Everlife WB (HG)-Coast Guard Gray F52136

ICP Construction

Version No: **1.2**
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	Everlife WB (HG)-Coast Guard Gray F52136
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	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	Reproductive Toxicity Category 2

Label elements

GHS label elements	
SIGNAL WORD	**WARNING**

Hazard statement(s)

H361	Suspected of damaging fertility or the unborn child.

Hazard(s) not otherwise specified

Not Applicable

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P281	Use personal protective equipment as required.

Precautionary statement(s) Response

Continued...

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
1317-70-0		titanium dioxide (anatase)
not avail.	54.5-54.54	Non-hazardous ingredient
1310-73-2	NotSpec.	sodium hydroxide
2634-33-5	NotSpec.	1,2-benzisothiazoline-3-one
124-68-5	0.1	monoisobutanolamine
112-34-5	0.25	diethylene glycol monobutyl ether
97-88-1	0.01	n-butyl methacrylate
7732-18-5	0.86-0.9	water
29911-28-2	3.7	dipropylene glycol mono-n-butyl ether - alpha isomer
111-77-3	2.5	diethylene glycol monomethyl ether
19224-26-1	0.01	propylene glycol dibenzoate
1330-20-7	0.27-0.54	xylene
122-99-6	0.09-0.27	ethylene glycol phenyl ether
100-41-4	0.09-0.27	ethylbenzene
7632-00-0	0.1	sodium nitrite
1333-86-4	0.4	carbon black
51274-00-1	1	C.I. Pigment Yellow 42

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ 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	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. ▸ 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. ▸ Avoid giving milk or oils. ▸ Avoid giving alcohol.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.
For acute or short term repeated exposures to xylene:

- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- Pulmonary absorption is rapid with about 60-65% retained at rest.

Continued...

- Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 < 50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippu-ric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift	

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	- Alert Fire Brigade and tell them location and nature of hazard. - Wear breathing apparatus plus protective gloves in the event of a fire. - Prevent, by any means available, spillage from entering drains or water courses. - Use fire fighting procedures suitable for surrounding area. - **DO NOT** approach containers suspected to be hot. - Cool fire exposed containers with water spray from a protected location. - If safe to do so, remove containers from path of fire. - Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	- Non combustible. - Not considered a significant fire risk, however containers may burn. 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	- Clean up all spills immediately. - Avoid breathing vapours and contact with skin and eyes. - Control personal contact with the substance, by using protective equipment. - Contain and absorb spill with sand, earth, inert material or vermiculite. - Wipe up. - Place in a suitable, labelled container for waste disposal.
Major Spills	Moderate hazard. - Clear area of personnel and move upwind. - Alert Fire Brigade and tell them location and nature of hazard. - Wear breathing apparatus plus protective gloves. - Prevent, by any means available, spillage from entering drains or water course. - Stop leak if safe to do so. - Contain spill with sand, earth or vermiculite. - Collect recoverable product into labelled containers for recycling. - Neutralise/decontaminate residue (see Section 13 for specific agent). - Collect solid residues and seal in labelled drums for disposal. - Wash area and prevent runoff into drains. - After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. - If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	- Electrostatic discharge may be generated during pumping - this may result in fire. - Ensure electrical continuity by bonding and grounding (earthing) all equipment. - Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1 m/sec until fill pipe submerged to twice its diameter, then <= 7 m/sec). - Avoid splash filling.

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	▸ Do NOT use compressed air for filling discharging or handling operations. ▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ Avoid contact with moisture. ▸ Avoid contact with incompatible materials. ▸ When handling, **DO NOT** eat, drink or smoke. ▸ Keep containers securely sealed when not in use. ▸ Avoid physical damage to containers. ▸ Always wash hands with soap and water after handling. ▸ Work clothes should be laundered separately. Launder contaminated clothing before re-use. ▸ Use good occupational work practice. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS. ▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Polyethylene or polypropylene container. ▸ Packing as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Xylenes: ▸ may ignite or explode in contact with strong oxidisers, 1,3-dichloro-5,5-dimethylhydantoin, uranium fluoride ▸ attack some plastics, rubber and coatings ▸ may generate electrostatic charges on flow or agitation due to low conductivity. ▸ Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents. ▸ Aromatics can react exothermically with bases and with diazo compounds. For alkyl aromatics: The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring. ▸ Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) - this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen ▸ Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids. ▸ Oxidation in the presence of transition metal salts not only accelerates but also selectively decomposes the hydroperoxides. ▸ Hock-rearrangement by the influence of strong acids converts the hydroperoxides to hemiacetals. Peresters formed from the hydroperoxides undergo Criegee rearrangement easily. ▸ Alkali metals accelerate the oxidation while CO2 as co-oxidant enhances the selectivity. ▸ Microwave conditions give improved yields of the oxidation products. ▸ Photo-oxidation products may occur following reaction with hydroxyl radicals and NOx - these may be components of photochemical smogs. Oxidation of Alkylaromatics: T.S.S Rao and Shubhra Awasthi: E-Journal of Chemistry Vol 4, No. 1, pp 1-13 January 2007 None known

