TWA | 1,000 ppm 1,900 mg/m3 | NIOSH REL |
| | | TWA | 1,000 ppm 1,900 mg/m3 | OSHA Z-1 |
| | | TWA | 1,000 ppm 1,900 mg/m3 | OSHA P0 |
| Molybdenum(VI) oxide | 1313-27-5 | TWA | 5 mg/m3 (Molybdenum) | OSHA Z-1 |
| | | TWA (Res- | 0.5 mg/m3 | ACGIH |

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| | | | | |
|---------------|------------|-------------------------------------|-------------------------------------|-----------|
| | | pirable particulate matter) | (Molybdenum) | |
| | | TWA | 5 mg/m3 (Molybdenum) | OSHA P0 |
| mica | 12001-26-2 | TWA (Respirable particulate matter) | 0.1 mg/m3 | ACGIH |
| | | TWA (Dust) | 20 Million particles per cubic foot | OSHA Z-3 |
| | | TWA (Respirable) | 3 mg/m3 | NIOSH REL |
| | | TWA (respirable dust fraction) | 3 mg/m3 | OSHA P0 |
| silicon | 7440-21-3 | TWA (Respirable) | 5 mg/m3 | NIOSH REL |
| | | TWA (total) | 10 mg/m3 | NIOSH REL |
| | | TWA (total dust) | 15 mg/m3 | OSHA Z-1 |
| | | TWA (respirable fraction) | 5 mg/m3 | OSHA Z-1 |
| | | TWA (Total dust) | 10 mg/m3 | OSHA P0 |
| | | TWA (respirable dust fraction) | 5 mg/m3 | OSHA P0 |
| manganese | 7439-96-5 | TWA (Fumes) | 1 mg/m3 (Manganese) | NIOSH REL |
| | | ST (Fumes) | 3 mg/m3 (Manganese) | NIOSH REL |
| | | C (Fumes) | 5 mg/m3 | OSHA Z-1 |
| | | TWA (Fumes) | 1 mg/m3 (Manganese) | OSHA P0 |
| | | STEL (Fumes) | 3 mg/m3 (Manganese) | OSHA P0 |
| | | TWA (Inhalable particulate matter) | 0.1 mg/m3 (Manganese) | ACGIH |
| | | TWA (Respirable particulate matter) | 0.02 mg/m3 (Manganese) | ACGIH |
| ethyl acetate | 141-78-6 | TWA | 400 ppm | ACGIH |
| | | TWA | 400 ppm 1,400 mg/m3 | NIOSH REL |
| | | TWA | 400 ppm 1,400 mg/m3 | OSHA Z-1 |
| | | TWA | 400 ppm 1,400 mg/m3 | OSHA P0 |
| methanol | 67-56-1 | TWA | 200 ppm | ACGIH |

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| | | | | |
|----------------------|-------------|-------------------------------------|--|-----------|
| | | STEL | 250 ppm | ACGIH |
| | | ST | 250 ppm 325 mg/m3 | NIOSH REL |
| | | TWA | 200 ppm 260 mg/m3 | NIOSH REL |
| | | TWA | 200 ppm 260 mg/m3 | OSHA Z-1 |
| | | TWA | 200 ppm 260 mg/m3 | OSHA P0 |
| | | STEL | 250 ppm 325 mg/m3 | OSHA P0 |
| 2-butoxyethanol | 111-76-2 | TWA | 20 ppm | ACGIH |
| | | TWA | 5 ppm 24 mg/m3 | NIOSH REL |
| | | TWA | 50 ppm 240 mg/m3 | OSHA Z-1 |
| | | TWA | 25 ppm 120 mg/m3 | OSHA P0 |
| Silica, amorphous | 112945-52-5 | TWA (Dust) | 20 Million particles per cubic foot (Silica) | OSHA Z-3 |
| | | TWA (Dust) | 80 mg/m3 / %SiO2 (Silica) | OSHA Z-3 |
| | | TWA | 6 mg/m3 (Silica) | NIOSH REL |
| kaolin | 1332-58-7 | TWA (Respirable particulate matter) | 2 mg/m3 | ACGIH |
| | | TWA (Respirable) | 5 mg/m3 | NIOSH REL |
| | | TWA (total) | 10 mg/m3 | NIOSH REL |
| | | TWA (total dust) | 15 mg/m3 | OSHA Z-1 |
| | | TWA (respirable fraction) | 5 mg/m3 | OSHA Z-1 |
| | | TWA (Total dust) | 10 mg/m3 | OSHA P0 |
| | | TWA (respirable dust fraction) | 5 mg/m3 | OSHA P0 |
| | | PEL (respirable) | 0.05 mg/m3 | OSHA CARC |
| 4-methylpentan-2-one | 108-10-1 | TWA | 20 ppm | ACGIH |
| | | STEL | 75 ppm | ACGIH |
| | | TWA | 50 ppm 205 mg/m3 | NIOSH REL |
| | | ST | 75 ppm 300 mg/m3 | NIOSH REL |
| | | TWA | 100 ppm 410 mg/m3 | OSHA Z-1 |

