SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Viscosity standard specimen 1 BW

Version 6.2

Revision date 10.01.2025

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

1.1. Product identifier

Trade name: Viscosity standard specimen 1 BW

Substance name: Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

EC-No.: 919-446-0
CAS-No.: 64742-82-1

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

Use of the Substance/Mixture: calibration of viscosity measuring instruments according to DIN EN ISO 9001

Recommended restrictions on use: exclusively for calibration purposes

1.3. Details of the supplier of the safety data sheet

Company: ZMK & ANALYTIK GmbH
PD-ChemiePark Bitterfeld-Wolfen
Areal A, Filmstraße 7
DE 06766 Bitterfeld-Wolfen
Telephone : +49 (0)3494-6973-0
Telefax : +49 (0)3494-6973-34
E-mail address: info@zmk-wolfen.de

1.4. Emergency telephone number

Emergency telephone number: +49 (0)3494-6973-0 (Available: from 8 to 16 Uhr / Mo to Fr)

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Regulation (EC) No. 1272/2008			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statement**
Flammable liquids	Category 3	---	H226
Aspiration hazard	Category 1	---	H304
Specific target organ toxicity – single exposure; Narcotic effects	Category 3	---	H336
Causes damage to organs through prolonged or repeated exposure	Category 1	---	H372
Chronic hazards to the aquatic environment	Category 2	---	H411
Supplemental Hazard Information	---	---	EUH066

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

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

Hazard symbols:

Signal words:	Danger	
Hazard Statements:	H226	Flammable liquid and vapour
	H304	May be fatal if swallowed and enters airways
	H336	May cause drowsiness or dizziness
	H372	Causes damage to organs through prolonged or repeated exposure
	EUH066	Repeated exposure may cause skin dryness or cracking.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements		
Prevention	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P243	Take action to prevent static discharges.

	P261	Avoid breathing dust/fumes/gas/mist/vapours/spray.
	P273	Avoid release to the environment.
Response:	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331	Do NOT induce vomiting.
	P312	Call a POISON CENTER or doctor/physician if you feel unwell.
Storage:	P405	Store locked up.
Disposal:	P501	Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Hazardous components which must be listed on the label:
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

2.3. Other Hazards

The product does not contain any PBT substances. The product does not contain any vPvB substances.
This product contains no substance that has endocrine properties in humans.
The product contains no substance with endocrine disrupting properties in non-target organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances / Mixture

Chemical name: Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic compounds, aromatics (2-25%)

Hazardous components	Concentration [%]	CAS-No. EC-No.
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic compounds, aromatics (2-25%)	100	64742-82-1 919-446-0

4. First aid measures

4.1. Description of first aid measures

General information:	Remove the affected persons from the danger area and lay them down. Remove soiled, soaked clothing immediately, do not allow to dry. If there is a risk of unconsciousness, store and transport in a stable side position.
Protection of first-aiders:	It is important for first responders to wear appropriate personal protective equipment appropriate to the incident, injury, and environment.
Skin Contact:	Wash off immediately with soap and water. Consult a doctor if skin irritation persists.
Eye Contact:	In case of contact with eyes, immediately flush with plenty of water for 15 minutes. Send for medical treatment.
Ingestion:	Do not induce vomiting - risk of aspiration. Consult doctor immediately.
Inhalation:	Take to fresh air. If rapid recovery does not occur, seek medical attention immediately.

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

Symptoms:	Headache, drowsiness, dizziness, nausea, unconsciousness, depression central nervous system

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

Treatment:	**Information for the doctor / dangers** If swallowed followed by vomiting, aspiration into the lungs may result chemical pneumonia or asphyxiation. Repeated and prolonged Skin contact may cause defatting and irritation.

5. Firefighting measures

5.1. Extinguishing media

Extinguishing Media:	Carbon dioxide, Dry powder, Water spray jet, Alcohol-resistant foam
Unsuitable Extinguishing Media:	Do not use strong water in a jet.

5.2. Special hazards arising from substance or mixture

Specific hazard during firefighting:	Only allow emergency medical services into the fire area. As hazardous combustion products can form: Complex mixture of solid and liquid particles and gases, including carbon monoxide. Unidentified organic and inorganic compounds. Flammable vapors may be present even if the temperature is below flash point. Vapors are heavier than air and spread along ground. Inflammation possible over a greater distance. Floats on and can join the Ignite the water surface again.

