SPREE

FILL & FIX

CHEMICAL ANCHOR

TECHNICAL DATA SHEET

Chemical anchor anchoring epoxy adhesive is a two-component, non sag, 100% solids, multi-purpose, high-performance, moisture tolerant epoxy adhesive designed for anchoring bolts and rebar steel into concrete and for bonding or repairing a variety of household and common building materials including concrete, porous tile, and stone.

USES

- Planting steel bars and bolts in concrete, stone or other substrate.
- Curtain wall & stone dry hanging brackets' strengthening
- Building structure reinforcement & framework anchoring
- Various equipment's basic fixation
- Steel structures and concrete structures anchoring connection
- Rail fixing for railway building

GENERAL FEATURES

- High-strength
- Resists chemicals and solvents
- Moisture tolerant
- Fits standard caulking gun
- Non-shrink
  - Fast-setting
  - Initial set time of in as little as 15-30 min.
  - Initial cure time of 2 hr.
- Final cure of 1-3days
- Non-sag
- Excellent adhesion

PRODUCT INFORMATION

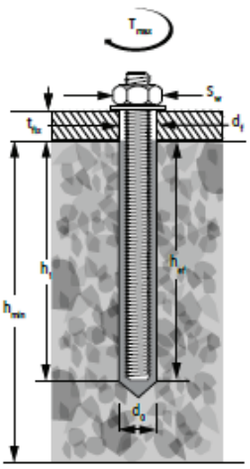
- **Package:** 390ml/pc, 20pc or 30pc per carton
- **Shelf life:** 18 months
- **Storage condition:** Stored in their original packaging, in cool conditions (5°C-35°C) and out of direct sunlight.
- **Color:** Red and grey
- **Mix Ratio:** 3:1
- **Density:** 1.5g/cm^3
- **Solids:** 100%

TECHNICAL INFORMATION

Compressive strength 7 days at 25-32°C	70.6MPa
Compressive modulus 7 days at 25-32°C	2400MPa
Tensile strength 7 days at 25-32°C	42MPa
Elongation at break 7 days at 25-32°C	1.6%
Bonding strength 7 days at 25-32°C	≥11.4MPa
Heat deflection temperature 7 days at 25-32°C	68°C
Absorption 7 days at 25-32°C	0.18%
Linear Coefficient of Shrinkage on Cure 7 days at 25-32°C	0.009

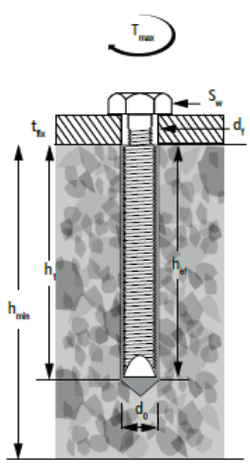
OPERABLE TIME AND CURING TIME

Ambient temperature (°C)	-10-0	0-10	10-20	≥35
Operable time (min)	60	45	30	15
Curing time 70% (h)	60	48	24	6
Full curing time (days)	20	14	12	3



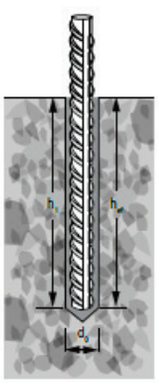
INSTALLATION DATA- THREADED ROD

	Notation	Unit	EF-AE500-Threaded rod							
			M8	M10	M12	M16	M20	M24	M27	M30
Anchor Diameter	d	[mm]	8	10	12	16	20	124	27	30
Nominal drill bit dimeter	d0=	[mm]	10	12	14	18	24	28	32	35
Diameter of hole celarance in fixture	df<	[mm]	9	12	14	18	22	26	30	33
Diameter of steel brush	db≥	[mm]	12	14	16	20	26	30	34	37
Mix embedment & drill hole depth	hef,min	[mm]	60	60	70	80	90	96	108	120
Max embedment & drill hole depth	hef,max	[mm]	160	200	240	320	400	480	540	600
Minimum member thickness	hmin	[mm]								
Minimum spacing	Smin	[mm]	40	50	60	80	100	120	135	50
Minimum edge distance	Cmin	[mm]	40	50	60	80	100	120	135	50
Thickness of fixture	Tfix	[mm]								
Maximum torque	Tmax	[Nm]	10	20	40	80	120	160	180	200
Torque wrench socket size	Sw	[mm]	13	17	19	24	30	36	41	46



