VT-301 All Pressure Solvent Cement

Safety Data Sheet

according to the United Nations GHS (Rev. 10, 2023)
Issue date: 8/5/2021 Revision date: 6/10/2025 Supersedes: 8/5/2021 Version: 1.1

SECTION 1: Identification

1.1. GHS Product identifier

Product form	:	Mixture
Product name	:	VT-301 All Pressure Solvent Cement
UN-No. (ADR)	:	1133
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	:	Adhesives

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

Flammable liquids, Category 2	H225	On basis of test data
Serious eye damage/eye irritation, Category 2	H319	Calculation method
Carcinogenicity, Category 2	H351	Calculation method
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	Calculation method

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects	:	Suspected of causing cancer,May cause drowsiness or dizziness,Causes serious eye irritation,Highly flammable liquid and vapour.

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	:	tetrahydrofuran; butanone; ethyl methyl ketone; acetone; propan-2-one; propanone
Hazard statements (GHS UN)	:	H225 - Highly flammable liquid and vapour H319 - Causes serious eye irritation H336 - May cause drowsiness or dizziness H351 - Suspected of causing cancer
Precautionary statements (GHS UN)	:	P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.
P233 - Keep container tightly closed.

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
butanone; ethyl methyl ketone	CAS-No.: 78-93-3	30 – 50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
cyclohexanone	CAS-No.: 108-94-1	10 – 30	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332
acetone; propan-2-one; propanone	CAS-No.: 67-64-1	10 – 30	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
tetrahydrofuran	CAS-No.: 109-99-9	1 – 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 2, H351 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 : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing.
First-aid measures after 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.
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 : May cause drowsiness or dizziness.
Symptoms/effects after eye contact : Eye irritation.

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 : Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Water spray.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapour.

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

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. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. No open flames, no sparks, and no smoking.

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 : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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 : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment.

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 : Ground/bond container and receiving equipment.

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

tetrahydrofuran (109-99-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tetrahydrofuran
IOELV TWA (mg/m³)	150 mg/m³
IOELV STEL (mg/m³)	300 mg/m³
IOELV STEL (ppm)	100 ppm
Notes	Skin

tetrahydrofuran (109-99-9)	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
USA - ACGIH - Occupational Exposure Limits	
Local name	Tetrahydrofuran
ACGIH TWA (ppm)	50 ppm
ACGIH STEL (ppm)	100 ppm
Remark (ACGIH)	TLV® Basis: URT irr; CNS impair; kidney dam. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	TETRAHYDROFURAN
Biological Exposure Indices (BEI)	2 mg/l Parameter: Tetrahydrofuran - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2021

butanone; ethyl methyl ketone (78-93-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Butanone
IOELV TWA (mg/m³)	600 mg/m³
IOELV STEL (mg/m³)	900 mg/m³
IOELV STEL (ppm)	300 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
USA - ACGIH - Occupational Exposure Limits	
Local name	Methyl ethyl ketone (MEK)
ACGIH TWA (ppm)	200 ppm
ACGIH STEL (ppm)	300 ppm
Remark (ACGIH)	TLV® Basis: URT irr; CNS & PNS impair. Notations: BEI
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	METHYL ETHYL KETONE
Biological Exposure Indices (BEI)	2 mg/l Parameter: Methyl ethyl ketone - Medium: urine - Sampling time: End of shift - Notations: Ns
Regulatory reference	ACGIH 2021

acetone; propan-2-one; propanone (67-64-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetone
IOELV TWA (mg/m³)	1210 mg/m³
IOELV TWA (ppm)	500 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetone
ACGIH TWA (ppm)	250 ppm
ACGIH STEL (ppm)	500 ppm

acetone; propan-2-one; propanone (67-64-1)	
Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	ACETONE
Biological Exposure Indices (BEI)	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift - Notations: Ns
Regulatory reference	ACGIH 2021

