Lightclean
Safety Data Sheet

Section 1 Identification of the Material and the Supplier

Product:	Lightclean
Product Code:	LCW
Product Use:	Specialised cleaner (underwater lights)
Restrictions of Use:	Refer to Section 15
Supplier:	Oceanmax International Ltd 25 Akatea Road Glendene Auckland 0602 New Zealand www.oceanmax.com
Telephone: Fax:	0800 LESS FUEL (0800 5377 3835) +64 9 813 5246
Emergency Response Telephone: (24 hours, 365 days)	New Zealand 0800 243 622 Australian 1800 127 406 Global Access + 64 4 917 9888
NZ National Poisons Centre Telephone:	0800 POISON (0800 764 766)
Date of SDS Preparation:	13 August 2018, Version 2

Section 2 Hazards Identification

Hazardous Status: This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR001094

GHS Pictograms:

Flammable

Irritant

GHS Signal Word: **Danger**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
3.1B	H225	Highly flammable liquid and vapour.	Flam. Liq. 2
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A

Prevention Code	Prevention Statement
P103	Read label before use.
P210	Keep away from heat, sparks, open flame or hot surfaces. No smoking.
P233	Keep container tightly closed.

P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating or lighting.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash hands thoroughly after handling.
P280	Wear protective clothing in Section 8.

Response Code	Response Statement
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use water spray, alcohol resistant foam, Carbon dioxide or dry chemical powder.for extinction.

Storage Code	Storage Statement
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Do not let this product enter the environment. Do not dispose of in waterways or sewers. Dispose of this material and its container as hazardous waste, via a licensed hazardous waste contractor. See local council for disposal/recycling information.

Section 3 Composition / Information on Hazardous Ingredients

Ingredients	Wt (%)	CAS Number
Tert-Butyl Acetate	≥99.9	540-88-5

Section 4 First Aid Measures

If in Eyes — Immediately flush with plenty of water. Remove any contact lenses and open eyes wide apart. If eye irritation persists: Get medical advice/attention.

If on Skin — Wash with soap and plenty of water. If skin irritation occurs: Get medical advice/ attention.

If Swallowed — Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

If Inhaled — Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed. Call the doctor if needed.

Most important symptoms and effects, both acute and delayed

Symptoms

Ingestion: Not applicable.
Inhalation: Not applicable.
Skin: Causes mild skin irritation.
Eye: Causes serious eye irritation.

Section 5 Fire Fighting Measures

Hazard Type	Flammable liquid
Hazards from products	On combustion, may emit toxic fumes of carbon oxides (CO2, CO).
Suitable Extinguishing media	Water spray, alcohol resistant foam, Carbon dioxide, dry chemical powder.
Precautions for firefighters and special protective clothing	Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers. Alert Fire Brigade and tell them location and nature of hazard.
HAZCHEM CODE	**3YE**

Section 6 Accidental Release Measures

Avoid any exposure. Do not smoke, use open fire or other sources of ignition. For personal protection, see section 8. Follow precautions for safe handling described in this safety data sheet.

Clear area of personnel and move upwind. May be violently or explosively reactive. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Water spray or fog may be used to disperse/absorb vapour. Contain spill with sand, earth or vermiculite. Use only spark-free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains -If contamination of drains or waterways occurs, advise emergency services. Dispose of according to Local Regulations.

Section 7 Handling and Storage

Precautions for safe handling:

- Read label before use.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical, ventilating or lighting.
- Use only non-sparking tools.
- Use in well ventilated area.
- Prevent concentration in hollows and sumps
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights, heat or ignition sources.
- When handling, DO NOT eat, drink or smoke.
- Vapour may ignite on pumping or pouring due to static electricity.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
- Take precautionary measures against static discharge.
- Wash hands thoroughly after handling.
- Wear protective clothing in Section 8.

