



PD Stain Color Vial Yellow

ICP Building Solutions Group/Pli-Dek

Version No: 1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **04/22/2020**

Print Date: **04/22/2020**

S.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

| | |
|-------------------------------|----------------------------|
| Product name | PD Stain Color Vial Yellow |
| Synonyms | Not Available |
| Other means of identification | Not Available |

Recommended use of the chemical and restrictions on use

| | |
|--------------------------|-------|
| Relevant identified uses | Color |
|--------------------------|-------|

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

| | |
|-------------------------|--|
| Registered company name | ICP Building Solutions Group/Pli-Dek |
| Address | 4565 W. Watkins Street Phoenix AZ Not applicable |
| Telephone | 623-435-2277 |
| Fax | Not Available |
| Website | www.ICPGROUP.com |
| Email | Not Available |

Emergency phone number

| | |
|-----------------------------------|----------------|
| Association / Organisation | ChemTel |
| Emergency telephone numbers | 1-800-255-3924 |
| Other emergency telephone numbers | 1-813-248-0585 |

SECTION 2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

| | |
|----------------|--|
| Classification | Eye Irritation Category 2A, Specific target organ toxicity - repeated exposure Category 2, Skin Sensitizer Category 1B |
|----------------|--|

Label elements

| | |
|---------------------|--|
| Hazard pictogram(s) | |
|---------------------|--|

| | |
|-------------|----------------|
| SIGNAL WORD | WARNING |
|-------------|----------------|

Hazard statement(s)

| | |
|------|--|
| H319 | Causes serious eye irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H317 | May cause an allergic skin reaction. |

Hazard(s) not otherwise classified

Not Applicable

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Precautionary statement(s) General

| | |
|-------------|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |

Precautionary statement(s) Prevention

| | |
|-------------|--|
| P202 | Do not handle until all Safety Precautions have been read and understood. |
| P260 | Do not breathe mist/vapours/spray. |
| P272 | Contaminated work clothing should not be allowed out of the work place. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P270 | Do not eat, drink or smoke when using this product. |
| P264 | Wash thoroughly after handling. |

Precautionary statement(s) Response

| | |
|-----------------------|--|
| P302+P352 | IF ON SKIN: wash with plenty of water |
| P333+P313 | IF skin irritation or rash occurs; get medical advice/attention. |
| P363 | Wash contaminated clothing before reuse. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing |
| P337+P313 | If eye irritation persists; get medical advice/attention |
| P314 | Get medical advice/attention if you feel unwell |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

| | |
|-------------|--|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|-------------|--|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|------------|-----------|----------------------------------|
| 14807-96-6 | 10-25 | <u>talc</u> |
| 21645-51-2 | .2-5 | <u>aluminium hydroxide</u> |
| 1317-80-2 | 5-15 | <u>titanium dioxide (rutile)</u> |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

| | |
|---------------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. |
| Ingestion | <ul style="list-style-type: none"> ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. |

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Both dermal and oral toxicity of manganese salts is low because of limited solubility of manganese. No known permanent pulmonary sequelae develop after acute manganese exposure. Treatment is supportive.

Continued...

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[Ellenhorn and Barceloux: Medical Toxicology]

In clinical trials with miners exposed to manganese-containing dusts, L-dopa relieved extrapyramidal symptoms of both hypo kinetic and dystonic patients. For short periods of time symptoms could also be controlled with scopolamine and amphetamine. BAL and calcium EDTA prove ineffective.

[Gosselin et al: Clinical Toxicology of Commercial Products.]

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|-------------|
| Fire Incompatibility | None known. |
|-----------------------------|-------------|

Special protective equipment and precautions for fire-fighters

| | |
|------------------------------|--|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Non combustible. ▶ Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: hydrogen iodide silicon dioxide (SiO ₂) metal oxides May emit poisonous fumes. May emit corrosive fumes. |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|---|
| Minor Spills | <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. |
| Major Spills | <ul style="list-style-type: none"> ▶ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. ▶ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na₂S₂O₅) or sodium bisulfite (NaHSO₃), or 12% sodium sulfite (Na₂SO₃) and 8% hydrochloric acid (HCl). |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| | |
|--------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Polyethylene or polypropylene container. ▶ Packing as recommended by manufacturer. |
| Storage incompatibility | Derivative of electropositive metal. Titanium dioxide <ul style="list-style-type: none"> ▶ reacts with strong acids, strong oxidisers ▶ reacts violently with aluminium, calcium, hydrazine, lithium (at around 200 deg C.), magnesium, potassium, sodium, zinc, especially at elevated temperatures - these reactions involves reduction of the oxide and are accompanied by incandescence ▶ dust or powders can ignite and then explode in a carbon dioxide atmosphere ▶ WARNING: Avoid or control reaction with peroxides. All <i>transition metal</i> peroxides should be considered as potentially explosive. |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

█ OCCUPATIONAL EXPOSURE LIMITS (OEL)

█ INGREDIENT DATA

Continued...

