

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : TENO®coating ZBBP-14  
Product code : R3022T  
Product group : Blend

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

##### 1.2.1. Relevant identified uses

No additional information available

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Vesuvius Istanbul Refrakter San. ve Tic. A.Ş.  
Gebze OSB 1000.Cad. No:1022  
TR 41420 Çayırova / KOCAELİ  
Turkey  
T +90 262 677 09 99, F +90 262 677 10 60  
[sds@vesuvius.com](mailto:sds@vesuvius.com), [www.vesuvius.com](http://www.vesuvius.com)

#### 1.4. Emergency telephone number

Emergency number : +90 262 677 09 99  
8am to 18pm Operating hours

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2 H225  
Serious eye damage/eye irritation, Category 2 H319  
Specific target organ toxicity – Single exposure, Category 3, H336  
Narcosis

Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

Signal word (CLP)

: Danger

Contains

: propan-2-ol; isopropyl alcohol; isopropanol

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing

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protection.  
P312 - Call a POISON CENTRE or doctor if you feel unwell.  
P337+P313 - If eye irritation persists: Get medical advice/attention.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propan-2-ol; isopropyl alcohol; isopropanol	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0 REACH-no: 01-2119457558-25	25 – 50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Quartz (SiO <sub>2</sub> ), crystalline silica, non-respirable substance with a Community workplace exposure limit	CAS-No.: 14808-60-7 EC-No.: 238-878-4	< 1	Not classified

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

No additional information available

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

No additional information available

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

No additional information available

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

No additional information available

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

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### 6.2. Environmental precautions

No additional information available

### 6.3. Methods and material for containment and cleaning up

No additional information available

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

No additional information available

### 7.2. Conditions for safe storage, including any incompatibilities

No additional information available

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

#### United Kingdom - Occupational Exposure Limits

Local name	Propan-2-ol
WEL TWA (OEL TWA)	999 mg/m <sup>3</sup>
	400 ppm
WEL STEL (OEL STEL)	1250 mg/m <sup>3</sup>
	500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Zirconium Silicate (14940-68-2)

#### United Kingdom - Occupational Exposure Limits

Local name	Zirconium
WEL TWA (OEL TWA)	5 mg/m <sup>3</sup> compounds (as Zr)
WEL STEL (OEL STEL)	10 mg/m <sup>3</sup> compounds (as Zr)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Quartz (SiO<sub>2</sub>), crystalline silica, non-respirable (14808-60-7)

#### EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Silica crystalline (Quartz)
IOEL TWA	0,05 mg/m <sup>3</sup> (respirable dust)
Remark	(Year of adoption 2003)
Regulatory reference	SCOEL Recommendations

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

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### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

No additional information available

### 8.2.2. Personal protection equipment

#### 8.2.2.1. Eye and face protection

No additional information available

#### 8.2.2.2. Skin protection

No additional information available

#### 8.2.2.3. Respiratory protection

No additional information available

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Dark pink.
Odour	: alcohol.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

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### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

No additional information available

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

#### propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

LD50 oral rat	1870 mg/kg
LD50 dermal rabbit	4059 mg/kg
LC50 Inhalation - Rat [ppm]	> 10000 ppm (Exposure time: 6 h)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

#### propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

IARC group	3 - Not classifiable
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#### Quartz (SiO<sub>2</sub>), crystalline silica, non-respirable (14808-60-7)

IARC group	1 - Carcinogenic to humans
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Reproductive toxicity : Not classified

STOT-single exposure : May cause drowsiness or dizziness.

#### propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : Not classified

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Aspiration hazard : Not classified

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
LC50 - Fish [1]	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)

### 12.2. Persistence and degradability

TENO®coating ZBBP-14	
Persistence and degradability	Not rapidly degradable
propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
Persistence and degradability	Not rapidly degradable
Quartz (SiO <sub>2</sub> ), crystalline silica, non-respirable (14808-60-7)	
Persistence and degradability	Not rapidly degradable

### 12.3. Bioaccumulative potential

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
Partition coefficient n-octanol/water (Log Pow)	0,05 (at 25 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

No additional information available






## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

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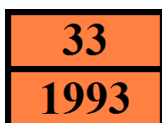
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1993	UN 1993	UN 1993	UN 1993	UN 1993
<b>14.2. UN proper shipping name</b>				
FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	Flammable liquid, n.o.s.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
<b>Transport document description</b>				
UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II, (D/E)	UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II	UN 1993 Flammable liquid, n.o.s., 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 274, 601, 640C
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP8, TP28
Tank code (ADR)	: L1.5BN
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: 3YE

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### Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28, TP8
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: B

### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3H

### Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 274, 601, 640C
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

### Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 274, 601, 640C
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP8, TP28
Tank codes for RID tanks (RID)	: L1.5BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33



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### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Safety Data Sheet (SDS), EU

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Comment:

Information contained within this safety data sheet is based on the current state of knowledge and relates to such products, their intended usage and the required safety precautions. Although every effort has been made to ensure that this information is correct and gives adequate safety margins in line with current knowledge, it does not constitute a specification and no information for other purposes, particularly information regarding properties of the delivered materials, may be inferred. Determination of the technical suitability of each material and complying with any guidance relating to safe usage remain the sole responsibility of the user. Consequently, beyond any separately agreed contractual arrangements, the aforementioned manufacturer and its subsidiaries exclude any and all liability resulting from the use of the product. Unknown hazards may be inherent in all materials; therefore these materials shall be treated with caution. Although certain hazards are described herein, we are unable to guarantee that these are the only hazards.