



Malibu EXT (LL) 485XX Series

ICP Construction

Version No: 4.12

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

Issue Date: 02/01/2017

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S.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

| | |
|-------------------------------|------------------------------|
| Product name | Malibu EXT (LL) 485XX Series |
| Synonyms | Not Available |
| Other means of identification | Not Available |

Recommended use of the chemical and restrictions on use

| | |
|--------------------------|----------------------------|
| Relevant identified uses | Exterior Latex House Paint |
|--------------------------|----------------------------|

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

| | |
|-------------------------|--|
| Registered company name | ICP Construction |
| Address | 150 Dascomb Road Massachusetts Andover United States |
| Telephone | 978-623-9980 |
| Fax | Not Available |
| Website | Not Available |
| 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

| | |
|----------------|---|
| Classification | Germ cell mutagenicity Category 1B, Reproductive Toxicity Category 1B, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3 |
|----------------|---|

Label elements

| | |
|--------------------|--|
| GHS label elements | |
|--------------------|--|

SIGNAL WORD **DANGER**

Hazard statement(s)

| | |
|------|--|
| H340 | May cause genetic defects. |
| H360 | May damage fertility or the unborn child. |
| H412 | Harmful to aquatic life with long lasting effects. |

Hazard(s) not otherwise specified

Not Applicable

Precautionary statement(s) Prevention

| | |
|------|--|
| P201 | Obtain special instructions before use. |
| P281 | Use personal protective equipment as required. |
| P273 | Avoid release to the environment. |

Continued...

Precautionary statement(s) Response

| | |
|-----------|--|
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
|-----------|--|

Precautionary statement(s) Storage

| | |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

Precautionary statement(s) Disposal

| | |
|------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|------------|-----------|--|
| 13463-67-7 | 20-30 | <u>titanium dioxide</u> |
| 57-55-6 | 20-30 | <u>propylene glycol</u> |
| 10605-21-7 | 0.1-2 | <u>carbendazim</u> |
| 55406-53-6 | 0.1-1 | <u>3-iodo-2-propynyl butyl carbamate</u> |
| 9003-31-0 | 10-15 | <u>isoprene homopolymer</u> |
| 7732-18-5 | 10-15 | <u>water</u> |

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 or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. |

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Propylene glycol is primarily a CNS depressant in large doses and may cause hypoglycaemia, lactic acidosis and seizures.

- ▶ The usual measures are supportive care and decontamination (Ipecac/ lavage/ activated charcoal/ cathartics), within 2 hours of exposure should suffice.
- ▶ Check the anion gap, arterial pH, renal function and glucose levels.

Ellenhorn and Barceloux: Medical Toxicology

SECTION 5 FIRE-FIGHTING MEASURES**Extinguishing media**

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

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 full body protective clothing with breathing apparatus. ▶ Prevent, by any means available, spillage from entering drains or water course. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: <ul style="list-style-type: none"> · carbon dioxide (CO₂) · other pyrolysis products typical of burning organic material. 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 | Environmental hazard - contain spillage. <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. |
| Major Spills | Environmental hazard - contain spillage. Moderate hazard. <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. |

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. ▶ Use in a well-ventilated area. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ No smoking, naked lights or ignition sources. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | <ul style="list-style-type: none"> ▶ Glycols and their ethers undergo violent decomposition in contact with 70% perchloric acid. This seems likely to involve formation of the glycol perchlorate esters (after scission of ethers) which are explosive, those of ethylene glycol and 3-chloro-1,2-propanediol being more powerful than glyceryl nitrate, and the former so sensitive that it explodes on addition of water. 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. For example transition metal complexes of alkyl hydroperoxides may decompose explosively. Alcohols <ul style="list-style-type: none"> ▶ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. ▶ reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen ▶ react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium ▶ should not be heated above 49 deg. C. when in contact with aluminium equipment |

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|------------------|------------------|----------------------|---------------|---------------|------------|
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | titanium dioxide | Titanium dioxide | 15 mg/m ³ | Not Available | Not Available | Total dust |

Continued...

