

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Issue date: 31/10/2020 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	VT-145 Vital Steel Epoxy Part A
Product group	:	Trade product

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

1.2.1. Relevant identified uses

Intended for general public
Main use category
Use of the substance/mixture

: Professional use : Adhesives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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		
sales@vitaltechnical.com		

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272	/2008 [CLP]
Hazard pictograms (CLP)	GHS07 GHS09
Signal word (CLP)	: Warning
Contains	: oxirane, mono[(C12-14-alkyloxy)methyl] derivs.; bis-[4-(2,3-epoxipropoxi)phenyl]propane
Hazard statements (CLP)	: H315 - Causes skin irritation.
	H317 - May cause an allergic skin reaction.
	H319 - Causes serious eye irritation.
	H411 - Toxic to aquatic life with long lasting effects.

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Precautionary statements (CLP)	 P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
	 P321 - Specific treatment (see supplemental first aid instruction on this label). P391 - Collect spillage. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

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]
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (EC Index-No.) 603-073-00-2 (REACH-no) 01-2119456619-26	30 – 50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
TALC	(CAS-No.) 14807-96-6 (EC-No.) 238-877-9	1 – 10	Not classified
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	(CAS-No.) 68609-97-2 (EC-No.) 271-846-8 (EC Index-No.) 603-103-00-4	0.1 – 1	Skin Irrit. 2, H315 Skin Sens. 1, H317

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (EC Index-No.) 603-073-00-2 (REACH-no) 01-2119456619-26	(5 ≤C ≤ 100) Eye Irrit. 2, H319 (5 ≤C ≤ 100) Skin Irrit. 2, H315

Full text of H-statements: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
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. 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 and e	ffects, both acute and delayed
Symptoms/effects after skin contact Symptoms/effects after eye contact	Irritation. May cause an allergic skin reaction.Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
5.2. Special hazards arising from the subst	ance or mixture
Hazardous decomposition products in case of fire	: Toxic fumes may be released.
5.3. Advice for firefighters	
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 contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.	
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 material for containment and cleaning up		

For containment Methods for cleaning up Other information	 Collect spillage. Take up liquid spill into absorbent material. Dispose of materials or solid residues at an authorized site.
6.4. Reference to other sections	

For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling Hygiene measures	 Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray. 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, includi	ing any incompatibilities
Storage conditions	: Store in a well-ventilated place. Keep cool.
7.3. Specific end use(s)	

No additional information available

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SECTION 8: Exposure controls/personal protection			
8.1. Control parameters			
8.1.1 National occupational exposure and biologica	l limit values		
TALC (14807-96-6)			
Austria - Occupational Exposure Limits			
MAK Daily average value (mg/m³)	≈ 2.5 mg/m³		
Belgium - Occupational Exposure Limits			
Limit value [mg/m³]	≈ 2 mg/m³		
Denmark - Occupational Exposure Limits			
Grænseværdi (8 timer) (mg/m³)	≈ 0.3 mg/m³		
Hungary - Occupational Exposure Limits			
AK-érték	≈ 2 mg/m³		
Ireland - Occupational Exposure Limits			
OEL (8 hours ref) (mg/m ³)	≈ 10 mg/m³		
Latvia - Occupational Exposure Limits			
OEL TWA (mg/m³)	≈ 4 mg/m³		
Netherlands - Occupational Exposure Limits			
Grenswaarde TGG 8H (mg/m³)	≈ 0.25 fibers/cm³		
Poland - Occupational Exposure Limits			
NDS (mg/m³)	≈ 4 mg/m³		
Spain - Occupational Exposure Limits			
VLA-ED (mg/m³)	≈ 2 mg/m³		
Sweden - Occupational Exposure Limits			
nivågränsvärde (NVG) (mg/m³)	≈ 2 mg/m³		
United Kingdom - Occupational Exposure Limits			
WEL TWA (mg/m³)	≈ 1 mg/m³		
USA - ACGIH - Occupational Exposure Limits			
Local name	Talc		
ACGIH TWA (mg/m³)	2 mg/m³ (Containing no asbestos fibers. E - The value is for particulate matter containing no asbestos and < 1 % crystalline silica, R - Respirable particulate matter) 2 mg/m³ (Containing asbestos fibers. R - Respirable particulate matter)		
ACGIH TWA (ppm)	0.1 fibers/cm³ (Containing asbestos fibers. F - Respirable fibers)		
Remark (ACGIH)	Containing no asbestos fibers = TLV® Basis: Pulm fibrosis; pulm func. Notations: A4 Containing asbestos fibers = TLV® Basis: Pneumoconiosis; lung cancer; mesothelioma. Notations: A1 (Confirmed Human Carcinogen)		
Regulatory reference	ACGIH 2020		

BARIUM SULPHATE PERCIPITATE (7727-43-7)		
Belgium - Occupational Exposure Limits		
.imit value [mg/m³] ≈ 5 mg/m³		
Ireland - Occupational Exposure Limits		
OEL (8 hours ref) (mg/m ³) ≈ 5 mg/m ³		