INSTALLATION DATA- INTERNAL THREADED SLEEVE

	Notation	Unit	WF-AE500- Internal threaded sleeve				
			M8	M10	M12	M16	M20
External diameter of sleeve	d	[mm]	12	16	20	24	30
Nominal drill bit diameter	d0=	[mm]	14	18	24	28	35
Diameter of hole clearance in fixture	df<	[mm]	9	12	14	18	22
Diameter of streel brush	db≥	[mm]	16	20	26	30	37
Embedment and drill hole depth	hef	[mm]	80	90	110	150	200
Minimum meber thickness	hmin	[mm]	110	130	160	210	270
Minimum edge distance	Cmin	[mm]	60	80	100	120	150
Minimum spacing	Smin	[mm]	60	80	100	120	150
Screw diameter	d1	[mm]	8	10	12	16	20
Minimum length of screw	l1,min	[mm]	8	10	12	16	20
Maximum length of screw	l1,max	[mm]	35	45	55	75	85
Maximum torque	Tmax	[Nm]	10	20	40	80	120
Recommended Torque wrench socket size	Sw	[mm]	13	17	19	24	30

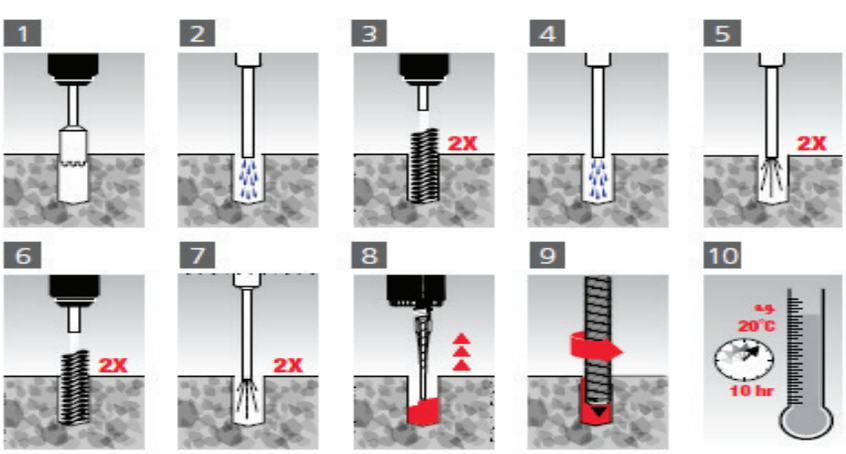


INSTALLATION DATA- REINFORCEMENT BAR

	Notation	Unit	WF-AE500- Internal threaded sleeve								
			M8	M10	M12	M14	M16	M20	M24	M28	M32
Nominal diameter of rebar	d	[mm]	8	10	12	14	16	20	24	28	32
Nominal drill bit diameter	d0=	[mm]	12	14	16	18	20	24	28	35	37
Diameter of steel brush	db≥	[mm]	12	14	16	20	26	30	34	37	40
Min embedment & drill hole depth	hef,min	[mm]	60	60	70	75	80	90	96	112	128
Max embedment & drill hole depth	hef,max	[mm]	160	200	240	280	320	400	480	560	640
Minimum meber thickness	hmin	[mm]	hef + 30mm ≥ 100mm				hef + 2 x d0				
Minimum spacing	Smin	[mm]	40	50	60	70	80	100	120	140	160
Minimum edge distance	Cmin	[mm]	40	50	60	70	80	100	120	140	160