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| | | | | | | |
|---|------------------|---|----------------------|---------------|---------------|---------------------|
| US ACGIH Threshold Limit Values (TLV) | titanium dioxide | Titanium dioxide | 10 mg/m ³ | Not Available | Not Available | TLV® Basis: LRT irr |
| US NIOSH Recommended Exposure Limits (RELs) | titanium dioxide | Rutile, Titanium oxide, Titanium peroxide | Not Available | Not Available | Not Available | Ca See Appendix A |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|-----------------------------------|-------------------------------------|-----------------------|-------------------------|-------------------------|
| titanium dioxide | Titanium oxide; (Titanium dioxide) | 30 mg/m ³ | 330 mg/m ³ | 2,000 mg/m ³ |
| propylene glycol | Propylene glycol; (1,2-Propanediol) | 30 mg/m ³ | 1,300 mg/m ³ | 7,900 mg/m ³ |
| 3-iodo-2-propynyl butyl carbamate | Butyl-3-iodo-2-propynylcarbamate | 3.3 mg/m ³ | 36 mg/m ³ | 220 mg/m ³ |

| Ingredient | Original IDLH | Revised IDLH |
|-----------------------------------|-----------------------------------|-------------------------|
| titanium dioxide | N.E. mg/m ³ / N.E. ppm | 5,000 mg/m ³ |
| propylene glycol | Not Available | Not Available |
| carbendazim | Not Available | Not Available |
| 3-iodo-2-propynyl butyl carbamate | Not Available | Not Available |
| isoprene homopolymer | Not Available | Not Available |
| water | Not Available | 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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. |
| 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. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. <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> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. |
| Thermal hazards | Not Available |

Respiratory protection

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

| Required minimum protection factor | Maximum gas/vapour concentration present in air p.p.m. (by volume) | Half-face Respirator | Full-Face Respirator |
|------------------------------------|--|----------------------|----------------------|
| up to 10 | 1000 | A-AUS / Class 1 | - |
| up to 50 | 1000 | - | A-AUS / Class 1 |
| up to 50 | 5000 | Airline * | - |
| up to 100 | 5000 | - | A-2 |
| up to 100 | 10000 | - | A-3 |
| 100+ | | - | Airline** |

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

A(All classes) = Organic vapours, B AUS or B1 = Acid gases, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 deg C)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Text | | |
|--|---------------|---|---------------|
| 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) | 8.5 | 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 (g/L) | Immiscible | 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. ▶ Hazardous polymerisation will not occur. |
| 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 | <p>The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.</p> <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> |
| Ingestion | <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Ingestion of propylene glycol produced reversible central nervous system depression in humans following ingestion of 60 ml. Symptoms included increased heart-rate (tachycardia), excessive sweating (diaphoresis) and grand mal seizures in a 15 month child who ingested large doses (7.5 ml/day for 8 days) as an ingredient of vitamin preparation.</p> <p>Excessive repeated ingestions may cause hypoglycaemia (low levels of glucose in the blood stream) among susceptible individuals; this may result in muscular weakness, incoordination and mental confusion.</p> <p>Dusts of titanium and titanium compounds are thought to exhibit little or no toxic effects.</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>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>There is some evidence to suggest that this material can cause eye irritation and damage in some persons.</p> |
| Chronic | <p>Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Based on experiments and other information, there is ample evidence to presume that exposure to this material can cause genetic defects that can be inherited.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</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>Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material.</p> <p>Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.</p> <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</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> |