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| | | | | |
|--------|------------|-------------------------------------|----------------------|-----------|
| | | TWA | 50 ppm 205 mg/m3 | OSHA P0 |
| | | STEL | 75 ppm 300 mg/m3 | OSHA P0 |
| quartz | 14808-60-7 | TWA (Respirable dust) | 0.05 mg/m3 | OSHA Z-1 |
| | | TWA (respirable) | 10 mg/m3 / %SiO2+2 | OSHA Z-3 |
| | | TWA (respirable) | 250 mppcf / %SiO2+5 | OSHA Z-3 |
| | | TWA (respirable dust fraction) | 0.1 mg/m3 | OSHA P0 |
| | | TWA (Respirable particulate matter) | 0.025 mg/m3 (Silica) | ACGIH |
| | | PEL (respirable) | 0.05 mg/m3 | OSHA CARC |
| | | TWA (Respirable dust) | 0.05 mg/m3 (Silica) | NIOSH REL |

Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|----------------------|----------|-------------------------|---------------------|--|---------------------------|-----------|
| methanol | 67-56-1 | Methanol | Urine | End of shift (As soon as possible after exposure ceases) | 15 mg/l | ACGIH BEI |
| 2-butoxyethanol | 111-76-2 | Butoxyacetic acid (BAA) | Urine | End of shift (As soon as possible after exposure ceases) | 200 mg/g Creatinine | ACGIH BEI |
| 4-methylpentan-2-one | 108-10-1 | methyl isobutyl ketone | Urine | End of shift (As soon as possible after exposure ceases) | 1 mg/l | ACGIH BEI |

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally re-

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- Hand protection : required.
 In the case of vapour formation use a respirator with an approved filter.

: Wear protective gloves, for example: polyvinyl alcohol or nitrile-butyl-rubber gloves, or similar; Glove thickness: > 0.4 mm and Break Through time: > 480 minutes. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Before removing gloves clean them with soap and water.
- Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
 Tightly fitting safety goggles.
- Skin and body protection : Impervious clothing

Protective measures : Wear suitable protective equipment.

Hygiene measures : Wash hands before breaks and at the end of workday.
 Remove contaminated clothing and protective equipment before entering eating areas.
 Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : paste
- Colour : black
- Odour : solvent-like
- Flash point : 57 °F / 14 °C
 Method: calculated
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Burning rate : No data available
- Self-ignition : No data available
- Upper explosion limit / Upper flammability limit : 19 %(V)
- Lower explosion limit / Lower flammability limit : 1.1 %(V)
- Relative vapour density : No data available

