



VT-442 VitalShield Flex Part A

Safety Data Sheet

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

Issue date: 9/21/2021 Revision date: 3/29/2022 Supersedes: 9/21/2021 Version: 1.1

SECTION 1: Identification

1.1. GHS Product identifier

Product form : Mixture
Product name : VT-442 VitalShield Flex Part A
Product group : Trade product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Paints/coatings - Protective and functional

1.4. Supplier's details

Manufacturer

Vital Technical Sdn. Bhd.
No.93, Jalan Industri 3/3 Rawang Integrated Industrial Park,
48000 Rawang, Selangor, Malaysia.
T +603 60942088 - F +603 60992930

1.5. Emergency phone number

No additional information available

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 2	H315	Calculation method
Serious eye damage/eye irritation, Category 1	H318	Calculation method
Skin sensitisation, Category 1	H317	Calculation method
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	Calculation method
Specific target organ toxicity – Repeated exposure, Category 1	H372	Calculation method

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : Causes damage to organs through prolonged or repeated exposure, May cause respiratory irritation, Causes skin irritation, May cause an allergic skin reaction, Causes serious eye damage.

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



Signal word (GHS UN)

: Danger

Hazardous ingredients

: SILICON DIOXIDE; SULPHATE RESISTANT CEMENT

Hazard statements (GHS UN)

: H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H372 - Causes damage to organs through prolonged or repeated exposure
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.

Precautionary statements (GHS UN)

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

P264+P265 - Wash hands, forearms and face thoroughly after handling. Do not touch eyes.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

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

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
SILICON DIOXIDE	CAS-No.: 14808-60-7	30 – 50	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
SULPHATE RESISTANT CEMENT	CAS-No.: 65997-15-1	30 – 50	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335

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	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

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

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
------------------------------	----------------------------------

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
--	--------------------------------

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

5.3. Special protective actions for fire-fighters

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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SILICON DIOXIDE (14808-60-7)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Silica crystalline (Quartz)
IOELV TWA (mg/m ³)	0.05 mg/m ³ (respirable dust)
Notes	(Year of adoption 2003)
Regulatory reference	SCOEL Recommendations

USA - ACGIH - Occupational Exposure Limits

Local name	Silica crystalline - quartz
ACGIH TWA (mg/m ³)	0.025 mg/m ³ (R - Respirable particulate matter)
Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2021

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

SULPHATE RESISTANT CEMENT (65997-15-1)

USA - ACGIH - Occupational Exposure Limits

Local name	Portland cement
ACGIH TWA (mg/m ³)	1 mg/m ³ (E - The value is for particulate matter containing no asbestos and < 1 % crystalline silica, R - Respirable particulate matter)
Remark (ACGIH)	TLV® Basis: Pulm func; resp symptoms; asthma. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

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

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	: Solid
Colour	: Grey.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not applicable
pH solution	: Not available
Viscosity, kinematic (calculated value) (40 °C)	: Not applicable
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	: No data available
Relative vapour density at 20°C	: Not applicable
Solubility	: Not available
Particle size	: Not available

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

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

Explosive limits : Not applicable

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

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

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

SULPHATE RESISTANT CEMENT (65997-15-1)

LD50 dermal	> 2000 mg/kg
-------------	--------------

Skin corrosion/irritation : Causes skin irritation.
pH: Not applicable

Serious eye damage/irritation : Causes serious eye damage.
pH: Not applicable

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

SILICON DIOXIDE (14808-60-7)

STOT-single exposure	May cause respiratory irritation.
----------------------	-----------------------------------

SULPHATE RESISTANT CEMENT (65997-15-1)

STOT-single exposure	May cause respiratory irritation.
----------------------	-----------------------------------

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

SILICON DIOXIDE (14808-60-7)

STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
------------------------	---

Aspiration hazard : Not classified

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

VT-442 VitalShield Flex Part A

Viscosity, kinematic

Not applicable

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

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

12.2. Persistence and degradability

VT-442 VitalShield Flex Part A

Persistence and degradability

Not rapidly degradable

SILICON DIOXIDE (14808-60-7)

Persistence and degradability

Not rapidly degradable

SULPHATE RESISTANT CEMENT (65997-15-1)

Persistence and degradability

Not rapidly degradable

12.3. Bioaccumulative potential

VT-442 VitalShield Flex Part A

Bioaccumulative potential

No additional information available

12.4. Mobility in soil

VT-442 VitalShield Flex Part A

Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with UN RTDG / IMDG / IATA

UN RTDG	IMDG	IATA
14.1. UN number		
Not applicable	Not regulated	Not regulated
14.2. UN Proper Shipping Name		
Not applicable	Not regulated	Not regulated

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

UN RTDG	IMDG	IATA
14.3. Transport hazard class(es)		
Not applicable	Not regulated	Not regulated
14.4. Packing group		
Not applicable	Not regulated	Not regulated
14.5. Environmental hazards		
Not applicable	Not regulated	Not regulated
No supplementary information available		

14.6. Special precautions for user

UN RTDG

Not applicable

IMDG

Not regulated

IATA

Not regulated

14.7. 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

Issue date : 9/21/2021
Revision date : 3/29/2022
Supersedes : 9/21/2021

Abbreviations and acronyms : CAS-No. - Chemical Abstract Service number
ATE - Acute Toxicity Estimate
EC50 - Median effective concentration
EC-No. - European Community number
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
LD50 - Median lethal dose
LOAEL - Lowest Observed Adverse Effect Level
N.O.S. - Not Otherwise Specified
NOAEC - No-Observed Adverse Effect Concentration
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
OEL - Occupational Exposure Limit
SDS - Safety Data Sheet

Full text of H-statements:	
Carc. 1A	Carcinogenicity, Category 1A
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2

VT-442 VitalShield Flex Part A

Safety Data Sheet

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

Full text of H-statements:	
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

Safety Data Sheet (SDS), UN

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.