5.3. Advice for fire-fighting

Special protective equipment for fire-fighting:	Persons must use appropriate personal protective equipment including Wear chemical protective gloves. If there is a risk of extensive contact from spilled material, a chemical protection suit must be worn. Close to fire in tight Self-contained breathing apparatus must be worn in the evacuation area. Please make a choiche Fire protection clothing that corresponds to the relevant standards (e.g. in Europe: EN 469).
specific	Common practices on chemical fires
Erasing Methods:	
Further information:	Cool endangered containers with water spray jet. Fire residues and contaminated extinguishing water must be disposed of in accordance with local official regulations.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:	Use personal protective clothing. Keep unprotected people away. sources of ignition keep away. Avoid contact with skin, eyes and clothing. Do not breathe vapors. For sufficient provide ventilation. **6.1.1. For non-emergency personnel** Avoid contact with skin, eyes and clothing. Cordon off hazardous areas and access for unnecessary and unprotected personnel refuse. **6.1.2. For emergency personnel** Avoid contact with skin, eyes and clothing. Cordon off hazardous areas and access for unnecessary and unprotected personnel refuse. Do not breathe fumes or vapors. Do not operate electrical devices.

6.2. Environmental precautions

Environmental precautions:	Do not discharge into drains or rivers. Not underground/soil let reach. In case of entry into waterways or sewage system, responsible authority notify. In case of penetration into the ground notify the responsible authority.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up:	In the case of smaller amounts of liquid that have escaped (< 1 drum), product for reprocessing or safe disposal in a labeled, lockable container. Allow residue to evaporate or absorb with a suitable absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

6.4. Reference to other sections

See section 8 of this safety data sheet for advice on the selection of personal protective equipment.
See section 13 of this safety data sheet for disposal considerations.

7. Handling and storage

General Precautions: Avoid breathing vapours and contact with material. Only use in well-ventilated areas. Wash thoroughly after handling. See Section 8 of this safety data sheet for guidance on selection of personal protective equipment. Use information in this data sheet as a basis for risk assessment of local conditions to determine appropriate measures for safe handling, storage and disposal of this product. Comply with all official regulations for handling and storage.

7.1. Precautions for safe handling

Precautions for Safe Handling: Ensure good room ventilation, if necessary, suction at the workplace. Keep container tightly closed. Avoid aerosol formation.

Information about fire and explosion protection

Keep away from sources of ignition - No smoking. Take precautionary measures against electrostatic discharges.
Use explosion-proof devices/fittings and non-sparking tools. Vapours can form an explosive mixture with air. Product vapours are heavier than air. Grounding when decanting.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities: Ventilate storage rooms well. Provide a solvent-resistant and sealed floor.
Storage class according to TRGS 510: 3 Flammable liquids
Keep container tightly closed in a cool, well-ventilated place.

Storage temperature: ambient temperature.

7.3. Specific end uses

Specific use(s) exclusively for calibration of viscosity measuring instruments according to DIN EN ISO 9001

8. Exposure controls/personal protection

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

8.1. Control Parameters

Occupational Exposure Limits

UK Workplace Exposure Limits
In the absence of occupational exposure standards for this product, it is recommended that the following are adopted

Material	Source	Type	ppm	mg/m³	Notation
RCP Mineral spirits 150 - 200	UK SIA	TWA (8h)	100 ppm	600 mg/m³	
Naphthalene	ACGIH	TWA	10 ppm		
	ACGIH	STEL	15 ppm		
	ACGIH	SKIN_DES			Can be absorbed through the skin.
Ethylbenzene	ACGIH	TWA	20 ppm		
	EH40 WEL	TWA	100 ppm	441 mg/m³	
	EH40 WEL	STEL	125 ppm	552 mg/m³	
	EH40 WEL	SKIN_DES			Can be absorbed through the skin.

Additional Information: Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Biological Exposure Index (BEI)

No biological limit allocated.

Derived No Effect Levels (DNEL/DMEL) Table				
Component	**Exposure Route**	**Exposure Type (long/short)**	**Application Area**	**Value**
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Inhalation	long term, systemic effects	Worker	330 mg/m3
	Dermal	long term, systemic effects	Worker	44mg/kg/d
	Inhalation	long term, systemic effects	Consumer	71 mg/m3
	Dermal	long term, systemic effects	Consumer	26mg/kg/d
	Oral	long term, systemic effects	Consumer	26mg/kg/d

Predicted No Effect Concentration (PNEC)

Substance is a hydrocarbon with a complex, unknown or variable composition. Conventional methods of deriving PNECs are not appropriate and it is not possible to identify a single representative PNEC for such substances.

