XDCLEAN
Safety Data Sheet
According to Regulation (EC) No. 1907/2006

***AIRMAR certifies that the application of Foulfree™ coating on its transducers results in no loss in transducer performance.**

Date of revision 2020-05-22, Version 2

Section 1 - Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	XDclean
Catalog No.	LCW Component in Foulfree kit FF15K.
CE No.	208-760-7
CAS No.	540-88-5
REACh registration No.	Not applicable

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Surface cleaner for transducers. (marine industry)

1.3 Details of the supplier of the Safety Data Sheet

Supplier	Propspeed International Limited PO BOX 83232 Edmonton Auckland New Zealand www.propspeed.com
Telephone	+64 9 524 1470
Telefax	+64 9 813 5246
E-mail (competent person)	info@propspeed.com

1.4 Emergency telephone number

Emergency number (24h/24 – 365 d/year)	+64 4 917 9888 (ChemCall)

Section 2 - Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008:

Hazard class	Hazard category	H-Code
Flammable liquids	Category 2	H225
Acute toxicity	Category 4	H332

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard pictograms:

Signal word: Danger

Hazard statements:
[H-Code: Hazard information]
H225: Highly flammable liquid and vapour.
H332: Harmful if inhaled.

Supplemental hazard statements (EU):
EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary statements:
[P-Code: Safety information]
General
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P103: Read label before use.
Prevention
P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233: Keep container tightly closed.
P271: Use only outdoors or in a well-ventilated area.
Storage
P403 + P235: Store in a well-ventilated place. Keep cool.

Elimination
P501: Dispose of contents/container to an approved waste disposal plant.

Reduced labelling (≤ 125 ml) according to Regulation (EC) No. 1272/2008. Derogations as referred to in section 1.5.2.1. of Annex I.

Hazard pictograms:

Signal word: Danger

Hazard statements:
H332: Harmful if inhaled.

Supplemental hazard statements (EU):
EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary statements:
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P103: Read label before use.
P271: Use only outdoors or in a well-ventilated area.

2.3 Other hazards

May cause respiratory irritation.
May cause drowsiness or dizziness.

Section 3 - Composition/information on ingredients

3.1 Substances

<Hazardous ingredients>

CAS No.	CE No. / REACh registration No.	Substance	Concentration %	Classification according to Regulation (EC) No. 1272/2008	
540-88-5	208-760-7 / Not applicable	tert-Butyl acetate Index REACh No. 607-026-00-7	≥ 99.9	Flam. Liq. 2 Acute Tox. 4	H225 H332

3.2 Mixtures

Not applicable.

Section 4 - First aid measures

4.1 Description of first aid measures

General information:

- Get medical attention when symptoms persist.
- Show these instructions to your physician/doctor.

Following inhalation:

- Remove victim from danger zone. Move to fresh air and keep at rest in a position comfortable for breathing. Breathe fresh air.
- Rinse mouth.
- If not breathing, give artificial respiration.
- 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.
- Call a doctor/physician if symptoms occur.

Following skin contact:

- Remove contaminated clothing immediately.
- Wash skin with soap and plenty of water for several minutes.
- Shower immediately in case of significant contamination.
- If skin irritation persists, seek medical attention. Show these instructions and label.

Following eye contact:

- Flush immediately with plenty of flowing water. Hold eyelids apart to rinse the entire surface of the eye.
- Remove contact lenses if those can be easily removed.
- If irritation persists, seek medical attention. Show these instructions and label.

Following ingestion:

- Never give anything by mouth to an unconscious person.
- If victim is conscious, rinse mouth.
- Do NOT induce vomiting.
- Caution if vomiting occurs unintentionally: risk of aspiration. Lean over to prevent vomit from entering airways. Keep airways free. Pulmonary failure possible after aspiration of vomit.
- Call a doctor/physician immediately. Show these instructions and label.

4.2 Most important symptoms and effects, both acute and delayed

Eye: severe eye irritation
Skin: Irritation. Repeated exposure may cause skin dryness or cracking.
Inhalation: headache, dizziness, drowsiness, fatigue, cough, breathing difficulties, nausea, vomiting
Ingestion: gastric / intestinal disturbances, dizziness, narcosis, nausea and vomiting

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

Section 5 – Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
Water spray, alcohol compatible foam, carbon dioxide or dry powder.
Remove safely flammable containers from danger zone.

Unsuitable extinguishing media:
Not applicable.

5.2 Special hazards arising from the substance or mixture
Flammable liquid. Risk of ignition. May form hazardous combustion gases and vapours.
May release toxic fumes and carbon oxides (CO, CO2) during combustion. Vapours can form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Beware of flashback.

5.3 Advice for firefighters
Wear self-contained breathing apparatus and appropriate protective equipment. Follow the general fire precautions indicated in the workplace. Use water spray to cool closed containers that were moved from danger zone.