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| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---------------------------|---|---------------------------|---------------|---------------|---|
| US NIOSH Recommended Exposure Limits (RELs) | talc | Massive talc, Soapstone silicate, Steatite | 6 (total), 3 (resp) mg/m3 | Not Available | Not Available | Not Available |
| US NIOSH Recommended Exposure Limits (RELs) | talc | Hydrous magnesium silicate, Steatite talc | 2 (resp) mg/m3 | Not Available | Not Available | Not Available |
| US OSHA Permissible Exposure Levels (PELs) - Table Z3 | talc | Silicates: Talc | Not Available | Not Available | Not Available | (Name ((less than 1% crystalline silica); (containing asbestos) Use asbestos limit)) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z3 | talc | Silicates: Talc | 20 mppcf | Not Available | Not Available | (Name ((less than 1% crystalline silica); (not containing asbestos))); (TWA mppcf (((c) Containing less than 1% quartz; if 1% quartz or more, use quartz limit.))) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z3 | talc | Silicates: Soapstone | 20 mppcf | Not Available | Not Available | (Name ((less than 1% crystalline silica))) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | talc | Silicates (less than 1% crystalline silica): Talc (containing no asbestos), respirable dust | Not Available | Not Available | Not Available | See Table Z-3 |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | talc | Silicates (less than 1% crystalline silica): Talc (containing asbestos); use asbestos limit | Not Available | Not Available | Not Available | see 29 CFR 1910.1001; See Table Z-3 |
| US ACGIH Threshold Limit Values (TLV) | talc | Talc: Containing no asbestos fibers | 2 mg/m3 | Not Available | Not Available | Pulm fibrosis; pulm func |
| US ACGIH Threshold Limit Values (TLV) | talc | Talc: Containing asbestos fibers | Not Available | Not Available | Not Available | Use Asbestos TLV® (K) |
| US NIOSH Recommended Exposure Limits (RELs) | aluminium hydroxide | Synonyms vary depending upon the specific aluminum compound. | 2 mg/m3 | Not Available | Not Available | Not Available |
| US NIOSH Recommended Exposure Limits (RELs) | aluminium hydroxide | Synonyms vary depending upon the specific aluminum compound. | 5 mg/m3 | Not Available | Not Available | Not Available |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | aluminium hydroxide | Particulates not otherwise regulated (PNOR): Total dust | 15 mg/m3 | Not Available | Not Available | (f) All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3. |
| US ACGIH Threshold Limit Values (TLV) | aluminium hydroxide | Aluminum metal and insoluble compounds (Inhalable fraction and vapor) | 1 mg/m3 | Not Available | Not Available | Pneumoconiosis; LRT irr; neurotoxicity |
| US NIOSH Recommended Exposure Limits (RELs) | titanium dioxide (rutile) | Rutile, Titanium oxide, Titanium peroxide | Not Available | Not Available | Not Available | Ca See Appendix A |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | titanium dioxide (rutile) | Titanium dioxide: Total dust | 15 mg/m3 | Not Available | Not Available | Not Available |
| US ACGIH Threshold Limit Values (TLV) | titanium dioxide (rutile) | Titanium dioxide | 10 mg/m3 | Not Available | Not Available | LRT irr |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---------------------------|------------------------------------|-----------|-----------|-------------|
| aluminium hydroxide | Aluminum hydroxide | 8.7 mg/m3 | 73 mg/m3 | 440 mg/m3 |
| titanium dioxide (rutile) | Titanium oxide; (Titanium dioxide) | 30 mg/m3 | 330 mg/m3 | 2,000 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|---------------------------|---------------|---------------|
| talc | 1,000 mg/m3 | Not Available |
| aluminium hydroxide | Not Available | Not Available |
| titanium dioxide (rutile) | 5,000 mg/m3 | Not Available |

Exposure controls

| | |
|---|--|
| Appropriate engineering controls | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. |
| Personal protection |  |