8.2. Exposure controls

General Protection and hygiene measures: Take off dirty, soaked clothes immediately. Avoid contact with eyes and skin. Keep separate from food and animal feedingstuffs. Do not eat, drink, smoke or sniff at work. Wash hands before breaks and at the end of work. Do not breathe vapors.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye Protection: Tight fitting goggles

Hand Protection: impervious gloves
Appropriate Material Nitrile rubber
Material thickness >= 0.5 mm
Breakthrough time >= 480 min. Wear protective gloves on clean hands. Wash

	hands after use and dry thoroughly. It is recommended to use an unscented moisturizer.
Body protection:	Flame retardant and antistatic protective clothing
Respiratory Protection:	In the case of short-term or low exposure, respiratory filter device; with intensive or prolonged exposure use self-contained breathing apparatus. Short-term filter device, Filter A

Environmental Exposure Controls

Environmental exposure control measures:	Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	Paraffinic
Melting / freezing point:	<-20°C
Initial boiling point and boiling range:	158 °C to 191 °C
Flammability:	Flammable
Upper flammability or explosive limits:	7 % (V)
lower flammability or explosive limits:	0,6% (V)
Flash point:	41 °C - 42 °C (closed cup, method: Abel)
Autoignition temperature:	>230 °C
Decomposition temperature:	No decomposition if used as directed
pH:	Not applicable
Viscosity, kinematic:	1,2 mm^2/s (20 °C) 0,95 mm^2/s (40 °C)
Water solubility:	not miscible
Partition coefficient: n-octanol/ water	Data not available.
Vapor pressure:	0,19 kPa (20 °C)
Density:	0,784 g/cm^3 (20 °C)
Relative Density:	0,72 bis 0,825 g/cm^3 (15 °C)
Relative Vapor Density:	Data not available.
Particle properties:	Data not available.

9.2. Other Information

Explosive substances/mixtures: The formation of explosive vapour/air mixtures is possible.

Evaporation speed: 57

Odor threshold: Not available

Oxidizing properties Not available

10. Stability and reactivity

10.1. Reactivity

In addition to the reactivity hazards listed in the following subsection, the product does not pose any other such hazards.

10.2. Chemical stability

Advice:	Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous reactions:	Reactions with strong oxidizing agents. Vapours can form an explosive mixture with air form.

10.4. Conditions to avoid

Hazardous reactions:	Avoid heat, sparks, open flames and other ignition sources. Do not smoking.

10.5. Incompatible materials

Materials to avoid:	Strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. Toxicological information

11.1. Information on the hazard classes within the meaning of Regulation (EC) No. 1272/2008

Acute Oral Toxicity (Components)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

species	rat
LD50	> 15000mg/kg
Duration of exposure	401

Acute Dermal Toxicity (Components)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

species	rabbit
LD50	approx. 3400 mg/kg
Method	OECD 402

Acute Inhalation Toxicity (Components)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

species	rat
LC50	40.2mg/l
Exposure time	1 hour
Administration/Form	Vapors
Method	OECD 403

Skin corrosion/irritation
rating irritating
Repeated and prolonged skin contact can cause defatting and irritation.

Serious eye damage/irritation
Rating not irritating

Sensitization (Components)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)
Evaluation not sensitizing

Mutagenicity (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)
There is no evidence of genotoxicity.

Reproductive toxicity (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)
There is no evidence of reproductive toxicity.

Carcinogenicity (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)
There are no indications of a possible carcinogenic effect.

Specific Target Organ Toxicity (STOT)
One time exposure
May cause drowsiness and dizziness.

Repeated exposure
Damages the organs.

Aspiration hazard
May be fatal if swallowed and enters airways.

11.2. Information about other hazards

Endocrine disruptive properties towards humans

The product does not contain any substance that has endocrine properties in humans.

Experiences from practice

If swallowed followed by vomiting, aspiration into the lungs can occur, which can lead to chemical pneumonia or asphyxiation. Effects on the central nervous system possible.

