



Fiberlock Lag-Kote II White 6420

ICP Building Solutions Group

Version No: 8.10

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

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S.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

Product name	Fiberlock Lag-Kote II White 6420
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Asbestos Encapsulant
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	ICP Building Solutions Group
Address	150 Dascomb Road Andover MA United States
Telephone	1-978-623-9980
Fax	Not Available
Website	http://www.icpgroup.com
Email	Not Available

Emergency phone number

Association / Organisation	ChemTel
Emergency telephone numbers	800-255-3924
Other emergency telephone numbers	Not Available

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, Acute Aquatic Hazard Category 3, Skin Corrosion/Irritation Category 2, Carcinogenicity Category 1A, Skin Sensitizer Category 1, Germ cell mutagenicity Category 2, Chronic Aquatic Hazard Category 3
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Label elements

Hazard pictogram(s)	
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SIGNAL WORD	DANGER
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Hazard statement(s)

H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H315	Causes skin irritation.
H350	May cause cancer.

Fiberlock Lag-Kote II White 6420

H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H412	Harmful to aquatic life with long lasting effects.

Hazard(s) not otherwise classified

Not Applicable

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

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see advice on this label).

Precautionary statement(s) Storage

P405	Store locked up.
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Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
57-55-6	1-5	<u>propylene glycol</u>
1897-45-6	<1	<u>chlorothalonil</u>
124-68-5	.5-5	<u>monoisobutanolamine</u>
13463-67-7	5-15	<u>titanium dioxide</u>
1332-58-7	10-15	<u>kaolin</u>
25265-77-4	.5-5	<u>2,2,4-trimethyl-1,3-pentanediol monoisobutyrate</u>
1314-13-2	1-5	<u>zinc oxide</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.

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Fiberlock Lag-Kote II White 6420

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

- ▶ Foam.
- ▶ Dry chemical powder.

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
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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.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. Combustion products include: carbon dioxide (CO ₂) 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.
Major Spills	Environmental hazard - contain spillage. Moderate hazard. <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind.

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	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed.

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	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 ▶ Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	titanium dioxide	Rutile, Titanium oxide, Titanium peroxide	Not Available	Not Available	Not Available	Ca See Appendix A

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Fiberlock Lag-Kote II White 6420

US ACGIH Threshold Limit Values (TLV)	titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	TLV® Basis: LRT irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	titanium dioxide	Titanium dioxide: Total dust	15 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	kaolin	China clay, Clay, Hydrated aluminum silicate, Hydrite, Porcelain clay [Note: Main constituent of Kaolin is Kaolinite (Al ₂ Si ₂ O ₅ (OH) ₄ .)]	10 (total), 5 (resp) mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	kaolin	Kaolin	2 mg/m3	Not Available	Not Available	TLV® Basis: Pneumoconiosis
US OSHA Permissible Exposure Levels (PELs) - Table Z1	kaolin	Kaolin: Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	kaolin	Kaolin: Total dust	15 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	zinc oxide	Zinc peroxide	Dust: 5 ,Fume: 5 mg/m3	Fume: 10 mg/m3	Dust: 15 mg/m3	Not Available
US ACGIH Threshold Limit Values (TLV)	zinc oxide	Zinc oxide	2 mg/m3	10 mg/m3	Not Available	TLV® Basis: Metal fume fever
US OSHA Permissible Exposure Levels (PELs) - Table Z1	zinc oxide	Zinc oxide fume	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	zinc oxide	Zinc oxide: Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	zinc oxide	Zinc oxide: Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
propylene glycol	Polypropylene glycols	30 mg/m3	330 mg/m3	2,000 mg/m3
propylene glycol	Propylene glycol; (1,2-Propanediol)	30 mg/m3	1,300 mg/m3	7,900 mg/m3
chlorothalonil	Chlorothalonil; (Tetrachloroisophthalonitrile)	0.13 mg/m3	1.4 mg/m3	8.6 mg/m3
monoisobutanolamine	Isobutanol-2-amine	17 mg/m3	190 mg/m3	570 mg/m3
titanium dioxide	Titanium oxide; (Titanium dioxide)	30 mg/m3	330 mg/m3	2,000 mg/m3
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	Trimethyl-1,3-pentanediol monoisobutyrate, 2,2,4-; (Texanol)	13 mg/m3	140 mg/m3	840 mg/m3
zinc oxide	Zinc oxide	10 mg/m3	15 mg/m3	2,500 mg/m3

Ingredient	Original IDLH	Revised IDLH
propylene glycol	Not Available	Not Available
chlorothalonil	Not Available	Not Available
monoisobutanolamine	Not Available	Not Available
titanium dioxide	5,000 mg/m3	Not Available
kaolin	Not Available	Not Available
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	Not Available	Not Available
zinc oxide	500 mg/m3	Not Available


OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
propylene glycol	E	≤ 0.1 ppm
chlorothalonil	E	≤ 0.01 mg/m ³
monoisobutanolamine	E	≤ 0.01 mg/m ³

Notes:

Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

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	
Eye and face protection	<ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles.
Skin protection	See Hand protection below

Fiberlock Lag-Kote II White 6420

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>
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C.

