WAECO DAPHNE HERMETIC OIL PS-F, WAECO DAPHNE HERMETIC OIL PR

SAFETY DATA SHEET

According to the Singapore standard SS 586-1-2014

ISSUE DATE: 4/7/2017
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VERSION: 1.1

1. SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name Waeco Daphne Hermetic Oil PS-F, Waeco Daphne Hermetic Oil PR
SDS Number 206

1.2. Other means of identification

No additional information available.

1.3. Recommended use of the chemical and restrictions on use

Recommended use Compressor oil for air conditioning systems
Restrictions on use None known

1.4. Supplier's details

DOMETIC PTE LTD
18 Boon Lay Way
06-140 Trade Hub 21
Singapore 609966
Tel +65 6795 3177
Fax +65 6862 6620
Mail dometic@dometic.com.sg

1.5. Emergency telephone number

Emergency number +49 (172) 3180-285 (Mo- Fr. 08:00 - 18:00 CET)

2. SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Physical hazards Flammable liquids Not classified

2.2 Label elements

Supplemental hazard information Contains epoxy constituents. May produce an allergic reaction

2.3 Other hazards

The mixture contains no substance that fulfils the criteria of a PBT- or vPvB substance.

3. SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Chemical name	Synonyms	Concentration(%)	Formula	CAS- No EC- No Index No
Tris(methylphenyl) phosphate		1 - < 1,5	C21H21O4P	1330-78-5 215-548-8

Chemical name	Synonyms	Concentration(%)	Formula	CAS- No EC- No Index No
2,6-di-tert-butyl-p-cresol		0,1 - < 1	C15H24O	128-37-0 204-881-4
7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester		0,1 - < 1	C14H20O4	2386-87-0 219-207-4

4. SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Inhalation Remove person to fresh air and keep comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact Rinse immediately with plenty of water. Get medical attention if symptoms occur.

Ingestion Rinse mouth thoroughly. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects May cause an allergic skin reaction.

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

Treat symptomatically.

5. SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media Dry chemical, CO2, or water spray or regular foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard During fire, gases hazardous to health may be formed.

Reactivity The product is stable and non reactive under normal conditions of use, storage and transport.

5.3. Special Protective actions for the fire fighters

Precautionary measures fire Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Firefighting instructions Move containers from fire area if it can be done without personal risk.

Other information Use standard firefighting procedures and consider the hazards of other involved materials.

6. SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available.

For non-emergency personnel

Emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

For emergency responders

Protective equipment	Wear recommended personal protective equipment.
Emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS.

6.2. Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small spills: Take up liquid spill into absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.
Other information	The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: Disposal considerations" ".

7. SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Store in a well-ventilated place. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the MSDS).

7.3. Specific end use(s)

No additional information available.

8. SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Monitoring

No additional information available.

8.3. Appropriate engineering controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

8.4. Personal protective equipment

Materials for protective clothing Wear suitable protective clothing.

Individual protection measures, such as personal protective equipment (PPE)

Eye protection Chemical goggles or face shield

Skin protection

Hand protection Nitrile gloves are recommended

Material	Permeation	Thickness (mm)	Penetration	Comments
Nitrile rubber (NBR)		> 0.3 mm		EN 374

Other protective measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Respiratory protection	Not normally needed. In case of insufficient ventilation, wear suitable respiratory equipment
Thermal hazard protection	Wear appropriate thermal protective clothing, when necessary.
Environmental exposure controls	Inform appropriate managerial or supervisory personnel of all environmental releases.

9. SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Light yellow
Odour	Characteristic
Odour threshold	No data available.
pH	No data available.
Relative evaporation rate (butylacetate=1)	No data available.
Melting point	No data available.
Freezing point	No data available.
Boiling point	No data available.
Flash point	200 - 244 °C
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Flammability (solid, gas)	No data available.
Vapour pressure	No data available.
Relative vapour density at 20 °C	No data available.
Relative density	No data available.
Density	1 - 1.01 g/cm³
Solubility	Insoluble.
Log Pow	No data available.
Log Kow	No data available.
Viscosity, kinematic	9.5 mm²/s - 20.01 mm²/s @100°C 45 mm²/s - 100.1 mm²/s @40°C
Viscosity, dynamic	No data available.
Explosive properties	No data available.
Oxidising properties	No data available.
Explosive limits	No data available.

10. SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable and non reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available.

10.5. Incompatible materials

Strong oxidizing agent.

10.6. Hazardous decomposition products

Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. Carbon oxides (CO, CO2). Phosphorus oxides.

11. SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

12. SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	Harmful to aquatic life with long lasting effects.
Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified

Acute aquatic toxicity

Substance / Product	Trophic level	Species	Type	Value	Duration	Remarks
Tris(methylphenyl) phosphate (1330-78-5)	Fish	Oncorhynchus mykiss (Rainbow trout)	LC50	0.21 - 0.32 mg/l,	96 hours	
2,6-di-tert-butyl-p-cresol (128-37-0)	crustacea	Daphnia magna	EC50	0.48 mg/l	48 hours	
	Fish	Danio rerio	LC0	> 0.5 mg/l	96 hours	

12.2. Persistence and degradability

7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester (2386-87-0)

Not rapidly degradable

12.3. Bioaccumulative potential

Tris(methylphenyl) phosphate (1330-78-5)

Log Kow	5.11

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

The mixture contains no substance that fulfils the criteria of a PBT- or vPvB substance.

12.6. Other adverse effects

Ozone	Not classified

Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. SECTION 13: Disposal considerations

Waste treatment methods	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
Additional information	Dispose in accordance with all applicable regulations.

14. SECTION 14: Transport information

14.1. UN number

Not regulated for transport

14.2. Proper Shipping Name

Proper Shipping Name (IMDG)	Not applicable.
Proper Shipping Name (IATA)	Not applicable.

14.3. Transport hazard class(es)

IMDG

Transport hazard class(es) (IMDG)	Not applicable.

IATA

Transport hazard class(es) (IATA)	Not applicable.

14.4. Packing group

Packing group (IMDG)	Not applicable.
Packing group (IATA)	Not applicable.

14.5. Environmental hazards

Dangerous for the environment	No
Marine pollutant	No
Other information	No supplementary information available.

14.6. Special precautions for user

UN RTDG

No data available.

IMDG

No data available.

IATA

No data available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. SECTION 15: Regulatory information

15.1. National regulations

No additional information available.

15.2. International Regulations

No additional information available.

15.3 Chemical inventory status

Australia AICS	No
Canada DSL	No
Canada NDSL	No
China IECSC	No
EU EINECS	No
EU ELINCS	No
EU NLP	No
Korea ECL	No
US TSCA	No

16. SECTION 16: Other information

Data sources Singapore Standard SS 586:2014 on Specification on Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
BCF	Bioconcentration factor.
DNEL	Derived-No Effect Level.
IATA	International Air Transport Association.
LC50	Median lethal concentration.
IMDG	International Maritime Dangerous Goods.
OECD	Organisation for Economic Co-operation and Development.
PBT	Persistent Bioaccumulative Toxic.
PNEC	Predicted No-Effect Concentration.
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail.
RRN	REACH Registration Number.
SDS	Safety Data Sheet.
vPvB	Very Persistent and Very Bioaccumulative.

Training advice Normal use of this product shall imply use in accordance with the instructions on the packaging.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.