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 (anatase)	Titanium dioxide	15 mg/m3	Not Available	Not Available	Total dust
US ACGIH Threshold Limit Values (TLV)	titanium dioxide (anatase)	Titanium dioxide	10 mg/m3	Not Available	Not Available	TLV® Basis: LRT irr
US NIOSH Recommended Exposure Limits (RELs)	titanium dioxide (anatase)	Rutile, Titanium oxide, Titanium peroxide	Not Available	Not Available	Not Available	Ca See Appendix A
US OSHA Permissible Exposure Levels (PELs) - Table Z1	sodium hydroxide	Sodium hydroxide	2 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	sodium hydroxide	Sodium hydroxide	Not Available	Not Available	2 mg/m3	TLV® Basis: URT, eye, & skin irr
US NIOSH Recommended Exposure Limits (RELs)	sodium hydroxide	Caustic soda, Lye, Soda lye, Sodium hydrate	Not Available	Not Available	2 mg/m3	Not Available
US ACGIH Threshold Limit Values (TLV)	diethylene glycol monobutyl ether	Diethylene glycol monobutyl ether	10 ppm	Not Available	Not Available	TLV® Basis: Hematologic, liver & kidney eff
US OSHA Permissible Exposure Levels (PELs) - Table Z1	xylene	Xylenes (o-, m-, p-isomers)	435 mg/m3 / 100 ppm	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	xylene	Xylene (all isomers)	100 ppm	150 ppm	Not Available	TLV® Basis: URT & eye irr; CNS impair; BEI
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethylbenzene	Ethyl benzene	435 mg/m3 / 100 ppm	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	ethylbenzene	Ethyl benzene	20 ppm	Not Available	Not Available	TLV® Basis: URT irr; kidney dam (nephropathy); cochlear impair; BEI

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US NIOSH Recommended Exposure Limits (RELs)	ethylbenzene	Ethylbenzol, Phenylethane	435 mg/m3 / 100 ppm	545 mg/m3 / 125 ppm	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	carbon black	Carbon black	3.5 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	carbon black	Carbon black	3 mg/m3	Not Available	Not Available	TLV® Basis: Bronchitis
US NIOSH Recommended Exposure Limits (RELs)	carbon black	Acetylene black, Channel black, Furnace black, Lamp black, Thermal black	3.5 mg/m3	Not Available	Not Available	Ca See Appendix A See Appendix C

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
titanium dioxide (anatase)	Titanium oxide; (Titanium dioxide)	30 mg/m3	330 mg/m3	2,000 mg/m3
sodium hydroxide	Sodium hydroxide	Not Available	Not Available	Not Available
monoisobutanolamine	Isobutanol-2-amine	17 mg/m3	190 mg/m3	570 mg/m3
diethylene glycol monobutyl ether	Butoxyethoxy)ethanol, 2-(2-; (Diethylene glycol monobutyl ether)	30 ppm	33 ppm	200 ppm
n-butyl methacrylate	Methyl butylacrylate, 2-; (Butyl methacrylate)	19 mg/m3	210 mg/m3	1,300 mg/m3
diethylene glycol monomethyl ether	Methoxyethoxy)ethanol, 2-(2-; (Diethylene glycol monomethyl ether)	3.4 ppm	37 ppm	220 ppm
xylene	Xylenes	Not Available	Not Available	Not Available
ethylene glycol phenyl ether	Phenoxyethanol, 2-; (Phenyl cellosolve)	1.5 ppm	16 ppm	97 ppm
ethylbenzene	Ethyl benzene	Not Available	Not Available	Not Available
sodium nitrite	Sodium nitrite	6.4 mg/m3	71 mg/m3	240 mg/m3
carbon black	Carbon black	9 mg/m3	99 mg/m3	590 mg/m3

Ingredient	Original IDLH	Revised IDLH
titanium dioxide (anatase)	N.E. mg/m3 / N.E. ppm	5,000 mg/m3
Non-hazardous ingredient	Not Available	Not Available
sodium hydroxide	250 mg/m3	10 mg/m3
1,2-benzisothiazoline-3-one	Not Available	Not Available
monoisobutanolamine	Not Available	Not Available
diethylene glycol monobutyl ether	Not Available	Not Available
n-butyl methacrylate	Not Available	Not Available
water	Not Available	Not Available
dipropylene glycol mono-n-butyl ether - alpha isomer	Not Available	Not Available
diethylene glycol monomethyl ether	Not Available	Not Available
propylene glycol dibenzoate	Not Available	Not Available
xylene	1,000 ppm	900 ppm
ethylene glycol phenyl ether	Not Available	Not Available
ethylbenzene	2,000 ppm	800 [LEL] ppm
sodium nitrite	Not Available	Not Available
carbon black	N.E. mg/m3 / N.E. ppm	1,750 mg/m3
C.I. Pigment Yellow 42	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.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)

Continued...