Section 6 - Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Since the product is only supplied in small quantities on soaked wipes, the risk of accidental release is low. However, always take the following precautions:

- Wear personal protective equipment (see section 8) to avoid any kind of content with the substance. Personal protective clothing must be kept separate from other clothes.
- Observe industry health and safety good practices.
- Provide adequate ventilation.
- Do NOT touch the product and avoid contact with skin, eyes and clothing.
- Do NOT breathe vapour, spray and fumes.
- Do NOT smoke, do NOT use flames or other source of ignition.

The product may react violently.

6.2 Environmental precautions
Avoid further spillage if it can be done without risk. Do not allow to enter drains, surface and ground water, basements and other confined spaces. Risk of explosion. If drain contamination occurs, notify local authorities.

6.3 Methods and material for containment and cleaning up

Do not drain away with water. Observe possible material restrictions (see section 7 and 10). Prevent further spillage if without risk and collect. Soak up spillage with absorbent, non-flammable, inert materials (sand, earth, diatomaceous earth, vermiculite, specialized absorbent granules or powder, etc.). Place in clean appropriate container with tight-fitting lid for disposal, with indication of the content. Dispose of as special waste in compliance with local regulations. Water sprays or mists can be used to disperse / absorb vapours. Ventilate and clean affected area. Disposal considerations: see section 13.

6.4 Reference to other sections

Incompatible materials: see section 7 and 10.

Personal protective equipment: see section 8.

Disposal considerations: see section 13.

Section 7 - Handling and storage

7.1 Precautions for safe handling

- Read label before use and observe label precautions.
- Read safety data sheet before use.
- Provide adequate ventilation or use outdoors.
- Avoid concentration of the product in confined spaces and measure / check the atmosphere.
- DO NOT enter confined spaces where there is the product if the atmosphere has not been measured and checked first.
- Atmosphere must be regularly measured and checked against established exposure standards (see section 8).
- Keep away from heat, sparks, open flames and hot surfaces. — No smoking.
- Use only non-sparking tools.
- Take precautionary measures against static discharges.
- Follow the general fire precautions indicated in the workplace.
- Keep away from incompatible materials listed in section 10.
- Do not breathe fumes and vapours.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Keep container tightly closed when not in use.
- Prevent concentration of the product in confined spaces.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs.
- Vapour may ignite on pumping or pouring due to static electricity.

7.2 Conditions for safe storage, including any incompatibilities

- Keep out of reach of children.
- Keep/store only in original container.
- Store containers in a flameproof, non-smoking area.
- Store in a cool and well-ventilated place.
- Keep away from water and moisture.
- Keep containers tightly closed.
- Keep away from heat, sparks, open flames, hot surfaces and any source of ignition.
- Protect containers from physical damage and inspect regularly for deficiencies or leaks.
- Protect from sunlight.
- Store away from incompatible materials as detailed in section 10.
- Store locked-up, in an area accessible only to trained and authorized personnel.
- Ground/bond container and receiving equipment.
- Vapours can form explosive mixtures with air.
- Have appropriate equipment to clean spillage and fire extinguishers near the storage area.
- Recommended storage temperature: < 25 °C

7.3 Specific end use(s)

No specific use provided except for that mentioned in section 1.2.

Section 8 - Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits (WELs) for chemical substances established nationally:

- **UK:** EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated Fourth Edition 2020. Published with the permission of the Health and Safety Executive on behalf of the Controller of Her Majesty's Stationery Office.
- **IRE:** 2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulation (2001-2019). Published by the Health and Safety Authority.

Occupational exposure limit values (WELs)

Component	Country /Region	**TWA** (1)		**STEL** (2)	
		ppm	**mg.m^{-3}**	**ppm**	**mg.m^{-3}**
tert-Butyl acetate	UK	200	966	250	1210
	IRE	200	-	-	-
	EU	-	-	-	-

(1) TWA Time-weighted average (long-term exposure limit): a value in relation to an 8-hour time-weighted average reference period

(2) STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute reference period

Derived No Effect Level (DNEL)

		Workers			
Component	**Exposure**	**Acute / short-term Local Effects**	**Acute / short-term Systemic Effects**	**Long-term Local Effects**	**Long-term Systemic Effects**
tert-Butyl acetate	Inhalation	-	714 mg/m³	-	159 mg/m³
	Dermal	-	-	-	22.5 mg/kg bw/day

		General population			
Component	**Exposure**	**Acute / short-term Local Effects**	**Acute / short-term Systemic Effects**	**Long-term Local Effects**	**Long-term Systemic Effects**
tert-Butyl acetate	Inhalation	-	710 mg/m³	-	47.3 mg/m³
	Dermal	-	-	-	13.5 mg/kg bw/day
	Oral	-	-	-	13.5 mg/kg bw/day

