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

1.1 Product identifier

W & H Service Oil F1 MD-400 REF 10940021
Article number: 1101670

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

1.2.1 Relevant uses

Lubricant

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Ivoclar Vivadent Ltd.
12 Omega Street
0751 Auckland, Rosedale / NEW ZEALAND
Phone +64 (0)508 486 252
E-mail orders.nz@ivoclar.com

Address enquiries to

Technical information orders.nz@ivoclar.com

Safety Data Sheet sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Advisory body National Poison Centre (New Zealand): 0800 764 766 (24 hours)

SECTION 2: Hazards identification

Approval This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002515,Aerosols (Flammable), Group Standard 2020)

Hazard classifications

aerosol Category 2

Hazardous to the aquatic environment acute Category 3

aspiration hazard Category 1

Hazard pictograms

Signal word DANGER

Hazard statements

H223 Flammable aerosol.
H229 Pressurised container: May burst if heated.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P260 Do not breathe spray.
P273 Avoid release to the environment.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122°F.

Other Classifications

There are no other Classifications that are known to apply.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
50 - < 100	iso-Butane
	CAS: 75-28-5
10 - < 20	White mineral oil (petroleum)
	CAS: 8042-47-5
5 - < 10	Propane
	CAS: 74-98-6
1 - < 3	Butane
	CAS: 106-97-8
0,1 - < 1	O,O,O-Triphenyl phosphorothioate
	CAS: 597-82-0

Comment on component parts For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Remove contaminated soaked clothing immediately and dispose of safely.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Rinse out mouth and give plenty of water to drink.
Get medical advice.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Vertigo
Nausea, vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used Full water jet

5.2 Special hazards arising from the substance or mixture

risk of formation of toxic pyrolysis products, carbon monoxide (CO), not combusted hydrocarbons
Bursting aerosols can be forcibly projected from a fire.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.
Ensure adequate ventilation.
Keep away from all sources of ignition.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid formation of aerosols.
Use solvent-resistant equipment.

Keep away from sources of ignition - refrain from smoking.
Vapours can form an explosive mixture with air.
Take precautionary measures against static discharges.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.

Do not store together with food and animal food/diet.

Keep in a cool place. Store in a dry place.
Protect from heat/overheating and from sun.
Recommended storage temperature: 5-25 °C (41-77 °F).

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (NZ)

Substance
Butane
CAS: 106-97-8
Time Weighted Average (TWA): 800 ppm, 1900 mg/m³

DNEL

Substance
O,O,O-Triphenyl phosphorothioate, CAS: 597-82-0
Industrial, inhalative, Long-term - systemic effects, 1.39 mg/m³
Industrial, dermal, Long-term - systemic effects, 400 µg/kg bw/day
general population, inhalative, Long-term - systemic effects, 340 µg/m³
general population, dermal, Long-term - systemic effects, 200 µg/kg bw/day
general population, oral, Long-term - systemic effects, 200 µg/kg bw/day
iso-Butane, CAS: 75-28-5
There are no DNEL values established for the substance.
Propane, CAS: 74-98-6
There are no DNEL values established for the substance.
White mineral oil (petroleum), CAS: 8042-47-5
Industrial, dermal, Long-term - systemic effects, 217,05 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 164,56 mg/m³
general population, inhalative, Long-term - systemic effects, 34,78 mg/m³
general population, dermal, Long-term - systemic effects, 93,02 mg/kg bw/day
general population, oral, Long-term - systemic effects, 25 mg/kg bw/day

PNEC

Substance
O,O,O-Triphenyl phosphorothioate, CAS: 597-82-0
freshwater, 0.17µg/L
seawater, 0.017µg/L
sewage treatment plants (STP), 10mg/L
sediment (freshwater), 33.9mg/kg sediment dw
sediment (seaater), 3.39mg/kg sediment dw
soil, 2.46mg/kg soil dw
iso-Butane, CAS: 75-28-5
There are no PNEC values established for the substance.
Propane, CAS: 74-98-6
There are no PNEC values established for the substance.
White mineral oil (petroleum), CAS: 8042-47-5
There are no PNEC values established for the substance.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. 0,7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Solvent-resistant protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	gas
Form	aerosol
Color	yellowish
Odor	characteristic
Odour threshold	not determined
pH-value	not determined
pH-value [1%]	not determined
Boiling point or initial boiling point and boiling range [°C]	- 40
Flash point [°C]	-80
Flammability	not applicable
Lower explosion limit	1,5 Vol %
Upper explosion limit	10,8 Vol %
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/cm³]	0,8575
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not determined
Kinematic viscosity	not determined
Relative vapour density	not determined
Melting point [°C]	not determined
Auto-ignition temperature [°C]	not self-igniting
Decomposition temperature [°C]	not determined
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Evolution of flammable mixtures possible during spraying or misting in air.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Not required under normal conditions.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

Product
oral, Based on the available information, the classification criteria are not fulfilled.

Substance
O,O,O-Triphenyl phosphorothioate, CAS: 597-82-0
LC50, oral, Rat, >10,000 mg/kg bw, OECD 401
NOAEL, oral, Rat, 1000 mg/kg bw/day, OECD 408
White mineral oil (petroleum), CAS: 8042-47-5
LD50, oral, Rat, >5000 mg/kg (OECD 401)

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.