	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) — 1-2.5 m/s (200-500 f/min) grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). — 2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Personal protection

Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

Hands/feet protection

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

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.
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.
Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.
It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.
Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Body protection

See Other protection below

Other protection

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

Thermal hazards

Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Continued...

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)	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 (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	▸ 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	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. Headache, fatigue, tiredness, irritability and digestive disturbances (nausea, loss of appetite and bloating) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted amongst workers. Xylene is a central nervous system depressant
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) 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	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. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. 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	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Women exposed to xylene in the first 3 months of pregnancy showed a slightly increased risk of miscarriage and birth defects. Evaluation of workers chronically exposed to xylene has demonstrated lack of genetic toxicity.

Everlife WB (HG)-Coast Guard Gray F52136

TOXICITY	IRRITATION
Not Available	Not Available

titanium dioxide (anatase)

TOXICITY	IRRITATION
Inhalation (rat) LC50: >2.28 mg/l/4hr[1]	Not Available
Inhalation (rat) LC50: >3.56 mg/l/4hr[1]	
Inhalation (rat) LC50: >6.82 mg/l/4hr[1]	

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	Inhalation (rat) LC50: 3.43 mg/l/4hr[1]
	Inhalation (rat) LC50: 5.09 mg/l/4hr[1]
	Oral (rat) LD50: >2000 mg/kg[1]

Non-hazardous ingredient	TOXICITY	IRRITATION
	Not Available	Not Available

sodium hydroxide	TOXICITY	IRRITATION
	Oral (rabbit) LD50: 325 mg/kg[1]	Eye (rabbit): 0.05 mg/24h SEVERE
		Eye (rabbit):1 mg/24h SEVERE
		Eye (rabbit):1 mg/30s rinsed-SEVERE
		Skin (rabbit): 500 mg/24h SEVERE

1,2-benzisothiazoline-3-one	TOXICITY	IRRITATION
	Oral (rat) LD50: 670 mg/kg[2]	Not Available

monoisobutanolamine	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg[1]	Not Available
	Oral (rat) LD50: 2900 mg/kg[2]	

diethylene glycol monobutyl ether	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 2700 mg/kg[2]	Eye (rabbit): 20 mg/24h moderate
	Oral (rat) LD50: 3306 mg/kg[1]	Eye (rabbit): 5 mg - SEVERE

n-butyl methacrylate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 11300 mg/kg[2]	Skin (rabbit): 10000 mg/kg (open)
	Inhalation (rat) LC50: 4910 ppm/4hr[2]	
	Oral (rat) LD50: 16000 mg/kg[2]	

water	TOXICITY	IRRITATION
	Oral (rat) LD50: >90000 mg/kg[2]	Not Available

dipropylene glycol mono-n-butyl ether - alpha isomer	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg[1]	Not Available
	Oral (rat) LD50: 1501.74 mg/kg[2]	

diethylene glycol monomethyl ether	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 2525 mg/kg[2]	Eye (rabbit): 500 mg moderate
	Oral (rat) LD50: 4040 mg/kg[2]	Eye (rabbit): 500 mg/24h mild

propylene glycol dibenzoate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg[2]	Not Available
	Inhalation (rat) LC50: >200 mg/l/4h *[2]	
	Oral (rat) LD50: 3593 mg/kg[2]	

xylene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1700 mg/kg[2]	Eye (human): 200 ppm irritant
	Inhalation (rat) LC50: 5000 ppm/4hr[2]	Eye (rabbit): 5 mg/24h SEVERE
	Oral (rat) LD50: 4300 mg/kg[2]	Eye (rabbit): 87 mg mild
		Skin (rabbit):500 mg/24h moderate

Continued...