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- ▶ 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.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

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	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.
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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Fiberlock Lag-Kote II White 6420

Ingestion	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. 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.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition 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. Open cuts, abraded or irritated skin should not be exposed to this material 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.
Eye	This material can cause eye irritation and damage in some persons.
Chronic	Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. 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. Chronic dust inhalation of kaolin, can cause kaolinosis from kaolin deposition in the lungs causing distinct lung markings, abnormal inflation of air sacs, and chronic lung diseases (nodular pneumoconiosis). This condition is made worse by long duration of occupational exposure and pre-existing chest infection. Pre-employment screening is recommended. Propylene glycol is thought to be sensitizing following the regular use of topical creams by eczema patients. Testing in humans showed that 16% of exposed individuals, irritation occurred, with 12.5% showing toxic or allergic reactions.

Fiberlock Lag-Kote II White 6420	TOXICITY	IRRITATION
	Not Available	Not Available
propylene glycol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 11890 mg/kg ^[2]	Eye (rabbit): 100 mg - mild
	Inhalation (rat) LC50: >44.9 mg/l/4h ^[2]	Eye (rabbit): 500 mg/24h - mild
	Oral (rat) LD50: 20000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin(human):104 mg/3d Intermit Mod
		Skin(human):500 mg/7days mild
	Skin: no adverse effect observed (not irritating) ^[1]	
chlorothalonil	TOXICITY	IRRITATION
	dermal (rat) LD50: >2500 mg/kg ^[2]	Not Available
	Inhalation (rat) LC50: 0.0775 mg/l/1h ^[2]	
	Oral (rat) LD50: >5000 mg/kg ^[2]	
monoisobutanolamine	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[2]	Not Available
	Oral (rat) LD50: 2900 mg/kg ^[2]	
titanium dioxide	TOXICITY	IRRITATION
	dermal (hamster) LD50: >=10000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (rat) LD50: >2000 mg/kg ^[1]	Skin (human): 0.3 mg /3D (int)-mild *
	Skin: no adverse effect observed (not irritating) ^[1]	
kaolin	TOXICITY	IRRITATION
Not Available	Not Available	
2,2,4-trimethyl-1,3-pentenediol monoisobutyrate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >15200 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
	Inhalation (rat) LC50: >5.325 mg/l/6h ^[2]	Eyes - Moderate irritant *
	Oral (rat) LD50: 3200 mg/kg ^[2]	Skin - Slight irritant *
		Skin (rabbit): mild ***
	Skin: no adverse effect observed (not irritating) ^[1]	
zinc oxide	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit) : 500 mg/24 h - mild
	Inhalation (rat) LC50: >1.79 mg/l/4 h ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (rat) LD50: >5000 mg/kg ^[2]	Skin (rabbit) : 500 mg/24 h - mild

Fiberlock Lag-Kote II White 6420

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

CHLOROTHALONIL	Chlorothalonil has low toxicity, according to animal testing. It irritates the skin and eye. ADI: 0.01 mg/kg/day NOEL: 1.5 mg/kg/day
MONOISOBUTANOLAMINE	TRIS AMINO and its surrogate chemicals have very little, if any, toxicity. They are mildly irritating to eyes at moderate concentrations, and do not cause allergic skin reactions.
TITANIUM DIOXIDE	* IUCLID 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. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
KAOLIN	For bentonite clays: Bentonite (CAS No. 1302-78-9) consists of a group of clays formed by crystallization of vitreous volcanic ashes that were deposited in water. The expected acute oral toxicity of bentonite in humans is very low.
2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE	Not a skin sensitizer (guinea pig, Magnusson-Kligman) *** Ames Test: negative *** Micronucleus, mouse: negative *** Not mutagenic *** No effects on fertility or foetal development seen in the rat *** * [SWIFT] ** [Eastman] *** [Perstop] The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Fiberlock Lag-Kote II White 6420 & TITANIUM DIOXIDE	Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.
Fiberlock Lag-Kote II White 6420 & CHLOROTHALONIL	The following information refers to contact allergens as a group and may not be specific to this product. 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.
Fiberlock Lag-Kote II White 6420 & PROPYLENE GLYCOL	The acute oral toxicity of propylene glycol is very low; large amounts are needed to cause perceptible health damage in humans. Serious toxicity generally occurs only at blood concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time; this is nearly impossible with consuming foods or supplements which contain 1g/kg of PG at most.
PROPYLENE GLYCOL & TITANIUM DIOXIDE & 2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE & ZINC OXIDE	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.
CHLOROTHALONIL & TITANIUM DIOXIDE	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. WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
TITANIUM DIOXIDE & KAOLIN	No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	Carcinogenicity	✓
Skin Irritation/Corrosion	✓	Reproductivity	✗
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