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| | | |
|--|---|--|
| Relative density | : | No data available |
| Bulk density | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | soluble |
| Solubility in other solvents | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | > 411 mm ² /s (73 °F / 23 °C) > 473 mm ² /s (68 °F / 20 °C) |
| Flow time | : | 61 s (73 °F / 23 °C) Cross section: 6 mm Method: ISO 2431 > 100 s (73 °F / 23 °C) Cross section: 4 mm Method: ISO 2431 ≥ 90 s (68 °F / 20 °C) Cross section: 4 mm Method: DIN 53211 ≥ 30 s (73 °F / 23 °C) Cross section: 3 mm Method: ISO 2431 |
| Explosive properties | : | No data available |
| Oxidizing properties | : | Not applicable |
| Refractive index | : | No data available |
| Volatile organic compounds (VOC) content | : | This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450. |

This product contains components that are reportable under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

SECTION 10. STABILITY AND REACTIVITY

| | | |
|------------|---|---|
| Reactivity | : | No decomposition if stored and applied as directed. |
|------------|---|---|

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Chemical stability : Stable under normal conditions.
 Possibility of hazardous reactions : No decomposition if stored and applied as directed.
 Conditions to avoid : Heat, flames and sparks.
 Incompatible materials : Not applicable
 Hazardous decomposition products : Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Remarks: No data available
 Acute toxicity estimate: 3,626 mg/kg
 Method: Calculation method

Acute inhalation toxicity : Remarks: No data available
 Acute toxicity estimate: 95.33 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour
 Method: Calculation method

Acute dermal toxicity : Remarks: No data available
 Acute toxicity estimate: > 5,000 mg/kg
 Method: Calculation method

Components:

ethanol:

Acute oral toxicity : LD50 Oral (Rat, male and female): 10,470 mg/kg
 Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 51 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour
 Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Method: OECD Test Guideline 402

Molybdenum(VI) oxide:

Acute oral toxicity : LD50 (Rat, male and female): 4,461 mg/kg
 Method: OECD Test Guideline 401
 GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,840 mg/m3

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Exposure time: 4 h
 Test atmosphere: dust/mist
 Method: OECD Test Guideline 403
 Target Organs: Mucous membranes
 GLP: yes
 Assessment: The substance or mixture has no acute inhalation toxicity
 Remarks: No adverse effect has been observed in acute toxicity tests.

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
 Method: OECD Test Guideline 402
 GLP: yes
 Assessment: The substance or mixture has no acute dermal toxicity

manganese:

Acute oral toxicity : LD50 Oral (Rat): 9 g/kg

ethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): 6,100 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 22.5 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour

Acute dermal toxicity : LD50 Dermal (Rabbit): > 18,000 mg/kg

methanol:

Acute oral toxicity : LD50 Oral (Rat): 6,200 mg/kg

2-butoxyethanol:

Acute oral toxicity : LD50 Oral (Rat, male and female): 1,200 mg/kg
 Method: OECD Test Guideline 401
 GLP: no

Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 2,000 mg/kg
 Method: OECD Test Guideline 402
 GLP: yes

boron orthophosphate:

Acute oral toxicity : LD50 (Rat, female): > 300 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.31 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist

Method: ISO TC58

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Silica, amorphous:

Acute oral toxicity : LD50 Oral (Rat): 3,160 mg/kg

4-methylpentan-2-one:

Acute oral toxicity : LD50 Oral (Rat): 2,080 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 3,000 mg/kg

quartz:

Acute oral toxicity : LD50 Oral (Rat): 500 mg/kg
 Assessment: The substance or mixture has no acute oral toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

ethanol:

Species : Rabbit
 Exposure time : 24 h
 Method : OECD Test Guideline 404
 Result : No skin irritation

Molybdenum(VI) oxide:

Species : Rabbit
 Exposure time : 4 h
 Assessment : No skin irritation
 Method : OECD Test Guideline 404
 Result : No skin irritation
 GLP : yes

2-butoxyethanol:

Species : Rabbit
 Exposure time : 72 h
 Method : OECD Test Guideline 404
 Result : Irritating to skin.
 GLP : yes

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

ethanol:

Species : Rabbit
 Result : Eye irritation
 Method : OECD Test Guideline 405

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Molybdenum(VI) oxide:

