



Shell Tellus S2 VX 46

Safety Data Sheet

according to the United Nations GHS (Rev. 10, 2023)

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Supersedes: 11/07/2025

Version: 1.1

1.1. GHS Product identifier

Product form	Mixture
Product name	Shell Tellus S2 VX 46
Product code	BU ET&A

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	Hydraulic fluids and additives
Restrictions on use	For professional use only

1.4. Supplier's details

Supplier

Maagtechnic AG
Sonnentalstrasse 8
CH-8600 Dübendorf 1
Switzerland
T +41 44 824 91 91
lubeinfo@maagtechnic.com

Department issuing data specification sheet

Hilti AG
Feldkircher Strasse 100
FL 9494 Schaan
Liechtenstein
T +423 234 2111
product.compliance-power.tools@hilti.com

1.5. Emergency phone number

Emergency number	Emergency CONTACT (24-Hour-Number): GBK GmbH Global Regulatory Compliance +49 (0)6132-84463
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SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Flammable liquids Not classified	On basis of test data
Aspiration hazard Not classified	Calculation method
Hazardous to the aquatic environment – Acute Hazard Not classified	Calculation method
Hazardous to the aquatic environment – Chronic Hazard Not classified	Calculation method
Full text of H-statements: see section 16	

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

No labelling applicable

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Highly refined mineral oil (IP346 <3%)	-	≤ 90	Aspiration hazard, Category 1, H304
2,6-di-tert-butylphenol	CAS-No.: 128-39-2	< 0.25	Acute toxicity (oral) Not classified Skin corrosion/irritation, Category 2, H315 Hazardous to the aquatic environment – Acute Hazard, Category 1, H400 Hazardous to the aquatic environment – Chronic Hazard, Category 1, H410
triazole derivatives	CAS-No.: 91273-04-0	< 0.1	Flammable liquids Not classified Acute toxicity (oral), Category 5, H303 Skin corrosion/irritation, Category 1B, H314 Serious eye damage/eye irritation, Category 1, H318 Skin sensitisation, category 1A, H317 Hazardous to the aquatic environment – Acute Hazard, Category 2, H401 Hazardous to the aquatic environment – Chronic Hazard, Category 1, H410

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest. If symptoms persist call a doctor.
First-aid measures after skin contact	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse.
First-aid measures after eye contact	IF IN EYES: 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.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Get medical advice/attention.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after skin contact	Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Necrosis. High pressure injection of product under the skin can have very serious consequences even without apparent symptoms or injuries.
Symptoms/effects after ingestion	Ingestion may cause nausea, vomiting and diarrhea.
Chronic symptoms	Symptoms may be delayed.
Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.

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4.3. Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	Foam. Water spray. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	No fire hazard.
Explosion hazard	No direct explosion hazard.
Reactivity in case of fire	Hazardous decomposition products in case of fire.
Hazardous decomposition products in case of fire	Carbon dioxide. Carbon monoxide. Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Precautionary measures fire	Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Do not allow run-off from fire-fighting to enter drains or water courses.
Firefighting instructions	Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Spilled material may present a slipping hazard.
Prevention Measures for Secondary Accidents	No additional information available.

6.1.1. For non-emergency personnel

Protective equipment	Wear recommended personal protective equipment.
Emergency procedures	Evacuate unnecessary personnel. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	Evacuate unnecessary personnel. Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Collect all waste in suitable and labelled containers and dispose according to local legislation.
Methods for cleaning up	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Ensure good ventilation of the work station. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapours, spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	Keep in a cool, well-ventilated place away from heat. Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	Keep cool. Protect from sunlight. Keep container closed when not in use. Keep only in original container.
Incompatible materials	PVC.
Packaging materials	Always store product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Monitoring methods	
Monitoring methods	A specific exposure sampling method is not available.

8.2. Appropriate engineering controls

Appropriate engineering controls	Ensure good ventilation of the work station.
Environmental exposure controls	Avoid release to the environment.
Other information	Do not eat, drink or smoke during use.

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

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection	Protective gloves
Eye protection	Safety glasses
Skin and body protection	Wear suitable protective clothing
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	Liquid
Colour	clear.
Odour	characteristic.

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Odour threshold	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	> 280 °C (estimated value)
Flammability	Not available
Lower explosion limit	1 vol % (typical)
Upper explosion limit	10 vol % (typical)
Flash point	220 °C ISO 2592
Auto-ignition temperature	> 320 °C
Decomposition temperature	Not available
pH	Not available
pH solution	Not available
Viscosity, kinematic (calculated value) (40 °C)	46 mm ² /s ASTM D445 (40 °C)
Partition coefficient n-octanol/water (Log Pow)	> 6 Data from similar product
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	< 0.5 hPa (estimated value)
Vapour pressure at 50°C	Not available
Density	856 kg/m ³ ISO 12185 (15 °C)
Relative density	0.856 (15 °C)
Relative vapour density at 20°C	Not available
Solubility	Water: Negligible
Particle size	Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

triazole derivatives (91273-04-0)	
LD50 oral rat	2356 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))