Fiberlock Lag-Kote II White 6420	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
propylene glycol	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>10-mg/L	2
	EC50	48	Crustacea	43-500mg/L	2
	EC50	96	Algae or other aquatic plants	19-mg/L	2
NOEC	168	Fish	11-530mg/L	2	
chlorothalonil	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.0076mg/L	4
	EC50	48	Crustacea	0.0066475mg/L	4
	EC50	72	Algae or other aquatic plants	0.0068mg/L	4
	BCF	336	Algae or other aquatic plants	0.02mg/L	4
NOEC	240	Crustacea	0.0003mg/L	4	

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Fiberlock Lag-Kote II White 6420

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	monoisobutanolamine	LC50	96	Fish	=100mg/L
EC50		48	Crustacea	=193mg/L	1
EC50		96	Algae or other aquatic plants	52.872mg/L	3
NOEC		48	Crustacea	100mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	titanium dioxide	LC50	96	Fish	>1-mg/L
EC50		48	Crustacea	>1-mg/L	2
EC50		72	Algae or other aquatic plants	5.83mg/L	4
NOEC		336	Fish	0.089mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	kaolin	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LC50	96	Fish	9.552mg/L
EC50		48	Crustacea	>19mg/L	2
EC50		96	Algae or other aquatic plants	0.789mg/L	3
NOEC		72	Algae or other aquatic plants	2mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	zinc oxide	LC50	96	Fish	0.001-0.58mg/L
EC50		48	Crustacea	0.001-0.014mg/L	2
EC50		72	Algae or other aquatic plants	0.037mg/L	2
BCF		336	Fish	4376.673mg/L	4
NOEC		72	Algae or other aquatic plants	0.00008138mg/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				

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.

Bentonite and kaolin have low toxicity to aquatic species, a large number of which have been tested

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.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
propylene glycol	LOW	LOW
chlorothalonil	HIGH	HIGH
monoisobutanolamine	LOW	LOW
titanium dioxide	HIGH	HIGH
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
propylene glycol	LOW (BCF = 1)
chlorothalonil	LOW (BCF = 125)
monoisobutanolamine	LOW (BCF = 330)
titanium dioxide	LOW (BCF = 10)
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LOW (LogKOW = 2.9966)
zinc oxide	LOW (BCF = 217)

Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (KOC = 1)
chlorothalonil	LOW (KOC = 2392)
monoisobutanolamine	MEDIUM (KOC = 2.196)

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Fiberlock Lag-Kote II White 6420

titanium dioxide	LOW (KOC = 23.74)
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LOW (KOC = 22.28)

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>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 or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
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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

PROPYLENE GLYCOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles	US DOE Temporary Emergency Exposure Limits (TEELs)
IMO IBC Code Chapter 17: Summary of minimum requirements	US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes
IMO IBC Code Chapter 18: List of products to which the Code does not apply	US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)
IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)	

CHLOROTHALONIL IS FOUND ON THE FOLLOWING REGULATORY LISTS

Chemical Footprint Project - Chemicals of High Concern List	US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	US Department of Transportation (DOT), Hazardous Material Table
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans	US DOE Temporary Emergency Exposure Limits (TEELs)
International Air Transport Association (IATA) Dangerous Goods Regulations	US EPCRA Section 313 Chemical List
International Maritime Dangerous Goods Requirements (IMDG Code)	US List of Active Substances Exempt from the TSCA Inventory Notifications (Active-Inactive) Rule
United Nations Recommendations on the Transport of Dangerous Goods Model Regulations	US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide
US - California Office of Environmental Health Hazard Assessment Proposition 65 No Significant Risk Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity	US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number
US - California Proposition 65 - Carcinogens	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