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| | | |
|-----------------------------------|---|---------------------------------------|
| | Long term exposure to titanium and several of its compounds produces lung scarring and chronic bronchitis. Breathing is impaired and cardiac changes with right heart enlargements occur. Propylene glycol is though, by some, to be a sensitising principal following the regular use of topical creams by eczema patients. A study of 866 persons using a formulation containing propylene glycol in a patch test indicated that propylene glycol caused primary irritation in 16% of exposed individuals probably caused by dehydration. Undiluted propylene glycol was tested on 1556 persons in a 24 hour patch test. | |
| Malibu EXT (LL) 485XX Series | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| titanium dioxide | TOXICITY | IRRITATION |
| | Inhalation (rat) LC50: >2.28 mg/l/4hr ^[1] | Skin (human): 0.3 mg /3D (int)-mild * |
| | Inhalation (rat) LC50: >3.56 mg/l/4hr ^[1] | |
| | Inhalation (rat) LC50: >6.82 mg/l/4hr ^[1] | |
| | Inhalation (rat) LC50: 3.43 mg/l/4hr ^[1] | |
| | Oral (rat) LD50: >2000 mg/kg ^[1] | |
| propylene glycol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >2000 mg/kg ^[1] | Eye (rabbit): 100 mg - mild |
| | Oral (rat) LD50: 20000 mg/kg ^[2] | Eye (rabbit): 500 mg/24h - mild |
| | | Skin(human):104 mg/3d Intermit Mod |
| | | Skin(human):500 mg/7days mild |
| carbendazim | TOXICITY | IRRITATION |
| | dermal (rat) LD50: 2000 mg/kg ^[2] | Eye (rabbit): non-irritating * |
| | Oral (rat) LD50: 6400 mg/kg ^[2] | Skin (rabbit): non-irritating * |
| 3-iodo-2-propynyl butyl carbamate | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[2] | Eye: Irritating |
| | Inhalation (rat) LC50: 0.680 mg/l/4hr ^[2] | Skin: Slight irritant |
| | Oral (rat) LD50: 1056 mg/kg ^[2] | |
| isoprene homopolymer | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| water | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >90000 mg/kg ^[2] | Not Available |

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

| | |
|--|---|
| TITANIUM DIOXIDE | The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. 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. WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. * IUCLID |
| PROPYLENE GLYCOL | The acute oral toxicity of propylene glycol is very low, and large quantities are required to cause perceptible health damage in humans. Serious toxicity generally occurs only at plasma concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time. It would be nearly impossible to reach toxic levels by consuming foods or supplements, which contain at most 1 g/kg of PG. |
| CARBENDAZIM | Benomyl (a precursor of carbendazim) sensitises skin in humans. Benomyl and carbendazim represent a very low risk for acute poisoning in humans. Carbendazim has low acute toxicity and is excreted in the urine. [* <i>The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection Council</i>] Intraperitoneal (Rat, adult male) LD50: 7320 mg/kg * Intraperitoneal (Rat, adult female) LD50: 15000 mg/kg * Inhalation LC50 (4 h) for rats, rabbits, guinea pigs or cats no effect with suspension (10 g/l water). * NOEL (2 y) for dogs 300 mg/kg diet, corresponding to 6-7 mg/kg b.w. ADI 0.01 mg/kg b.w. * Toxicity Class WHO III; EPA IV |
| 3-iodo-2-propynyl BUTYL CARBAMATE | For 3-iodo-2-propynyl butyl carbamate (IPBC): Acute toxicity studies with IPBC show low toxicity except severe eye irritation. Animal testing showed that extended exposure may cause decreased weight gain and increased red cell and eosinophil counts. One study showed the possibility of increased breast cancer on extended contact. |
| TITANIUM DIOXIDE & PROPYLENE GLYCOL | 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. |
| ISOPRENE HOMOPOLYMER & WATER | No significant acute toxicological data identified in literature search. |
| Acute Toxicity |  |
| Carcinogenicity |  |