ethylene glycol phenyl ether	**TOXICITY** / **IRRITATION** dermal (rat) LD50: 14391 mg/kg[1] / Eye (rabbit): 250 ug/24h - SEVERE Oral (rat) LD50: 1386 mg/kg[1] / Eye (rabbit): 6 mg - moderate — / Skin (rabbit): 500 mg/24h - mild
ethylbenzene	**TOXICITY** / **IRRITATION** Dermal (rabbit) LD50: ca.15432.6 mg/kg[1] / Eye (rabbit): 500 mg - SEVERE Inhalation (mouse) LC50: 35.5 mg/L/2hr[2] / Skin (rabbit): 15 mg/24h mild Inhalation (rat) LC50: 55 mg/L/2hr[2] / — Oral (rat) LD50: 3500 mg/kg[2] / —
sodium nitrite	**TOXICITY** / **IRRITATION** Inhalation (rat) LC50: 0.0055 mg/L/4hr[2] / Eye (rabbit): 500 mg/24hr - mild Oral (rat) LD50: 157.9 mg/kg[2] / —
carbon black	**TOXICITY** / **IRRITATION** Dermal (rabbit) LD50: >3000 mg/kg[2] / Not Available Oral (rat) LD50: >8000 mg/kg[1] / —
C.I. Pigment Yellow 42	**TOXICITY** / **IRRITATION** Oral (rat) LD50: >5000 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 (ANATASE)	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.
SODIUM HYDROXIDE	The material may cause severe 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. Repeated exposures may produce severe ulceration.
1,2-BENZISOTHIAZOLINE-3-ONE	**Acute toxicity** data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation , but repeated dermal application indicated a more significant skin irritation response. The neurotoxicity observed in the rat acute oral toxicity study (piloerection and upward curvature of the spine at 300 mg/kg and above; decreased activity, prostration, decreased abdominal muscle tone, reduced righting reflex, and decreased rate and depth of breathing at 900 mg/kg) and the acute dermal toxicity study (upward curvature of the spine was observed in increased incidence, but this was absent after day 5 post-dose at a dose of 2000 mg/kg) were felt to be at exposures in excess of those expected from the use pattern of this pesticide and that such effects would not be observed at estimated exposure doses.
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. Ingestion of relatively high dosages can cause liver changes.
N-BUTYL METHACRYLATE	Where no "official" classification for acrylates and methacrylates exists, there has been cautious attempts to create classifications in the absence of contrary evidence. For example Monalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53 Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38 For isobutyl methacrylates (i-BMA) and n-butyl methacrylates (n-BMA): These have low levels of toxicity orally, through skin contact or by inhalation. They irritate the skin and eyes. They have not been shown to cause genetic damage or cancer, and there is little concern about them causing developmental toxicity. Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing. This position has now been revised and acrylates and methacrylates are no longer *de facto* carcinogens.
DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER	for propylene glycol ethers (PGEs): Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM). Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on reproductive organs, the developing embryo and fetus, blood (haemolytic effects), or thymus, are not seen with the commercial-grade propylene glycol ethers.
DIETHYLENE GLYCOL MONOMETHYL ETHER	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
PROPYLENE GLYCOL DIBENZOATE	A member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS) based in part on their self-limiting properties as flavouring substances in food; their rapid absorption. metabolic detoxification, and excretion in humans and other animals, their low level of flavour use, the wide margin of safety between the conservative estimates of intake and the no-observed-adverse effect levels determined from chronic and subchronic studies and the lack of significant genotoxic and mutagenic potential. This evidence of safety is supported by the fact that the intake of benzyl derivatives as natural components of traditional foods is greater than the intake as intentionally added flavouring substances. ** Eastman Kodak
XYLENE	Reproductive effector in rats

Continued...

ETHYLENE GLYCOL PHENYL ETHER	The aryl alkyl alcohol (AAA) fragrance ingredients are a diverse group of chemical structures with similar metabolic and toxicity profiles. The AAA fragrances demonstrate low acute and subchronic dermal and oral toxicity. At concentrations likely to be encountered by consumers, AAA fragrance ingredients are non-irritating to the skin. Bacterial cell mutagen
ETHYLBENZENE	Ethylbenzene is readily absorbed when inhaled, swallowed or in contact with the skin. It is distributed throughout the body, and passed out through urine. It may irritate the skin, eyes and may cause hearing loss if exposed to high doses. **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. Liver changes, utheral tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded.
SODIUM NITRITE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Tumorigenic - Carcinogenic by RTECS criteria.
CARBON BLACK	Inhalation (rat) TCLo: 50 mg/m3/6h/90D-I Nil reported
SODIUM HYDROXIDE & DIETHYLENE GLYCOL MONOBUTYL ETHER & XYLENE & ETHYLENE GLYCOL PHENYL ETHER & ETHYLBENZENE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
SODIUM HYDROXIDE & N-BUTYL METHACRYLATE & C.I. PIGMENT YELLOW 42	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant.
1,2-BENZISOTHIAZOLINE-3-ONE & N-BUTYL METHACRYLATE & PROPYLENE GLYCOL DIBENZOATE	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.
DIETHYLENE GLYCOL MONOBUTYL ETHER & DIETHYLENE GLYCOL MONOMETHYL ETHER	This category includes diethylene glycol ethyl ether (DGEE), diethylene glycol propyl ether (DGPE) diethylene glycol butyl ether (DGBE) and diethylene glycol hexyl ether (DGHE) and their acetates. Studies show that they can cause kidney and liver damage, skin and eye irritation as well as blood changes but do not cause damage to the reproductive, genetic and developmental abnormalities, sensitisation or respiratory systems. However, DGEE is reported to cause sperm insufficiency.
WATER & CARBON BLACK & C.I. PIGMENT YELLOW 42	No significant acute toxicological data identified in literature search.
XYLENE & ETHYLENE GLYCOL PHENYL ETHER & ETHYLBENZENE	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.
XYLENE & C.I. PIGMENT YELLOW 42	The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
ETHYLBENZENE & CARBON BLACK	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