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triazole derivatives (91273-04-0)	
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
2,6-di-tert-butylphenol (128-39-2)	
LD50 oral rat	> 5000 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitization	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.
Shell Tellus S2 VX 46	
Viscosity, kinematic	46 mm²/s ASTM D445 (40 °C)
Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	Not classified.
Classification procedure (Hazardous to the aquatic environment, short-term (acute))	Calculation method
Hazardous to the aquatic environment, long-term (chronic)	Not classified.
Classification procedure (Hazardous to the aquatic environment, long-term (chronic))	Calculation method

triazole derivatives (91273-04-0)	
LC50 - Fish [1]	1.1 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	2.2 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Read-across)
ErC50 algae	> 1 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Scenedesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
2,6-di-tert-butylphenol (128-39-2)	
LC50 - Fish [1]	1.4 mg/l (ASTM E729-80, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	0.45 mg/l (US EPA, 48 h, Daphnia magna, Flow-through system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	1.2 mg/l (EPA OTS 797.1050, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Cell numbers)

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12.2. Persistence and degradability

Shell Tellus S2 VX 46	
Persistence and degradability	No additional information available.
Highly refined mineral oil (IP346 <3%)	
Persistence and degradability	Rapidly degradable
triazole derivatives (91273-04-0)	
Persistence and degradability	Not readily biodegradable in water.
2,6-di-tert-butylphenol (128-39-2)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

Shell Tellus S2 VX 46	
Partition coefficient n-octanol/water (Log Kow)	> 6 Data from similar product
Bioaccumulative potential	Not established.
triazole derivatives (91273-04-0)	
BCF - Fish [1]	< 1 (24 h, Static system, Marine water, Experimental value)
Bioaccumulative potential	Not bioaccumulative.
2,6-di-tert-butylphenol (128-39-2)	
BCF - Fish [1]	660 l/kg (3 day(s), Leuciscus idus, Static system, Fresh water, Weight of evidence)
Partition coefficient n-octanol/water (Log Kow)	4.5 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 24 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

12.4. Mobility in soil

Shell Tellus S2 VX 46	
Mobility in soil	No additional information available
triazole derivatives (91273-04-0)	
Surface tension	58.1 mN/m (20 °C, Experimental value, 0.10 ml/10ml, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	5.5 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Adsorbs into the soil.
2,6-di-tert-butylphenol (128-39-2)	
Surface tension	30.1 mN/m (QSAR)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.65 (log Koc, Calculated value)
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available
Other information	Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	Disposal must be done according to official regulations.
Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations.
Ecological waste information	Avoid release to the environment.
Additional information	Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information



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Section	Changed item	Comments
3	Composition/information on ingredients	Modified

Abbreviations and acronyms

ACGIH - American Conference of Government Industrial Hygienists
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
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
BLV - Biological limit value
BOD - Biochemical oxygen demand (BOD)
CAS-No. - Chemical Abstract Service number
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD - Chemical oxygen demand (COD)
CSA - Chemical safety assessment
DMEL - Derived Minimal Effect level
DNEL - Derived-No Effect Level
EC-No. - European Community number
EC50 - Median effective concentration
ED - Endocrine disruptor
EN - European Standard
EWC - European waste catalogue
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
LD50 - Median lethal dose
LOAEL - Lowest Observed Adverse Effect Level
Log Kow - Partition coefficient n-octanol/water (Log Kow)
Log Pow - Partition coefficient n-octanol/water (Log Pow)
MAK - maximum workplace concentration
NOAEC - No-Observed Adverse Effect Concentration
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
N.O.S. - Not Otherwise Specified
OECD - Organisation for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OSHA - Occupational Safety Health Administration
PBT - Persistent Bioaccumulative Toxic
PNEC - Predicted No-Effect Concentration
PPE - Personal protection equipment
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS - Safety Data Sheet
STP - Sewage treatment plant
TF - Technical function
ThOD - Theoretical oxygen demand (ThOD)
TLM - Median Tolerance Limit
TWA - Time Weighted Average
VOC - Volatile Organic Compounds
vPvB - Very Persistent and Very Bioaccumulative



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Other information

UFI - Unique Formula Identifier
None.

Full text of H-statements:	
Acute Tox. 5 (Oral)	Acute toxicity (oral), Category 5
Acute Tox. Not classified (Oral)	Acute toxicity (oral) Not classified
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment – Acute Hazard, Category 2
Aquatic Acute Not classified	Hazardous to the aquatic environment – Acute Hazard Not classified
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic Not classified	Hazardous to the aquatic environment – Chronic Hazard Not classified
Asp. Tox. 1	Aspiration hazard, Category 1
Asp. Tox. Not classified	Aspiration hazard Not classified
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. Not classified	Flammable liquids Not classified
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.