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

Legend: ✗ – Data available but does not fill the criteria for classification
 ✓ – Data available to make classification
 ☒ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|-----------------------------------|----------|--------------------|-------------------------------|---------------|--------|
| titanium dioxide | LC50 | 96 | Fish | 9.214mg/L | 3 |
| titanium dioxide | EC50 | 48 | Crustacea | >10mg/L | 2 |
| titanium dioxide | EC50 | 72 | Algae or other aquatic plants | 5.83mg/L | 4 |
| titanium dioxide | EC20 | 72 | Algae or other aquatic plants | 1.81mg/L | 4 |
| titanium dioxide | NOEC | 336 | Fish | 0.089mg/L | 4 |
| propylene glycol | LC50 | 96 | Fish | 710mg/L | 4 |
| propylene glycol | EC50 | 48 | Crustacea | >1000mg/L | 4 |
| propylene glycol | EC50 | 96 | Algae or other aquatic plants | 10905.921mg/L | 3 |
| propylene glycol | EC50 | 384 | Crustacea | 311.145mg/L | 3 |
| propylene glycol | NOEC | 168 | Fish | 98mg/L | 4 |
| carbendazim | LC50 | 96 | Fish | 0.007mg/L | 4 |
| carbendazim | EC50 | 48 | Crustacea | 0.02mg/L | 4 |
| carbendazim | EC50 | 96 | Algae or other aquatic plants | 3.945mg/L | 3 |
| carbendazim | EC50 | 24 | Crustacea | 0.0035mg/L | 4 |
| carbendazim | NOEC | 480 | Crustacea | <0.0031mg/L | 4 |
| 3-iodo-2-propynyl butyl carbamate | LC50 | 96 | Fish | 0.067mg/L | 4 |
| 3-iodo-2-propynyl butyl carbamate | EC50 | 48 | Crustacea | 0.04mg/L | 5 |
| 3-iodo-2-propynyl butyl carbamate | EC50 | 96 | Algae or other aquatic plants | 1.978mg/L | 3 |
| 3-iodo-2-propynyl butyl carbamate | EC50 | 96 | Crustacea | 0.0234mg/L | 4 |
| 3-iodo-2-propynyl butyl carbamate | NOEC | 48 | Crustacea | <0.01mg/L | 4 |
| isoprene homopolymer | LC50 | 96 | Fish | 4.364mg/L | 3 |
| isoprene homopolymer | EC50 | 96 | Algae or other aquatic plants | 10.375mg/L | 3 |
| isoprene homopolymer | EC50 | 384 | Crustacea | 1.061mg/L | 3 |

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Propylene glycol is known to exert high levels of biochemical oxygen demand (BOD) during degradation in surface waters. This process can adversely affect aquatic life by consuming oxygen needed by aquatic organisms for survival. Large quantities of dissolved oxygen (DO) in the water column are consumed when microbial populations decompose propylene glycol.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|-----------------------------------|-------------------------|------------------|
| titanium dioxide | HIGH | HIGH |
| propylene glycol | LOW | LOW |
| carbendazim | HIGH | HIGH |
| 3-iodo-2-propynyl butyl carbamate | HIGH | HIGH |
| isoprene homopolymer | LOW | LOW |
| water | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------|-----------------|
| | |

| | |
|-----------------------------------|-----------------------|
| titanium dioxide | LOW (BCF = 10) |
| propylene glycol | LOW (BCF = 1) |
| carbendazim | LOW (BCF = 3.5) |
| 3-iodo-2-propynyl butyl carbamate | LOW (LogKOW = 2.4542) |
| isoprene homopolymer | LOW (LogKOW = 2.5803) |
| water | LOW (LogKOW = -1.38) |

Mobility in soil

| Ingredient | Mobility |
|-----------------------------------|-------------------|
| titanium dioxide | LOW (KOC = 23.74) |
| propylene glycol | HIGH (KOC = 1) |
| carbendazim | LOW (KOC = 175.8) |
| 3-iodo-2-propynyl butyl carbamate | LOW (KOC = 365.3) |
| isoprene homopolymer | LOW (KOC = 67.7) |
| water | LOW (KOC = 14.3) |