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 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 (anatase)	LC50	96	Fish	9.214mg/L	3
titanium dioxide (anatase)	EC50	48	Crustacea	>10mg/L	2
titanium dioxide (anatase)	EC50	72	Algae or other aquatic plants	5.83mg/L	4
titanium dioxide (anatase)	EC20	72	Algae or other aquatic plants	1.81mg/L	4
titanium dioxide (anatase)	NOEC	336	Fish	0.089mg/L	4
sodium hydroxide	LC50	96	Fish	4.16158mg/L	3
sodium hydroxide	EC50	96	Algae or other aquatic plants	1034.10043mg/L	3
sodium hydroxide	EC50	384	Crustacea	27901.643mg/L	3
sodium hydroxide	NOEC	96	Fish	56mg/L	4
1,2-benzisothiazoline-3-one	LC50	96	Fish	1.6mg/L	4
1,2-benzisothiazoline-3-one	EC50	48	Crustacea	0.062mg/L	4
1,2-benzisothiazoline-3-one	EC50	48	Crustacea	4.4mg/L	4
monoisobutanolamine	LC50	96	Fish	=100mg/L	1
monoisobutanolamine	EC50	48	Crustacea	=193mg/L	1

Continued...

monoisobutanolamine	EC50	96	Algae or other aquatic plants	52.872mg/L	3
monoisobutanolamine	EC50	24	Crustacea	=65mg/L	1
diethylene glycol monobutyl ether	LC50	96	Fish	488.016mg/L	3
diethylene glycol monobutyl ether	EC50	48	Crustacea	>100mg/L	1
diethylene glycol monobutyl ether	EC50	96	Algae or other aquatic plants	>100mg/L	1
diethylene glycol monobutyl ether	EC50	384	Crustacea	112.547mg/L	3
diethylene glycol monobutyl ether	NOEC	96	Algae or other aquatic plants	>=100mg/L	1
n-butyl methacrylate	LC50	96	Fish	5.478mg/L	3
n-butyl methacrylate	EC50	48	Crustacea	32mg/L	1
n-butyl methacrylate	EC50	96	Algae or other aquatic plants	57mg/L	1
n-butyl methacrylate	EC50	504	Crustacea	6.59mg/L	2
n-butyl methacrylate	NOEC	336	Fish	0.78mg/L	2
dipropylene glycol mono-n-butyl ether - alpha isomer	LC50	96	Fish	139.478mg/L	3
dipropylene glycol mono-n-butyl ether - alpha isomer	EC50	96	Algae or other aquatic plants	556.359mg/L	3
dipropylene glycol mono-n-butyl ether - alpha isomer	EC50	384	Crustacea	32.795mg/L	3
dipropylene glycol mono-n-butyl ether - alpha isomer	NOEC	96	Fish	=180mg/L	1
diethylene glycol monomethyl ether	LC50	96	Fish	4276.836mg/L	3
diethylene glycol monomethyl ether	EC50	48	Crustacea	>500mg/L	1
diethylene glycol monomethyl ether	EC50	72	Algae or other aquatic plants	>500mg/L	1
diethylene glycol monomethyl ether	EC0	48	Crustacea	=500mg/L	1
propylene glycol dibenzoate	LC50	96	Fish	4.927mg/L	3
propylene glycol dibenzoate	EC50	96	Algae or other aquatic plants	0.418mg/L	3
xylene	LC50	96	Fish	2.6mg/L	2
xylene	EC50	48	Crustacea	>3.4mg/L	2
xylene	EC50	72	Algae or other aquatic plants	4.6mg/L	2
xylene	EC50	24	Crustacea	0.711mg/L	4
xylene	NOEC	73	Algae or other aquatic plants	0.44mg/L	2
ethylene glycol phenyl ether	LC50	96	Fish	106.514mg/L	3
ethylene glycol phenyl ether	EC50	48	Crustacea	>500mg/L	1
ethylene glycol phenyl ether	EC50	96	Algae or other aquatic plants	429.444mg/L	3
ethylene glycol phenyl ether	EC50	384	Crustacea	25.027mg/L	3
ethylene glycol phenyl ether	NOEC	504	Crustacea	9.43mg/L	2
ethylbenzene	LC50	96	Fish	0.0043mg/L	4
ethylbenzene	EC50	48	Crustacea	1.184mg/L	4
ethylbenzene	EC50	96	Algae or other aquatic plants	3.6mg/L	2
ethylbenzene	EC50	96	Crustacea	=0.49mg/L	1
ethylbenzene	NOEC	168	Crustacea	0.96mg/L	5
sodium nitrite	LC50	96	Fish	0.048mg/L	4
sodium nitrite	EC50	48	Crustacea	ca.12.5100mg/L	1
sodium nitrite	EC50	96	Algae or other aquatic plants	12.537mg/L	3
sodium nitrite	EC50	216	Crustacea	1.8mg/L	4
sodium nitrite	NOEC	2	Fish	0.02mg/L	4
carbon black	LC50	96	Fish	=1000mg/L	1
carbon black	EC50	24	Crustacea	>5600mg/L	1
carbon black	NOEC	96	Fish	=1000mg/L	1
C.I. Pigment Yellow 42	LC50	96	Fish	0.05mg/L	2
C.I. Pigment Yellow 42	EC50	72	Algae or other aquatic plants	18mg/L	2

Continued...