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BARIUM SULPHATE PERCIPITATE (7727-43-7)			
Latvia - Occupational Exposure Limits			
DEL TWA (mg/m³) ≈ 6 mg/m³			
Spain - Occupational Exposure Limits			
VLA-ED (mg/m ³) ≈ 10 mg/m ³			
United Kingdom - Occupational Exposure Limits			
VEL TWA (mg/m³) ≈ 10 mg/m³			
USA - ACGIH - Occupational Exposure Limits			
Local name	Barium sulfate		
ACGIH TWA (mg/m ³) 5 mg/m ³ (I - Inhalable particulate matter, E - The value is for particulate matter containi no asbestos and < 1 % crystalline silica)			
Remark (ACGIH) TLV® Basis: Pneumoconiosis			
Regulatory reference ACGIH 2020			

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

8.2.2.3. Respiratory protection

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Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Black.
Odour	: Pleasant.
Odour threshold	: No data available
рН	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 1.96
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

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

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

10.5. Incompatible materials

No additional information available

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10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information	on
11.1 Information on toxicological effects	
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation)	 Not classified Not classified Not classified
Skin corrosion/irritation	: Causes skin irritation. pH: Not applicable
Serious eye damage/irritation	: Causes serious eye irritation. 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	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general Hazardous to the aquatic environment, short-term (acute) Hazardous to the aquatic environment, long-term (chronic) Not rapidly degradable	 Toxic to aquatic life with long lasting effects. Not classified Toxic to aquatic life with long lasting effects.
12.2. Persistence and degradability	
No additional information available	
12.3. Bioaccumulative potential	
No additional information available	
12.4. Mobility in soil	
No additional information available	
12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Other adverse effects	
No additional information available	

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

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

SECTION 14: Transport information

ADR	IMDG	ΙΑΤΑ	ADN	RID
I4.1. UN number	-	'		
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shippin	g name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S.
Fransport document descr	iption	· · · · · · · · · · · · · · · · · · ·		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S., 9, III
14.3. Transport hazard o	lass(es)	<u> </u>		<u> </u>
9	9	9	9	9
14.4. Packing group				·
111	III	III	Ш	III
14.5. Environmental haz	ards	· · · · · · · · · · · · · · · · · · ·		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary informatio	n available			

14.6. Special precautions for user

Overland transport		
Classification code (ADR)	:	M6
Special provisions (ADR)	:	274, 335, 375, 601
Limited quantities (ADR)	:	51
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Special packing provisions (ADR)	:	PP1
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	Τ4
Portable tank and bulk container special provisions	:	TP1, TP29
(ADR)		
Tank code (ADR)	:	LGBV
Vehicle for tank carriage	:	AT

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Transport category (ADR)		3
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Loading, unloading and handling (ADR)		CV13
Hazard identification number (Kemler No.)	:	90
Orange plates		
	•	90
		90 3082
Tunnel restriction and (ADD)		
Tunnel restriction code (ADR) EAC code	:	- •3Z
	•	*3Z
Transport by sea		074 005 000
Special provisions (IMDG)		274, 335, 969
Limited quantities (IMDG)		5 L E1
Excepted quantities (IMDG)		
Packing instructions (IMDG)		LP01, P001 PP1
Special packing provisions (IMDG) IBC packing instructions (IMDG)		IBC03
Tank instructions (IMDG)		T4
Tank special provisions (IMDG)		TP1, TP29
EmS-No. (Fire)		F-A
EmS-No. (Spillage)		S-F
Stowage category (IMDG)		A
	•	~
Air transport		E1
PCA Excepted quantities (IATA)		E 1 Y964
PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA)		
PCA infinited quantity max net quantity (IATA) PCA packing instructions (IATA)	:	30kgG 964
PCA packing instituctions (IATA) PCA max net quantity (IATA)	:	904 450L
CAO packing instructions (IATA)		450L 964
CAO max net quantity (IATA)		450L
Special provisions (IATA)		A97, A158, A197
ERG code (IATA)		9L
Inland waterway transport	•	
Classification code (ADN)		M6
Special provisions (ADN)		274, 335, 375, 601
Limited quantities (ADN)		5 L
Excepted quantities (ADN)		E1
Equipment required (ADN)		PP
Number of blue cones/lights (ADN)		0
Rail transport	•	°
Classification code (RID)		M6
Special provisions (RID)	:	
Limited quantities (RID)		5L
Excepted quantities (RID)		E1
Packing instructions (RID)	-	P001, IBC03, LP01, R001
Special packing provisions (RID)		PP1
Mixed packing provisions (RID)		MP19
Portable tank and bulk container instructions (RID)		T4
Portable tank and bulk container special provisions	÷	
(RID)	•	11 1, 11 20
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	÷	W12
Special provisions for carriage - Loading, unloading		CW13, CW31
and handling (RID)		
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)		90

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Germany	
Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Water hazard class (WGK)	: WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)
Netherlands	
ABM category	: A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen	: oxirane, mono[(C12-14-alkyloxy)methyl] derivs. is listed
SZW-lijst van mutagene stoffen	: oxirane, mono[(C12-14-alkyloxy)methyl] derivs. is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: None of the components are listed
Denmark	
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product
15.2. Chemical safety assessment	

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
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
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
ΙΑΤΑ	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Full text of H- and EUH-statements:		
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	
Skin Sens. 1	Skin sensitisation, Category 1	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H411	Toxic to aquatic life with long lasting effects.	

Safety Data Sheet (SDS), EU

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.