cyclohexanone (108-94-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Cyclohexanone
IOELV TWA (mg/m³)	40.8 mg/m³
IOELV STEL (mg/m³)	81.6 mg/m³
IOELV STEL (ppm)	20 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
USA - ACGIH - Occupational Exposure Limits	
Local name	Cyclohexanone
ACGIH TWA (ppm)	20 ppm
ACGIH STEL (ppm)	50 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	CYCLOHEXANONE
Biological Exposure Indices (BEI)	80 mg/l Parameter: 1,2-Cyclohexanediol (with hydrolysis) - Medium: urine - Sampling time: End of shift at end of workweek - Notations: Ns, Sq 8 mg/l Parameter: Cyclohexanol (with hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: Ns, Sq
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	:	Liquid
Colour	:	clear.
Odour	:	Characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	> 56 °C
Flammability	:	Highly flammable liquid and vapour.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	< 23 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	Not available
pH	:	No data available
pH solution	:	Not available
Viscosity, kinematic (calculated value) (40 °C)	:	> 40 mm²/s
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	:	≈ 0.94
Relative vapour density at 20°C	:	No data available
Solubility	:	Not available
Viscosity, dynamic	:	1000 – 1600 cP
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. Highly flammable liquid and vapour.

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). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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

butanone; ethyl methyl ketone (78-93-3)	
LD50 oral rat	≈ 2193 mg/kg

acetone; propan-2-one; propanone (67-64-1)	
LD50 oral rat	≈ 5800 mg/kg
LD50 dermal rabbit	> 7400 mg/kg
LC50 Inhalation - Rat	≈ 76 mg/l/4h

cyclohexanone (108-94-1)	
LD50 oral rat	≈ 2650 mg/kg
LD50 dermal rabbit	≈ 3160 mg/kg
LC50 Inhalation - Rat	> 6.2 mg/l/4h

Skin corrosion/irritation : Not classified
pH: No data available

Serious eye damage/irritation : Causes serious eye irritation.
pH: No data available

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer.
Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.

tetrahydrofuran (109-99-9)	
STOT-single exposure	May cause respiratory irritation.

butanone; ethyl methyl ketone (78-93-3)	
STOT-single exposure	May cause drowsiness or dizziness.

acetone; propan-2-one; propanone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

VT-301 All Pressure Solvent Cement	
Viscosity, kinematic	> 40 mm²/s

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-301 All Pressure Solvent Cement	
Persistence and degradability	Not rapidly degradable

tetrahydrofuran (109-99-9)	
Persistence and degradability	Not rapidly degradable

butanone; ethyl methyl ketone (78-93-3)	
Persistence and degradability	Not rapidly degradable

acetone; propan-2-one; propanone (67-64-1)	
Persistence and degradability	Not rapidly degradable

cyclohexanone (108-94-1)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

VT-301 All Pressure Solvent Cement	
Bioaccumulative potential	No additional information available

12.4. Mobility in soil

VT-301 All Pressure Solvent Cement	
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.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with UN RTDG / IMDG / IATA

UN RTDG	IMDG	IATA
14.1. UN number		
1133	1133	1133
14.2. UN Proper Shipping Name		
ADHESIVES (containing flammable liquid)	ADHESIVES (containing flammable liquid)	Adhesives (containing flammable liquid)
Transport document description		
UN 1133 ADHESIVES (containing flammable liquid), 3, II	UN 1133 ADHESIVES (containing flammable liquid), 3, II	UN 1133 Adhesives (containing flammable liquid), 3, II
14.3. Transport hazard class(es)		
3	3	3

UN RTDG	IMDG	IATA
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

UN RTDG

Limited quantities (UN RTDG) : 5L
Excepted quantities (UN RTDG) : E2
Packing instruction (UN RTDG) : P001, IBC02
Special packing provisions (UN RTDG) : PP1
Portable tank and bulk container special instructions (UN RTDG) : T4
Portable tank and bulk container special provisions (UN RTDG) : TP1, TP8

IMDG

Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG) : B
Properties and observations (IMDG) : Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.

IATA

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) : 3L

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

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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:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer

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.