Conditions for safe storage:

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.
- Keep containers securely sealed.
- Store away from incompatible materials in a cool, dry well ventilated area.
- Protect containers against physical damage and check regularly for leaks.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		STEL	
Substance	**ppm**	**mg/m³**	**ppm**	**mg/m³**
tert-Butyl acetate	200	950		

Workplace Exposure Standard – Time Weighted Average (WES-TWA).The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls:
None required when handling small quantities. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Personal Protection Equipment

Respiratory	Avoid generating and breathing mist and vapour. If applicable to use an air-purifying respirator approved by government standards NIOSH (US) or CEN (EU).
Hands	Wear protective gloves. Nitrile gloves are recommended. Inspect gloves prior to use and ensure proper glove removal technique to avoid skin contact with contaminated surfaces. Dispose of contaminated gloves according to local laws and good workplace practices.
Eyes	Safety glasses with side shields; or as required. Chemical goggles. Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.
Skin	Impervious protective clothing for small quantities. Consider wearing flame retardant anti-static protective equipment if working with larger quantities. Wear safety footwear.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Colourless
Odour	Fruity
Odour Threshold	Data not available
pH	Data not available
Boiling Point	97-98°C
Melting Point	-58^{0}C
Freezing Point	Data not available
Flash Point	4°C (closed cup)
Flammability	Data not available
Upper and Lower Explosive Limits	1.5 – 1.7 vol%
Vapour Pressure	5.6 kPa @20^{0}C
Vapour Density	4.65 (air=1)
Relative Density	0.866 g/cm3
Specific Gravity	0.87 – 0.92 g.cm^{-3}
Water Solubility	Partially soluble in water (≈ 6.7 g/L)
Partition Coefficient:	Log Pow = 1.64 at 21.7°C
Auto-ignition Temperature	589°C at 101.5 kPa
Decomposition Temperature	Data not available
Viscosity	Data not available
Particle Characteristics	Data not available
Evaporation Rate	3.2 Fast

Section 10 Stability and Reactivity

Stability of Substance	Stable under normal usage conditions. Curing time: 10 min - 1 h (20 °C)
Possibility of hazardous reactions	Not Available
Conditions to Avoid	Avoid heat, flames and other sources of ignition.
Incompatible Materials	Oxidizing agents.
Hazardous Decomposition Products	Carbon oxides (CO, CO2).

Section 11 Toxicological Information

Acute Effects:

Swallowed	LD50 = 4100 mg/kg (Male Rat)
Dermal	>2000mg/kg (Rabbit).
Inhalation	Not applicable.
Eye	Causes serious eye irritation.
Skin	Causes mild skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12 Ecotoxicological Information

This product in not hazardous to the environment.

Environmental Precautions

Persistence and degradability	Aerobic – exposure time 28 days Result: 50% (inherently biodegradable).
Bioaccumulation	No data available
Mobility in Soil	No data available.
Other adverse effects	No data available
Toxicity Fish (rainbow trout)	LC50(96): 240 mg/L
Toxicity Arthropoda (water flea)	EC50(48): 350 g/L/48Hr

Section 13 Disposal Considerations

Disposal Method:
Spent media that has removed toxic chemicals should be examined for specific hazards. Dispose of according to Local Regulations.

Ensure any container holding waste product or contaminated spill media is labelled “Hazardous Waste – Flammable” and that the label also has the Flammable Pictograms, waste type identifier, and the business name, address, and phone number.

Precautions or methods to avoid: None known.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012

	Road and Rail	Marine Transport (IMDG)	Air Transport (IATA)
UN No	1123	1123	1123
Proper Shipping Name	BUTYL ACETATES	BUTYL ACETATES	BUTYL ACETATES
Class	3	3	3
Packing Group	II	II	II
Hazchem	3YE	3YE	3YE
Marine Pollutant	-	No	-
EmS	-	F-E, S-E	-

Limited Quantities Statement:

If the product’s individual container is below 1L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR001094

HSNO Classes: 3.1B, 6.3B, 6.4A

HSNO Controls
Trigger quantities for this substance:

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	100L(>5L), 250L (<5L), 50L open (3.1B)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250L(3.1B)
Emergency Response Plan	1000L(3.1B)
Secondary Containment	1000L(3.1B)
Fire Extinguishers	At least 2 x 4.5kg powder extinguishers required when 250L is present in a workplace.
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms
HSW	Health and Safety at Work.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
STOT/SE	Specific target organ toxicity – single exposure
STOT/RE	Specific target organ toxicity – repeated exposure
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

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