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

| | |
|-------------------------------------|--|
| Product / Packaging disposal | <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>Otherwise:</p> <ul style="list-style-type: none"> ▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</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. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. |
|-------------------------------------|--|

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****TITANIUM DIOXIDE(13463-67-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

| | |
|---|--|
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs | US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants |
| US - Alaska Limits for Air Contaminants | US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants |
| US - California Permissible Exposure Limits for Chemical Contaminants | US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants |
| US - California Proposition 65 - Carcinogens | US - Washington Permissible exposure limits of air contaminants |
| US - Hawaii Air Contaminant Limits | US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants |
| US - Idaho - Limits for Air Contaminants | US ACGIH Threshold Limit Values (TLV) |
| US - Massachusetts - Right To Know Listed Chemicals | US ACGIH Threshold Limit Values (TLV) - Carcinogens |
| US - Michigan Exposure Limits for Air Contaminants | US NIOSH Recommended Exposure Limits (RELs) |
| US - Minnesota Permissible Exposure Limits (PELs) | US OSHA Permissible Exposure Levels (PELs) - Table Z1 |
| US - Oregon Permissible Exposure Limits (Z-1) | US Priority List for the Development of Proposition 65 Safe Harbor Levels - No Significant Risk Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity |
| US - Pennsylvania - Hazardous Substance List | US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory |
| US - Rhode Island Hazardous Substance List | |

PROPYLENE GLYCOL(57-55-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values

US AIHA Workplace Environmental Exposure Levels (WEELs)

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

CARBENDAZIM(10605-21-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

3-IODO-2-PROPYNYL BUTYL CARBAMATE(55406-53-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US EPCRA Section 313 Chemical List

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

ISOPRENE HOMOPOLYMER(9003-31-0) IS FOUND ON THE FOLLOWING REGULATORY LISTSInternational Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List
Passenger and Cargo Aircraft

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Pennsylvania - Hazardous Substance List

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

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

| | |
|---------------------------------|-----|
| Immediate (acute) health hazard | No |
| Delayed (chronic) health hazard | Yes |
| Fire hazard | No |
| Pressure hazard | No |
| Reactivity hazard | No |

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

| Name | Reportable Quantity in Pounds (lb) | Reportable Quantity in kg |
|---|------------------------------------|---------------------------|
| Carbamic acid, 1H-benzimidazol-2-yl, methyl ester | 10 | 4.54 |

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 PREPOSITION 65 - CARCINOGENS & REPRODUCTIVE TOXICITY (CRT): LISTED SUBSTANCE

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

| National Inventory | Status |
|-------------------------------|--|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (3-iodo-2-propynyl butyl carbamate; isoprene homopolymer; propylene glycol; water; carbendazim) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | N (isoprene homopolymer) |
| Japan - ENCS | N (water) |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION**CONTACT POINT**

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

Other information**Ingredients with multiple cas numbers**

| Name | CAS No |
|----------------------|---|
| titanium dioxide | 13463-67-7, 1317-70-0, 1317-80-2, 12188-41-9, 1309-63-3, 100292-32-8, 101239-53-6, 116788-85-3, 12000-59-8, 12701-76-7, 12767-65-6, 12789-63-8, 1344-29-2, 185323-71-1, 185828-91-5, 188357-76-8, 188357-79-1, 195740-11-5, 221548-98-7, 224963-00-2, 246178-32-5, 252962-41-7, 37230-92-5, 37230-94-7, 37230-95-8, 37230-96-9, 39320-58-6, 39360-64-0, 39379-02-7, 416845-43-7, 494848-07-6, 494848-23-6, 494851-77-3, 494851-98-8, 55068-84-3, 55068-85-4, 552316-51-5, 62338-64-1, 767341-00-4, 97929-50-5, 98084-96-9 |
| isoprene homopolymer | 9003-31-0, 104389-31-3, 104389-32-4 |

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

Continued...

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. Risks may be determined by reference to Exposures Scenarios.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
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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