MONOISOBUTANOLAMINE IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles	US DOE Temporary Emergency Exposure Limits (TEELs)
IMO IBC Code Chapter 17: Summary of minimum requirements	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US Coast Guard, Department of Homeland Security Part 153: Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements	

TITANIUM DIOXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Fiberlock Lag-Kote II White 6420

Chemical Footprint Project - Chemicals of High Concern List
 GESAMP/EHS Composite List - GESAMP Hazard Profiles
 IMO IBC Code Chapter 17: Summary of minimum requirements
 IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk
 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 - Alaska Limits for Air Contaminants
 US - California Proposition 65 - Carcinogens
 US - Hawaii Air Contaminant Limits
 US - Idaho - Limits for Air Contaminants
 US - Michigan Exposure Limits for Air Contaminants
 US - Minnesota Permissible Exposure Limits (PELs)
 US - Oregon Permissible Exposure Limits (Z-1)
 US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants
 US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
 US - Washington Permissible exposure limits of air contaminants
 US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
 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
 US TSCA Section 12(b) - List of Chemical Substances Subject to Export Notification Requirements
 US TSCA Section 5(a)(2) - Significant New Use Rules (SNURs)

KAOLIN IS FOUND ON THE FOLLOWING REGULATORY LISTS

Chemical Footprint Project - Chemicals of High Concern List
 GESAMP/EHS Composite List - GESAMP Hazard Profiles
 IMO IBC Code Chapter 18: List of products to which the Code does not apply
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
 US - Alaska Limits for Air Contaminants
 US - California Permissible Exposure Limits for Chemical Contaminants
 US - Hawaii Air Contaminant Limits
 US - Idaho - Limits for Air Contaminants
 US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits
 US - Minnesota Permissible Exposure Limits (PELs)
 US - Oregon Permissible Exposure Limits (Z-1)
 US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants
 US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
 US - Washington Permissible exposure limits of air contaminants
 US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
 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 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

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles
 IMO IBC Code Chapter 17: Summary of minimum requirements
 IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk
 US Coast Guard, Department of Homeland Security Part 153: Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements

US DOE Temporary Emergency Exposure Limits (TEELs)
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
 US TSCA Chemical Substance Inventory - Interim List of Active Substances

ZINC OXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Air Transport Association (IATA) Dangerous Goods Regulations
 International Maritime Dangerous Goods Requirements (IMDG Code)
 United Nations Recommendations on the Transport of Dangerous Goods Model Regulations
 US - Alaska Limits for Air Contaminants
 US - California Permissible Exposure Limits for Chemical Contaminants
 US - Hawaii Air Contaminant Limits
 US - Idaho - Limits for Air Contaminants
 US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits
 US - Michigan Exposure Limits for Air Contaminants
 US - Minnesota Permissible Exposure Limits (PELs)
 US - Oregon Permissible Exposure Limits (Z-1)
 US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants
 US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants
 US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
 US - Washington Permissible exposure limits of air contaminants
 US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
 US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)
 US AIHA Workplace Environmental Exposure Levels (WEELs)
 US CWA (Clean Water Act) - Priority Pollutants
 US CWA (Clean Water Act) - Toxic Pollutants
 US Department of Transportation (DOT), Hazardous Material Table
 US DOE Temporary Emergency Exposure Limits (TEELs)
 US EPA Carcinogens Listing
 US EPCRA Section 313 Chemical List
 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 Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide
 US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number
 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

Continued...

Fiberlock Lag-Kote II White 6420

Self-heating	No
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	Yes
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
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	Yes
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

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

National Inventory Status

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (chlorothalonil; monoisobutanolamine; kaolin; propylene glycol; 2,2,4-trimethyl-1,3-pentanediol monoisobutyrate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (kaolin)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	No (chlorothalonil)
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	01/22/2020
Initial Date	08/30/2017

CONTACT POINT

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

SDS Version Summary

Version	Issue Date	Sections Updated
7.10.1.1.1	01/22/2020	Acute Health (eye), Acute Health (skin), Acute Health (swallowed), Chronic Health, Classification, Disposal, Environmental, Exposure Standard, Fire Fighter (extinguishing media), Fire Fighter (fire/explosion hazard), Fire Fighter (fire fighting), Fire Fighter (fire incompatibility), First Aid (eye), Handling Procedure, Ingredients, Personal Protection (Respirator), Spills (major), Spills (minor), Storage (storage incompatibility), Storage (storage requirement), Storage (suitable container), Supplier Information

Continued...

Fiberlock Lag-Kote II White 6420**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
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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