Predicted No-Effect Concentration (PNEC)

Component	**Environmental protection objective**	**PNEC Value**
tert-Butyl acetate	Freshwater	16 µg/l
	Intermittent releases (freshwater)	160 µg/l
	Sediment (freshwater)	172 µg/kg
	Marine water	1.6 µg/l
	Sediment (marine water)	17.2 µg/kg
	Soil	25 µg/kg
	Sewage treatment plant (STP)	150 µg/l

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Provide adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. The methods of measuring the atmosphere in the workplace must comply with the standards in force.
Wear appropriate personal protective clothing and equipment according to the concentrations and quantities of hazardous substances in the workplace.
When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Do not store tobacco in work rooms or areas where the product is used. Avoid any exposure for pregnant women. Wash hands thoroughly before breaks and after work. Avoid contact with skin, eyes and clothing. Take off all contaminated clothing immediately. Personal protective clothing must be kept separate from other clothes. Do not breathe fumes, vapours or spray mist. Ensure that eyewash stations are close to the workstation location. Warn cleaning personnel of chemical's hazardous properties.

8.2.2 Personal protective equipment

Eye/face protection
Use tight fitting safety goggles or face shield, with side protection. European standard EN 166.
Warning: contact lenses are dangerous; soft lenses can absorb irritants and all types of lenses concentrate them.

Hand protection
Protective gloves must be worn at all times.

Type of material (recommended): Nitrile rubber protective gloves.
Material thickness: > 0.4 mm.
Breakthrough times of the glove material: > 30 min.

European standard EN 374.

Other types of gloves can be recommended by the glove supplier.
Inspect gloves prior to use. Be aware that the liquid may penetrate the gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the risk of cuts, abrasion and contact time. Warning: due to the many influencing factors (e.g. temperature), the duration of use of a chemical protective glove may be significantly shorter than the breakthrough times determined by the tests. Frequent change is advisable. Ensure proper glove removal technique to avoid skin contact with contaminated surfaces.
Dispose of contaminated gloves according to local laws and good workplace practices.

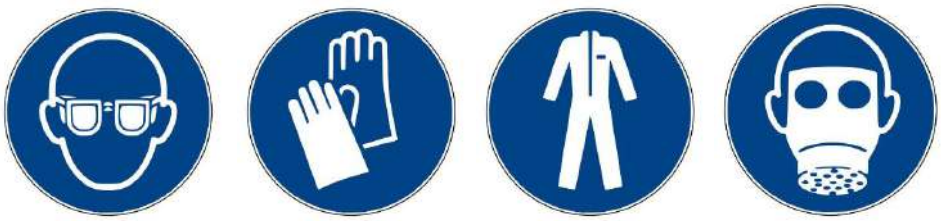
Skin and body protection

Wear long-sleeved impervious protective clothing. Wear flame retardant anti-static protective equipment. Wear appropriate personal protective clothing and equipment according to the concentrations and quantities of hazardous substances in the workplace.

Respiratory protection
Use appropriate certified respirator when:

- adequate ventilation cannot be provided
- exposure limits are exceeded
- vapours/aerosols are generated.

Use appropriate personal protective equipment according to the concentrations and quantities of hazardous substances in the workplace, and in accordance with European standards NF EN.
Examples of appropriate respirators: Respiratory protection device with half mask or full mask (if the mask is the only means of protection used) compliant with recognised European standards NF EN. Recommended Filter type: Filter A or ABEK, in accordance with recognised standards, such as NF EN 14387.
Observe the maximum wearing times of respiratory protection devices. Respiratory protective equipment must be the correct fit and be used and maintained properly. The employer must ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the manufacturer.



8.2.3 Environmental exposure controls
Do not let product enter drains, surface and ground water.

Section 9 – Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	liquid
Colour	colourless
Odour	fruity
Odour threshold	data not available
pH	data not available
Freezing point	data not available
Melting point	-58 °C

Boiling point and boiling range	95.1 °C – 97.8 °C
Flash point	16.6 °C – 22.2 °C
Evaporation rate	data not available
Flammability	data not available
Explosive limits	lower limit: 1.5%, upper limit: 1.7%
Vapour pressure	6.3 kPa at 25 °C
Density	0.866 at 20 °C
Relative vapour density	4.0 (air=1)
Solubility	Partially soluble in water (≈ 6.7 g/l)
Specific gravity	0.87 – 0.92 g/cm^3
Partition coefficient (n-octanol/water)	1.76 (LogP)
Auto-ignition temperature	589 °C à 101.5 kPa
Refractive index	1.386
Decomposition temperature	data not available
Viscosity	data not available

Section 10 – Stability and reactivity

10.1 Reactivity

Stable under normal handling and storage conditions.
Other important information may be mentioned in other parts of this chapter.