C.I. Pigment Yellow 42	EC50	504	Crustacea	4.49mg/L	2
C.I. Pigment Yellow 42	NOEC	504	Fish	0.52mg/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 Aromatic Substances Series:
Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.
Atmospheric Fate: PAHs are 'semi-volatile substances" which can move between the atmosphere and the Earth's surface in repeated, temperature-driven cycles of deposition and volatilization.
Terrestrial Fate: BTEX compounds have the potential to move through soil and contaminate ground water, and their vapors are highly flammable and explosive.
Ecotoxicity - Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus. The order of most toxic to least in a study using grass shrimp and brown shrimp was dimethylnaphthalenes > methylnaphthalenes >naphthalenes. Anthrcene is a phototoxic PAH. UV light greatly increases the toxicity of anthracene to bluegill sunfish. Biological resources in strong sunlight are at more risk than those that are not. PAHs in general are more frequently associated with chronic risks.
For Xylenes:
log Koc : 2.05-3.08; Koc : 25.4-204; Half-life (hr) air : 0.24-42; Half-life (hr) H2O surface water : 24-672; Half-life (hr) H2O ground : 336-8640; Half-life (hr) soil : 52-672; Henry's Pa m3 /mol : 637-879; Henry's atm m3 /mol - 7.68E-03; BOD 5 if unstated - 1.4,1%; COD - 2.56,13% ThOD - 3.125 : BCF : 23; log BCF : 1.17-2.41.
Environmental Fate: Most xylenes released to the environment will occur in the atmosphere and volatilisation is the dominant environmental fate process. Soil - Xylenes are expected to have moderate mobility in soil evaporating rapidly from soil surfaces. The extent of the degradation is expected to depend on its concentration, residence time in the soil, the nature of the soil, and whether resident microbial populations have been acclimated. Xylene can remain below the soil surface for several days and may travel through the soil profile and enter groundwater. Soil and water microbes may transform it into other, less harmful compounds, although this happens slowly. It is not clear how long xylene remains trapped deep underground in soil or groundwater, but it may be months or years.
Atmospheric Fate: Xylene evaporates quickly into the air from surface soil and water and can remain in the air for several days until it is broken down by sunlight into other less harmful chemicals. In the ambient atmosphere, xylenes are expected to exist solely in the vapour phase. Xylenes are degraded in the atmosphere with an estimated atmospheric lifetime of about 0.5 to 2 days. Xylene may contribute to photochemical smog formation. p-Xylene has a moderately high photochemical reactivity under smog conditions, higher than the other xylene isomers. The photooxidation of p-xylene results in the production of carbon monoxide, formaldehyde, glyoxal, methylglyoxal, 3-methylbenzylnitrate, m-tolualdehyde, 4-nitro-3-xylene, 5-nitro-3-xylene, 2,6-dimethyl-p-benzoquinone, 2,4-dimethylphenol, 6-nitro-2,4-dimethylphenol, 2,6-dimethylphenol, and 4-nitro-2,6-dimethylphenol.
Aquatic Fate: p-xylene may adsorb to suspended solids and sediment in water and is expected to volatilise from water surfaces. Estimated volatilisation half-lives for a model river and model lake are 3 hours and 4 days, respectively. Measurements taken from goldfish, eels and clams indicate that bioconcentration in aquatic organisms is low. Photo-oxidation in the presence of humic acids may play an important role in the abiotic degradation of p-xylene. p-Xylene is biodegradable and has been observed to degrade in pond water however; it is unclear if it degrades in surface waters. p-Xylene has been observed to degrade in anaerobic and aerobic groundwater; however, it is known to persist for many years in groundwater, at least at sites where the concentration might have been quite high. Ecotoxicity: Xylenes are slightly toxic to fathead minnow, rainbow trout and bluegill and not acutely toxic to water fleas. For Photobacterium phosphoreum EC50 (24 h): 0.0084 mg/L. and Gammarus lacustris LC50 (48 h): 0.6 mg/L.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
titanium dioxide (anatase)	HIGH	HIGH
sodium hydroxide	LOW	LOW
monoisobutanolamine	LOW	LOW
diethylene glycol monobutyl ether	LOW	LOW
n-butyl methacrylate	LOW	LOW
water	LOW	LOW
dipropylene glycol mono-n-butyl ether - alpha isomer	HIGH	HIGH
diethylene glycol monomethyl ether	LOW	LOW
propylene glycol dibenzoate	LOW	LOW
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
ethylene glycol phenyl ether	LOW	LOW
ethylbenzene	HIGH (Half-life = 228 days)	LOW (Half-life = 3.57 days)
sodium nitrite	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
titanium dioxide (anatase)	LOW (BCF = 10)
sodium hydroxide	LOW (LogKOW = -3.8796)
monoisobutanolamine	LOW (BCF = 330)
diethylene glycol monobutyl ether	LOW (BCF = 0.46)
n-butyl methacrylate	LOW (BCF = 114)
water	LOW (LogKOW = -1.38)
dipropylene glycol mono-n-butyl ether - alpha isomer	LOW (LogKOW = 1.1274)
diethylene glycol monomethyl ether	LOW (BCF = 0.18)
propylene glycol dibenzoate	LOW (LogKOW = 3.7326)
xylene	MEDIUM (BCF = 740)
ethylene glycol phenyl ether	LOW (LogKOW = 1.16)
ethylbenzene	LOW (BCF = 79.43)