12. Ecological information

12.1. Toxicity

Fish toxicity (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

Species	trout	
LL50	10	30mg/l
Exposure time	96 h	
Method	OECD 203	
Species	trout	
NOELR	0.13mg/L	
Exposure time	28 d	

Daphnia toxicity (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

Species	Daphnia magna	
EL50	10	22 mg/l
Exposure time	48 h	
Method	OECD 202	
Species	Daphnia magna	
NOELR	0.28mg/L	
Exposure time	21 d	

Algae toxicity (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

Species	Pseudokirchneriella subcapitata
EC50	4.1mg/l
Exposure time	72 h
Method	OECD 201
Species	Pseudokirchneriella subcapitata
NOEL	0.22 mg/l
Exposure time	72 h
Method	OECD 201

12.2. Persistence and degradability

Biodegradability (ingredients)
Hydrocarbons, C9-C12, n-alkanes, iso-alkanes, cyclic, aromatic (2-25%)

value	75%
Test duration	28 d
Rating	easily degradable
Method	OECD 301 F

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water

Remark	Not available

12.4. Mobility in soil

The product evaporates from the ground.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment
The substance does not meet the criteria for PBT properties. The substance does not meet the criteria for vPvB properties.

12.6. Endocrine disrupting properties

Endocrine disrupting properties towards the environment

The product does not contain any substance with endocrine disrupting effects on non-target organisms.

12.7. Other harmful effects

General information

Do not allow to enter drains/surface water/ground water. Toxic to aquatic organisms, may occur in the aquatic environment have long-term adverse effects.

13. Disposal considerations

13.1. Waste treatment methods

Material Disposal:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.
Container Disposal:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Refer to Section 7 before handling the product or containers. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.
Local Legislation:	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. Transport information

Land transport (ADR/RID)

14.1 UN number:	1300
14.2 UN proper shipping name	TURPENTINE SUBSTITUTE
14.3 Transport hazard classes	3
14.4 Packing group:	III
Danger label (main danger):	3
14.5 Environmental hazards:	Yes, environmentally hazardous
Limited quantity:	5L
Promotion category:	3
Tunnel restriction code:	D/E
hazard number (Kemler number).:	30
EmS:	

Sea transport (IMDG/GGVSee)

14.1 UN number:	1300
14.2 UN proper shipping name	TURPENTINE SUBSTITUTE
14.3 Transport hazard classes	3
14.4 Packing group:	III
Danger label (main danger):	3
14.5 Environmental Hazards:	Yes, environmentally hazardous
Limited quantity:	5L
Carriage category:	
Tunnel Restriction Code:	
hazard number (Kemler number).:	
EmS:	F-E, S-D

Air transport (ICAO/IATA)

14.1 UN number:	1300
14.2 UN proper shipping name	TURPENTINE SUBSTITUTE
14.3 Transport hazard classes	3
14.4 Packing group:	III
Danger label (main danger):	3
14.5 Environmental Hazards:	Yes, environmentally hazardous
Limited quantity:	5L
Carriage category:	
Tunnel Restriction Code:	
hazard number (Kemler number).:	
EmS:	

Information for all modes of transport

14.6. Special precautions for user

There is no additional information.

14.7 Bulk Carriage by Sea according to IMO Instruments

The product is not transported in bulk.

15. Regulatory information

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EPCRA - Emergency Planning and Community Right-to-Know Act
*: This material does not contain any components with a CERCLA RQ., Shell classifies this mate-rial as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Flammable (gases, aerosols, liquids, or solids)
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Pennsylvania Right To Know

naphtha (petroleum), hydrodesulphurized heavy	64742-82-1

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulations

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

The components of this product are reported in the following inventories:

AIIC	:	Listed
DSL	:	Listed
IECSC	:	Listed
KECI	:	Listed
NZIoC	:	Listed
PICCS	:	Listed
TSCA	:	Listed
ENCS	:	Listed
TCSI	:	Listed

15.2. Chemical Safety Assessment

A Chemical Safety Assessment was performed for all substances of this product.

16. Other information

Classification and method used to derive the classification of mixtures according to regulation (EG) No. 1272/2008 [CLP] was used:

Flam. Liq. 3	H226
Asp. Tox. 1	H304
STOT RE1	H372
STOT SE 3	H336
Aquatic Chronic 2	H411

H phrases from section 2/3
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness and dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

CLP categories from section 2/3
aquatic
Chronic 2 Hazardous to the aquatic environment, chronic, category 2
Asp. Tox. 1 Aspiration hazard, Category 1
Flam. Liq. 3 Flammable liquids, category 3
STOT RE 1 Specific target organ toxicity - repeated exposure, Category 1
STOT SE 3 Specific target organ toxicity - single exposure, category 3

Further information

Other information: The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.