10.2 Chemical stability

Stable under normal handling and storage conditions. Curation time: 10 - 60 min (20 °C)

10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.
Explosion hazards with: strong oxidizers.
May decompose violently if in contact with: alkali hydroxides.
Violent reaction with: strong bases, strong acids and nitrates.

10.4 Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Avoid contact with: oxidising agents, acids, strong oxidisers and strong bases.

10.6 Hazardous decomposition products

May form carbon oxides: carbon monoxide (CO), carbon dioxide (CO_2)
May release flammable gas.
May form hazardous decomposition products in the event of fire.

Section 11 – Toxicological information

11.1 Information on toxicological effects

[tert-Butyl-acetate]

Acute toxicity

LD50 (oral)	4,100 mg/kg (rat)
LC50 (inhalation)	4,211 ppm/6h (rat)
LD50 (dermal)	> 2,000 ml/kg (rabbit)

Gastric / intestinal disorders. Aspiration hazard if vomiting occurs. Aspiration can cause pulmonary oedema and pneumonia.

Skin corrosion/irritation
Irritation. Repeated exposure may cause skin dryness or cracking.

Eye damage/irritation
Eye irritation.

Skin sensitization/Sensitization to the respiratory tract
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity
No data available.

Teratogenicity
No data available.

Specific target organ toxicity (single or repeated exposure)
No data available.

Aspiration hazard
Aspiration hazard if vomiting occurs. Aspiration can cause pulmonary oedema and pneumonia.

Source: ECHA and French INRS

11.2 Further information

Repeated exposure may cause skin dryness or cracking. Inhalation of high concentration vapours may cause symptoms such as headache, dizziness, fatigue, nausea and vomiting. Other dangerous properties cannot be excluded.

Section 12 – Ecological information

12.1 Toxicity

Tert-butyl-acetate	Fish (Oncorhynchus mykiss) LC50 – 240 mg/l – 96h – semi-static Daphnia (Daphnia magna) EC50 – 350 mg/l – 48h – semi-static

12.2 Persistence and degradability

Tert-butyl-acetate	Aerobic biodegradability – Exposure time 28d Result: 50%: Inherently biodegradable

12.3 Bioaccumulative potential

Tert-butyl-acetate	No data available.

12.4 Mobility in soil

Tert-butyl-acetate	No data available.

12.5 Results of PBT & vPvB assessment

Tert-butyl-acetate	Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effect

Avoid release to the environment.

Section 13 – Disposal considerations

13.1 Waste treatment methods

Dispose of product and container as hazardous waste. Dispose in accordance with European directives on waste and hazardous waste. Dispose of in accordance with local regulations. Keep in original container. Handle empty containers carefully, as residual vapours are flammable.

Product/packaging disposal

Dispose of contents and container to an approved waste disposal plant for hazardous waste. Do not release to sewage system. Empty containers contain product residue (liquid or vapor) and may be dangerous. Handle contaminated packages in the same way as the substance itself. Keep product and empty container away from heat and ignition sources.

Waste Disposal Legislation Ref.No. (EC)
It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Section 14 – Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1123	UN1123	UN1123
14.2 UN proper shipping name	BUTYL ACETATES	BUTYL ACETATES	BUTYL ACETATES
14.3 Transport hazard class(es)	 3	 3	 3
14.4 Packing group	II	II	II
14.5 Environmental hazard	No	No	No

Hazchem code 3YE.

14.6 Special precautions for user
Transport with local users: always transport in packaging that is correct and secure. Ensure that persons transporting the product are aware of the measures to be taken if an accident occurs or in case of accidental release.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code
Not available.

Section 15 – Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Observe EU and national regulations. For labelling information, please refer to section 2.

Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III): Not applicable.

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out by the manufacturer for this product.

Section 16 – Other information

Product

The information provided in this document is based on our knowledge at the date of its publication.

The properties of the product described do not constitute a warranty in the legal sense of the term. The provision of this document does not release the purchaser of the product from his responsibility to comply with legislations and regulations in force for this product. This statement applies for the resale and distribution of the product, or of substances or goods containing this product, in other jurisdictions and having regard to the industrial and commercial property rights of third parties. If the product described is transformed or mixed with other substances or materials, the information contained in this document may not be valid for the new product thus manufactured, unless explicitly mentioned. In case of repackaging of the product, the customer is required to provide the required safety information.

Legend

CAS	Chemical Abstracts Service
ppm	part per million
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
EC50	Effective Concentration 50%
vPvB	very Persistent and very Bioaccumulative
WEL	Workplace Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic
DNEL	Derived No-Effect Level
PNEC	Predicted No-Effect Concentration
REACh	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemical
CLP	Regulation on Classification, Labelling and Packaging of substances and mixtures
ADR/RID	European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
Flam. Liq.	Flammable liquid
Acute Tox.	Acute toxicity