Continued...

sodium nitrite	LOW (LogKOW = 0.0564)

Mobility in soil

Ingredient	Mobility
titanium dioxide (anatase)	LOW (KOC = 23.74)
sodium hydroxide	LOW (KOC = 14.3)
monoisobutanolamine	MEDIUM (KOC = 2.196)
diethylene glycol monobutyl ether	LOW (KOC = 10)
n-butyl methacrylate	LOW (KOC = 63.6)
water	LOW (KOC = 14.3)
dipropylene glycol mono-n-butyl ether - alpha isomer	LOW (KOC = 10)
diethylene glycol monomethyl ether	HIGH (KOC = 1)
propylene glycol dibenzoate	LOW (KOC = 2573)
ethylene glycol phenyl ether	LOW (KOC = 12.12)
ethylbenzene	LOW (KOC = 517.8)
sodium nitrite	LOW (KOC = 23.74)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	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. A Hierarchy of Controls seems to be common - the user should investigate: ▸ Reduction ▸ Reuse ▸ Recycling ▸ Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. ▸ **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. ▸ Where in doubt contact the responsible authority. ▸ 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. ▸ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material). ▸ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

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 (ANATASE)(1317-70-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - Alaska Limits for Air Contaminants
US - California Permissible Exposure Limits for Chemical Contaminants
US - California Proposition 65 - Carcinogens
US - Hawaii Air Contaminant Limits
US - Idaho - Limits for Air Contaminants
US - Massachusetts - Right To Know Listed Chemicals
US - Michigan Exposure Limits for Air Contaminants
US - Minnesota Permissible Exposure Limits (PELs)
US - Oregon Permissible Exposure Limits (Z-1)
US - Pennsylvania - Hazardous Substance List
US - Rhode Island Hazardous Substance List
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 (TLV)
US ACGIH Threshold Limit Values (TLV) - Carcinogens
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Levels (PELs) - Table Z1
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 Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

NON-HAZARDOUS INGREDIENT(NOT AVAIL.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

SODIUM HYDROXIDE(1310-73-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Alaska Limits for Air Contaminants
US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
US - California Permissible Exposure Limits for Chemical Contaminants
US - Hawaii Air Contaminant Limits
US - Idaho - Limits for Air Contaminants
US - Massachusetts - Right To Know Listed Chemicals
US - Michigan Exposure Limits for Air Contaminants
US - Minnesota Permissible Exposure Limits (PELs)
US - Oregon Permissible Exposure Limits (Z-1)
US - Pennsylvania - Hazardous Substance List
US - Rhode Island Hazardous Substance List
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 - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US ACGIH Threshold Limit Values (TLV)
US CWA (Clean Water Act) - List of Hazardous Substances
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Levels (PELs) - Table Z1
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

1,2-BENZISOTHIAZOLINE-3-ONE(2634-33-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

MONOISOBUTANOLAMINE(124-68-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Massachusetts - Right To Know Listed Chemicals
US - Pennsylvania - Hazardous Substance List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

DIETHYLENE GLYCOL MONOBUTYL ETHER(112-34-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
US - Pennsylvania - Hazardous Substance List
US ACGIH Threshold Limit Values (TLV)
US Clean Air Act - Hazardous Air Pollutants
US EPCRA Section 313 Chemical List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

N-BUTYL METHACRYLATE(97-88-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Massachusetts - Right To Know Listed Chemicals
US - Pennsylvania - Hazardous Substance List
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

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER(29911-28-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
US - Pennsylvania - Hazardous Substance List
US Clean Air Act - Hazardous Air Pollutants
US EPCRA Section 313 Chemical List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

DIETHYLENE GLYCOL MONOMETHYL ETHER(111-77-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
US - Massachusetts - Right To Know Listed Chemicals
US - Pennsylvania - Hazardous Substance List
US Clean Air Act - Hazardous Air Pollutants
US EPCRA Section 313 Chemical List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

PROPYLENE GLYCOL DIBENZOATE(19224-26-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