Substance
O,O,O-Triphenyl phosphorothioate, CAS: 597-82-0
LD50, dermal, Rat, >2,000 mg/kg bw, OECD 402
White mineral oil (petroleum), CAS: 8042-47-5
LD50, dermal, Rabbit, >2000 mg/kg (OECD 402)

Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.

Substance
iso-Butane, CAS: 75-28-5
LC50, inhalative, mouse, 1237 mg/l (2h) (Lit.)
Propane, CAS: 74-98-6
LC50, inhalative, Rat, > 1443 mg/l (15 min) (Lit.)
White mineral oil (petroleum), CAS: 8042-47-5
LC50, inhalative, Rat, >5000 mg/m³ (4h) (OECD 403)
Butane, CAS: 106-97-8
LC50, inhalativ (gas), Rat, 1443 mg/L (15 min)

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
iso-Butane, CAS: 75-28-5
Eye, non-irritating
Propane, CAS: 74-98-6
Eye, non-irritating
White mineral oil (petroleum), CAS: 8042-47-5
Eye, Rabbit, OECD 405, non-irritating

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
iso-Butane, CAS: 75-28-5
dermal, non-irritating
Propane, CAS: 74-98-6
dermal, non-irritating
White mineral oil (petroleum), CAS: 8042-47-5

dermal, Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
iso-Butane, CAS: 75-28-5
dermal, non-sensitizing
inhalative, non-sensitizing
Propane, CAS: 74-98-6
dermal, non-sensitizing
inhalative, non-sensitizing
White mineral oil (petroleum), CAS: 8042-47-5
dermal, Guinea pig, OECD 406, non-sensitizing

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Substance
iso-Butane, CAS: 75-28-5
inhalative, non-irritating
Propane, CAS: 74-98-6
inhalative, non-irritating

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Substance
iso-Butane, CAS: 75-28-5
NOAEC, inhalative, Rat, 4437 mg/m³, The effects observed are not sufficient for classification.
White mineral oil (petroleum), CAS: 8042-47-5
NOAEL, dermal, Rat, 2000 mg/kg bw/day, OECD 411
NOAEL, oral, Rat, 1200 mg/kg bw/day, OECD 451
NOEL, inhalative, Rat, 50 mg/m³, OECD 412

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- Fertility

Substance
White mineral oil (petroleum), CAS: 8042-47-5
NOAEL, oral, Rat, 1000 mg/kg bw/day (subchronic), no adverse effect observed

- Development No information available.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Substance
White mineral oil (petroleum), CAS: 8042-47-5
NOAEL, oral, Rat, 1200 mg/kg bw/day, OECD 453, no adverse effect observed

Aspiration hazard May be fatal if swallowed and enters airways.
Based on the available information, the classification criteria are fulfilled.
Calculation method

General remarks

Toxicological data of complete product are not available.
The determination of properties hazardous to health does not take the propellant or carrier material into account.

SECTION 12: Ecological information

12.1 Toxicity

Substance
O,O,O-Triphenyl phosphorothioate, CAS: 597-82-0
EC50, (48h), Daphnia magna, >100 mg/L, OECD 202
IC50, (3h), Activated sewage sludge, >100 mg/L, OECD 209
EL50, (72h), Desmodesmus subspicatus, >100 mg/L, OECD 201
NOEC, (21d), Daphnia magna, >= 7.24 µg/L
NOEC, (90d), Oncorhynchus mykiss, 1.7 µg/L
LL50, (96h), Brachidanio rerio, >100 mg/L, OECD 203
iso-Butane, CAS: 75-28-5
LC50, (96h), Fish, 7,71 - 19,37 mg/L
White mineral oil (petroleum), CAS: 8042-47-5
LC50, (96h), Leuciscus idus, >1000 mg/l (OECD 203)
NOEC, (28d), Fish, >= 1000 mg/l
NOEC, (21d), Daphnia sp., >= 1000 mg/l
LL50, (48h), Daphnia magna, >100 mg/l (OECD 202)
NOEL, (72h), Algae, >=100 mg/l (OECD 201)

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

Restrictions Substances covered by this Group Standard must comply with the relevant provisions of the Hazardous
Substances (Hazardous Property Controls) Notice 2017

Disposal method The substance must be handled as hazardous waste and disposed of in an approved facility.

Contaminated packaging

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	1950
Air transport in accordance with IATA	1950

14.2 UN proper shipping name

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	Aerosols
- EMS	F-D, S-U
- Label	
- IMDG LQ	1 l
Air transport in accordance with IATA	Aerosols, flammable
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	2.1
Air transport in accordance with IATA	2.1

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002515,Aerosols (Flammable), Group Standard 2020)

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

MSDS	The content and format of this Safety-Data-Sheet is in accordance with HSNO Approved Code of Practice.
Labelling	Consolidated Hazardous Substances (Labelling) Notice 2017
Emergency plan	Required if > 1000L is stored
Approved handler	
Tracking	-
Bunding & secondary containment	-
Signage	-
Location test certificate	-
Flammable zone	-
Fire extinguisher	-
Note:	-
Other Legislation	In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

SECTION 16: Other information

16.1 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.2 Other information

Classification procedure

aerosol Category 2: H223 Flammable aerosol. (Calculation method) H229 Pressurised container: May burst if heated. (Calculation method)
Hazardous to the aquatic environment acute Category 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)
aspiration hazard Category 1: H304 May be fatal if swallowed and enters airways. (Calculation method)

Modified position

none