Species : Rabbit
 Result : Irritating to eyes.
 Assessment : Irritating to eyes.

ethyl acetate:

Species : Rabbit
 Result : No eye irritation

2-butoxyethanol:

Result : Eye irritation

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Suspected of causing cancer.

| | | |
|-------------|---|------------|
| IARC | Group 2B: Possibly carcinogenic to humans Molybdenum(VI) oxide | 1313-27-5 |
| | Group 2B: Possibly carcinogenic to humans 4-methylpentan-2-one | 108-10-1 |
| OSHA | OSHA specifically regulated carcinogen kaolin (crystalline silica) | 1332-58-7 |
| | OSHA specifically regulated carcinogen quartz (crystalline silica) | 14808-60-7 |
| NTP | Known to be human carcinogen kaolin (Silica, Crystalline (Respirable Size)) | 1332-58-7 |
| | Known to be human carcinogen quartz (Silica, Crystalline (Respirable Size)) | 14808-60-7 |

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Causes damage to organs.

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Components:

Molybdenum(VI) oxide:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

ethanol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13,000 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 12,340 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l
 End point: Growth rate
 Exposure time: 72 h
 Test Type: static test
 Method: OECD Test Guideline 201

EC10 (Chlorella vulgaris (Fresh water algae)): 11.5 mg/l
 Exposure time: 72 h
 Test Type: static test

Molybdenum(VI) oxide:

Toxicity to fish : (Oncorhynchus mykiss (rainbow trout)): 100 mg/l
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

(Pimephales promelas (fathead minnow)): 370 mg/l
 Exposure time: 96 h
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): 100 mg/l
 Exposure time: 24 h

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Method: OECD Test Guideline 202
 Remarks: No toxicity at the limit of solubility

(Daphnia magna (Water flea)): 100 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202
 Remarks: No toxicity at the limit of solubility

ethyl acetate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 220 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 560 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (algae): 3,300 mg/l
 Exposure time: 48 h

methanol:

Toxicity to fish : LC50 (Fish): 28,200 mg/l
 Exposure time: 96 h

2-butoxyethanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,490 mg/l
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 203
 GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,800 mg/l
 Exposure time: 48 h

boron orthophosphate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0.207 mg/l
 Exposure time: 96 h
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50: > 0.135 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 1.35 mg/l
 Exposure time: 72 h
 Test Type: static test

M-Factor (Acute aquatic toxicity) : 1

4-methylpentan-2-one:

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 496 - 514 mg/l
 Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 170 mg/l
 Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): 400 mg/l
 Exposure time: 96 h

Persistence and degradability

Components:

ethanol:

- Biodegradability : aerobic
 Result: Readily biodegradable.
 Biodegradation: 97 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

ethanol:

- Bioaccumulation : Bioconcentration factor (BCF): 0.66
 Remarks: Does not bioaccumulate.
- Partition coefficient: n-octanol/water : log Pow: -0.35 (75 °F / 24 °C)
 pH: 7.4
 Method: OECD Test Guideline 107

ethyl acetate:

- Partition coefficient: n-octanol/water : log Pow: 0.73 (68 °F / 20 °C)

methanol:

- Partition coefficient: n-octanol/water : log Pow: -0.77

2-butoxyethanol:

- Partition coefficient: n-octanol/water : log Pow: 0.77 (68 °F / 20 °C)
 pH: 7

4-methylpentan-2-one:

- Partition coefficient: n-octanol/water : Pow: 1.19

Mobility in soil

No data available

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Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
 Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : None known.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Send to a licensed waste management company. Dispose of wastes in an approved waste disposal facility. The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 1993
 Proper shipping name : FLAMMABLE LIQUID, N.O.S. (ethanol,)
 Class : 3
 Packing group : II
 Labels : 3

IATA-DGR

UN/ID No. : UN 1993
 Proper shipping name : Flammable liquid, n.o.s. (ethanol, ethyl acetate)
 Class : 3
 Packing group : II
 Labels : Flammable Liquids
 Packing instruction (cargo aircraft) : 364
 Packing instruction (passenger aircraft) : 353