XYLENE(1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - Alaska Limits for Air Contaminants
US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
US - California Permissible Exposure Limits for Chemical Contaminants
US - Hawaii Air Contaminant Limits
US - Idaho - Limits for Air Contaminants
US - Massachusetts - Right To Know Listed Chemicals
US - Michigan Exposure Limits for Air Contaminants
US - Minnesota Permissible Exposure Limits (PELs)
US - Oregon Permissible Exposure Limits (Z-1)
US - Pennsylvania - Hazardous Substance List
US - Rhode Island Hazardous Substance List
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 ACGIH Threshold Limit Values (TLV)
US ACGIH Threshold Limit Values (TLV) - Carcinogens
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
US Clean Air Act - Hazardous Air Pollutants
US CWA (Clean Water Act) - List of Hazardous Substances
US EPA Carcinogens Listing
US EPCRA Section 313 Chemical List
US OSHA Permissible Exposure Levels (PELs) - Table Z1
US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

ETHYLENE GLYCOL PHENYL ETHER(122-99-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
US - Pennsylvania - Hazardous Substance List
US Clean Air Act - Hazardous Air Pollutants
US EPCRA Section 313 Chemical List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

ETHYLBENZENE(100-41-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - Alaska Limits for Air Contaminants
US - California - Proposition 65 - Priority List for the Development of MADLs for Chemicals Causing Reproductive Toxicity
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
US - California Permissible Exposure Limits for Chemical Contaminants
US - California Proposition 65 - Carcinogens
US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens
US - Hawaii Air Contaminant Limits
US - Idaho - Limits for Air Contaminants
US - Massachusetts - Right To Know Listed Chemicals
US - Michigan Exposure Limits for Air Contaminants
US - Minnesota Permissible Exposure Limits (PELs)
US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens
US - Oregon Permissible Exposure Limits (Z-1)
US - Pennsylvania - Hazardous Substance List
US - Rhode Island Hazardous Substance List
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 - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US ACGIH Threshold Limit Values (TLV)
US ACGIH Threshold Limit Values (TLV) - Carcinogens
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
US Clean Air Act - Hazardous Air Pollutants
US CWA (Clean Water Act) - List of Hazardous Substances
US CWA (Clean Water Act) - Priority Pollutants
US CWA (Clean Water Act) - Toxic Pollutants
US EPA Carcinogens Listing
US EPCRA Section 313 Chemical List
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Levels (PELs) - Table Z1
US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

SODIUM NITRITE(7632-00-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - Massachusetts - Right To Know Listed Chemicals
US - Pennsylvania - Hazardous Substance List
US CWA (Clean Water Act) - List of Hazardous Substances
US EPCRA Section 313 Chemical List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

CARBON BLACK(1333-86-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - Alaska Limits for Air Contaminants
US - California Permissible Exposure Limits for Chemical Contaminants
US - California Proposition 65 - Carcinogens
US - Hawaii Air Contaminant Limits
US - Idaho - Limits for Air Contaminants
US - Massachusetts - Right To Know Listed Chemicals
US - Michigan Exposure Limits for Air Contaminants
US - Minnesota Permissible Exposure Limits (PELs)
US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens
US - Oregon Permissible Exposure Limits (Z-1)
US - Pennsylvania - Hazardous Substance List
US - Rhode Island Hazardous Substance List
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 (TLV)
US ACGIH Threshold Limit Values (TLV) - Carcinogens
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Levels (PELs) - Table Z1
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 Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. PIGMENT YELLOW 42(51274-00-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Alaska Limits for Air Contaminants
US - Pennsylvania - Hazardous Substance List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Continued...

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
Sodium hydroxide	1000	454
Xylene (mixed)	100	45.4
Ethylbenzene	1000	454
Sodium nitrite	100	45.4

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), Ethylbenzene, Carbon black (airborne, unbound particles of respirable size) Listed

National Inventory	Status
Australia - AICS	Y
Canada - DSL	N (propylene glycol dibenzoate)
Canada - NDSL	N (diethylene glycol monomethyl ether; monoisobutanolamine; 1,2-benzisothiazoline-3-one; dipropylene glycol mono-n-butyl ether - alpha isomer; xylene; diethylene glycol monobutyl ether; ethylbenzene; water; n-butyl methacrylate; ethylene glycol phenyl ether; sodium nitrite; carbon black; sodium hydroxide; C.I. Pigment Yellow 42)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (dipropylene glycol mono-n-butyl ether - alpha isomer; 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 (anatase)	1317-70-0, 13463-67-7
sodium hydroxide	1310-73-2, 12200-64-5
propylene glycol dibenzoate	19224-26-1, 105928-08-3
ethylene glycol phenyl ether	122-99-6, 37220-49-8, 134367-25-2, 18249-17-7, 200260-63-5, 79586-53-1, 9004-78-8, 56257-90-0, 1219804-65-5
C.I. Pigment Yellow 42	51274-00-1, 12259-21-1, 105478-30-6, 53028-10-7, 1342-51-4, 12000-32-7, 50641-37-7, 51109-85-4, 99241-66-4, 131462-81-2, 147625-38-5, 12001-03-5, 185464-57-7, 182761-12-2, 94809-98-0, 934248-40-5

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. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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

Continued...

TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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TEL (+61 3) 9572 4700.

end of SDS