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| | |
|--------------------------------|---|
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical 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.</p> <ul style="list-style-type: none"> ▶ Butyl rubber gloves -Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.) |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. |

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|------------------|--|---------------|
| Appearance | Light sensitive. | | |
| Physical state | Liquid | Relative density (Water = 1) | Not Available |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | Not Available | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Available | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Not Available | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

| | |
|----------------|---|
| Inhaled | The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. |
|----------------|---|

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| | |
|---------------------|--|
| Ingestion | <p>The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.</p> <p>Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination.</p> <p>Poisonings rarely occur after oral administration of manganese salts because they are poorly absorbed from the gut.</p> |
| Skin Contact | <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> <p>Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> |
| Eye | <p>This material can cause eye irritation and damage in some persons.</p> <p>Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye.</p> |
| Chronic | <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.</p> <p>Manganese is an essential trace element. Chronic exposure to low levels of manganese can include a mask-like facial expression, spastic gait, tremors, slurred speech, disordered muscle tone, fatigue, anorexia, loss of strength and energy, apathy and poor concentration.</p> <p>The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species.</p> <p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.</p> <p>Overexposure to the breathable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity and chest infections.</p> |

| | | |
|-----------------------------------|--|---|
| PD Stain Color Vial Yellow | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| talc | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] |
| | Oral (rat) LD50: >5000 mg/kg ^[1] | Skin (human): 0.3 mg/3d-I mild Skin: no adverse effect observed (not irritating) ^[1] |
| aluminium hydroxide | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] Skin: no adverse effect observed (not irritating) ^[1] |
| titanium dioxide (rutile) | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] Skin: no adverse effect observed (not irritating) ^[1] |
| Legend: | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances | |

| | | |
|---|--|---------------------------------|
| PD Stain Color Vial Yellow | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.</p> | |
| TALC | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.</p> <p>The overuse of talc in nursing infants has resulted in respiratory damage causing fluid in the lungs and lung inflammation which may lead to death within hours of inhalation.</p> <p>Long-term exposure can also cause a variety of respiratory symptoms.</p> <p>The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> | |
| TITANIUM DIOXIDE (RUTILE) | <p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>Exposure to titanium dioxide is via inhalation, swallowing or skin contact. When inhaled, it may deposit in lung tissue and lymph nodes causing dysfunction of the lungs and immune system. Absorption by the stomach and intestines depends on the size of the particle. Skin (human) 0.3: mg/3d-I mild</p> | |
| TALC & ALUMINIUM HYDROXIDE & TITANIUM DIOXIDE (RUTILE) | No significant acute toxicological data identified in literature search. | |
| Acute Toxicity | × | Carcinogenicity × |
| Skin Irritation/Corrosion | × | Reproductivity × |

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| | | | |
|-----------------------------------|---|--------------------------|---|
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | ✗ |
| Respiratory or Skin sensitisation | ✓ | STOT - Repeated Exposure | ✓ |
| Mutagenicity | ✗ | Aspiration Hazard | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| PD Stain Color Vial Yellow | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|----------------------------|---------------|--------------------|---------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |

| talc | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|------|----------|--------------------|-------------------------------|----------------|--------|
| | LC50 | 96 | Fish | 89-581.016mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | 7-202.7mg/L | 2 |
| | NOEC | 720 | Crustacea | 1-459.798mg/L | 2 |

| aluminium hydroxide | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---------------------|----------|--------------------|-------------------------------|-----------------|--------|
| | LC50 | 96 | Fish | 0.001-0.134mg/L | 2 |
| | EC50 | 48 | Crustacea | 0.7364mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | 0.001-0.05mg/L | 2 |
| NOEC | 168 | Crustacea | 0.001-mg/L | 2 | |

| titanium dioxide (rutile) | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---------------------------|----------|-------------------------------|-------------------------------|----------|--------|
| | LC50 | 96 | Fish | >1-mg/L | 2 |
| | EC50 | 48 | Crustacea | >1-mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | >10-mg/L | 2 |
| NOEC | 72 | Algae or other aquatic plants | 1mg/L | 2 | |

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

For Manganese and its Compounds:

Environmental Fate: Manganese is a naturally occurring element in the environment occurring as a result of weathering of geological material. It also occurs from its use in steel manufacture/ coal mining.

Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---------------------------|-------------------------|------------------|
| titanium dioxide (rutile) | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---------------------------|-----------------|
| titanium dioxide (rutile) | LOW (BCF = 10) |

Mobility in soil

| Ingredient | Mobility |
|---------------------------|-------------------|
| titanium dioxide (rutile) | LOW (KOC = 23.74) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| Product / Packaging disposal | Disposal Instructions |
|------------------------------|---|
| | <ul style="list-style-type: none"> Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.</p> <ul style="list-style-type: none"> DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. |

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SECTION 14 TRANSPORT INFORMATION**Labels Required**

| | |
|------------------|----|
| Marine Pollutant | NO |
|------------------|----|

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****TALC IS FOUND ON THE FOLLOWING REGULATORY LISTS**

| |
|--|
| Chemical Footprint Project - Chemicals of High Concern List |
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans |
| US ACGIH Threshold Limit Values (Spanish) |
| US ACGIH Threshold Limit Values (TLV) |
| US AIHA Workplace Environmental Exposure Levels (WEELs) |
| US NIOSH Recommended Exposure Limits (RELs) |
| US NIOSH Recommended Exposure Limits (RELs) (Spanish) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US OSHA Permissible Exposure Levels (PELs) - Table Z3 |
| US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish) |
| US OSHA Permissible Exposure Limits - Annotated Table Z-3 (Spanish) |
| US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US TSCA Chemical Substance Inventory - Interim List of Active Substances |

ALUMINIUM HYDROXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

| |
|---|
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |
| US ACGIH Threshold Limit Values (Spanish) |
| US ACGIH Threshold Limit Values (TLV) |
| US AIHA Workplace Environmental Exposure Levels (WEELs) |
| US DOE Temporary Emergency Exposure Limits (TEELs) |
| US NIOSH Recommended Exposure Limits (RELs) |
| US NIOSH Recommended Exposure Limits (RELs) (Spanish) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish) |
| US OSHA Permissible Exposure Limits - Annotated Table Z-3 (Spanish) |
| US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US TSCA Chemical Substance Inventory - Interim List of Active Substances |

TITANIUM DIOXIDE (RUTILE) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| |
|--|
| Chemical Footprint Project - Chemicals of High Concern List |
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans |
| International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS) |
| US - California Proposition 65 - Carcinogens |
| US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List |
| US ACGIH Threshold Limit Values (Spanish) |
| US ACGIH Threshold Limit Values (TLV) |
| US AIHA Workplace Environmental Exposure Levels (WEELs) |
| US DOE Temporary Emergency Exposure Limits (TEELs) |
| US List of Active Substances Exempt from the TSCA Inventory Notifications (Active-Inactive) Rule |
| US NIOSH Recommended Exposure Limits (RELs) |
| US NIOSH Recommended Exposure Limits (RELs) (Spanish) |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish) |
| US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US TSCA Chemical Substance Inventory - Interim List of Active Substances |

Federal Regulations**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SECTION 311/312 HAZARD CATEGORIES**

| | |
|---|----|
| Flammable (Gases, Aerosols, Liquids, or Solids) | No |
| Gas under pressure | No |
| Explosive | No |
| Self-heating | No |

Continued...

PD Stain Color Vial Yellow

| | |
|--|-----|
| Pyrophoric (Liquid or Solid) | No |
| Pyrophoric Gas | No |
| Corrosive to metal | No |
| Oxidizer (Liquid, Solid or Gas) | No |
| Organic Peroxide | No |
| Self-reactive | No |
| In contact with water emits flammable gas | No |
| Combustible Dust | No |
| Carcinogenicity | No |
| Acute toxicity (any route of exposure) | No |
| Reproductive toxicity | No |
| Skin Corrosion or Irritation | No |
| Respiratory or Skin Sensitization | Yes |
| Serious eye damage or eye irritation | Yes |
| Specific target organ toxicity (single or repeated exposure) | Yes |
| Aspiration Hazard | No |
| Germ cell mutagenicity | No |
| Simple Asphyxiant | No |
| Hazards Not Otherwise Classified | No |

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

None Reported

State Regulations**US. CALIFORNIA PROPOSITION 65**

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

US - CALIFORNIA PROPOSITION 65 - CARCINOGENS: LISTED SUBSTANCE

Titanium dioxide (airborne, unbound particles of respirable size) Listed

National Inventory Status

| National Inventory | Status |
|-------------------------------|---|
| Australia - AICS | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (talc; aluminium hydroxide; titanium dioxide (rutile)) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - ARIPS | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

| | |
|----------------------|------------|
| Revision Date | 04/22/2020 |
| Initial Date | 04/23/2020 |

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average

Continued...

PD Stain Color Vial Yellow

PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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