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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IMDG-Code

UN number : UN 1993
 Proper shipping name : FLAMMABLE LIQUID, N.O.S.
 (ethanol, ethyl acetate)
 Class : 3
 Packing group : II
 Labels : 3
 EmS Code : F-E, S-E
 Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship type : N/A
 Pollution category : N/A

National Regulations

49 CFR

UN/ID/NA number : UN 1993
 Proper shipping name : Flammable liquids, n.o.s.
 (ethanol, ethyl acetate)
 Class : 3
 Packing group : II
 Labels : FLAMMABLE LIQUID
 ERG Code : 128
 Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|----------------------|----------|--------------------|-----------------------------|
| ethyl acetate | 141-78-6 | 5000 | 205761 |
| methanol | 67-56-1 | 5000 | 228310 |
| 4-methylpentan-2-one | 108-10-1 | 5000 | 1136363 |

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
 Respiratory or skin sensitisation
 Carcinogenicity
 Specific target organ toxicity (single or repeated exposure)
 Serious eye damage or eye irritation

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SARA 313 : This product contains components that are reportable under the regulation.

Chromium III Compounds
Cobalt, inorganic compounds
Molybdenum trioxide
Manganese
Methanol
Certain Glycol Ethers
Methyl isobutyl ketone

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product contains components that are reportable under the hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product contains components that are reportable under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

This product contains components that are reportable under the U.S. Clean Water Act Section 307.

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

This product contains components that are reportable under the regulation.

Pennsylvania Right To Know

This product contains components that are reportable under the regulation.

Maine Chemicals of High Concern

This product contains components that are reportable under the regulation.

Vermont Chemicals of High Concern

This product contains components that are reportable under the regulation.

Washington Chemicals of High Concern

This product contains components that are reportable under the regulation.

New Jersey Right To Know

This product contains components that are reportable under the regulation.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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California List of Hazardous Substances

This product contains components that are reportable under the regulation.

California Permissible Exposure Limits for Chemical Contaminants

This product contains components that are reportable under the regulation.

California Regulated Carcinogens

This product contains components that are reportable under the regulation.

The components of this product are reported in the following inventories:

- TCSI (Taiwan) : On the inventory, or in compliance with the inventory
- TSCA (United States) : All substances listed as active on the TSCA inventory
- AIRC (Australia) : Not in compliance with the inventory
- DSL/NDSL (Canada) : This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.
boron orthophosphate

fatty acids, C16-22, ammonium salts

Feldspar-group minerals

polyaminoamide
- ENCS (Japan) : On the inventory, or in compliance with the inventory
- ISHL (Japan) : Not in compliance with the inventory
- KECI (Korea) : On the inventory, or in compliance with the inventory
- PICCS (Philippines) : Not in compliance with the inventory
- IECSC (China) : On the inventory, or in compliance with the inventory
- NZioC (New Zealand) : Not in compliance with the inventory
- SWISS (Switzerland) : The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory
- EINECS (European Union) : On the inventory, or in compliance with the inventory
- CICR (Turkey) : Not in compliance with the inventory
- TECI (Thailand) : Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
- ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
- NIOSH REL : USA. NIOSH Recommended Exposure Limits
- OSHA CARC : OSHA Specifically Regulated Chemicals/Carcinogens
- OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
- OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
- ACGIH / TWA : 8-hour, time-weighted average
- ACGIH / STEL : Short-term exposure limit
- NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
- NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
- OSHA CARC / PEL : Permissible exposure limit (PEL)
- OSHA P0 / TWA : 8-hour time weighted average
- OSHA P0 / STEL : Short-term exposure limit
- OSHA Z-1 / TWA : 8-hour time weighted average
- OSHA Z-1 / C : Ceiling
- OSHA Z-3 / TWA : 8-hour time weighted average

AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the

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Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 01/27/2026

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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