INSTALLATION PROCESS

1. Using the proper core bit size, drill a hole into the base material to the required depth.
2. Rinse the hole until water runs clear.
3. Brush the hole with the proper wire brush - 2 times minimum.
4. Rinse the hole until water runs clear.
5. Blow the hole clean using a hand pump (suitable for maximum 20mm dia. hole) or compressed air - 2 times minimum.
6. Brush the hole with the proper wire brush - 2 times minimum.
7. Blow the hole clean using a hand pump (suitable for maximum 20mm dia. hole) or compressed air - 2 times minimum.
8. Squeeze out separately and discard a minimum of 10cm until the mortar is uniformly mixed and shows consistent color. Starting from the rear of the hole, fill the hole up to approximately 2/3 with uniformly mixed adhesive.
9. Push the threaded rod / rebar into the hole while turning slightly to ensure positive distribution of the adhesive. Be sure that the rod / rebar is seated at the bottom of the hole and that some adhesive has flowed from the top of the hole.
10. Allow the adhesive to cure for the time specified for the actual concrete temperature (in dry concrete). Do not disturb or load the anchor until the adhesive has fully cured. Follow the longer curing time for wet concrete.



APPLICATION TOOLS

Manually dispenser gun

Electric dispenser gun

Steel brush used for cleaning the hole

Blow pump used for cleaning the hole

POINTS FOR ATTENTION

- Use up within the applicable period, do not use the adhesive if it is beyond the applicable period;
- If the cartridges adhesive are not used up, they should be covered and sealed. They should not be exposed to air for a long time;
- The construction workers should take all necessary safety measures (such as wearing masks, gloves, goggles, etc.), and maintain fire prevention measures as well as keeping the site clean;
- If the adhesive accidentally got in touch the skin and cloths, acetone can be used to wipe it at once, followed by a great deal of clear water;
- If accidentally swallowed or splashed into the eyes, please seek immediate medical service.

ENVIRONMENT, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products.

SPREE

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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Product name : Anchoring Epoxy adhesive
Product code : WF-AE390

1.2. Relevant identified uses of the substance or mixture and uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet
Registered company name : Shanghai Wolfix Materials Co.,Ltd.
Address : Room 703, Building 3, No.101 Youyi Rd, Baoshan district, Shanghai.
Telephone : +86 150 0066 9292
Email : Info@wolf-fix.com www.wolf-fix.com

1.4. Emergency telephone number : +86 150 0066 9292.
Association/Organisation : Company Phone (24h)

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1A	H314 - Causes severe skin burns and eye damage.
Skin Sens. 1	H317 - May cause an allergic skin reaction.
Aquatic Chronic 3	H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US)

GHS07

GHS09

Signal word (GHS US)

Danger

Hazard statements (GHS US)

H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (GHS US)

P280 - Wear eye protection, protective clothing, protective gloves.
P262 - Do not get in eyes, on skin, or on clothing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixtures

Name	Product identifier	%	GHS-US classification
Quartz (SiO2)	CAS-No.) 14808-60-7	60 - 80	Carc. 1A, H350
m-Xylylenediamine	(CAS-No.) 1477-55-0	10 - 25	"Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314 Skin Sens.1, H317"
Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene	CAS-No.) 710292-85-6	10 - 25	Skin Sens. 1B, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4 : FIRST AID MEASURES

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact: Wash with plenty of water/.... Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get immediate medical advice/attention.

First-aid measures after eye contact: Get immediate medical advice/attention. Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.

First-aid measures after ingestion: Drink plenty of water. Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met.

Symptoms/effects: Causes severe skin burns and eye damage.

Symptoms/effects after inhalation: May cause an allergic skin reaction.

Symptoms/effects after eye contact: Causes serious eye damage.

4.3. Immediate medical attention and special treatment, if necessary

SECTION 5 : FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Foam. Dry powder. Carbon dioxide. Water spray.
Unsuitable extinguishing media	Sand. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity	Corrosive vapours.

5.3. Advice for firefighters

Firefighting instructions	Water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection ventilate area.
Emergency procedures	

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

6.3. Methods and material for containment and cleaning up

For containment Methods for	Collect spillage.
Cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. On land, sweep or shovel into suitable containers. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8:	"Exposure controls/personal protection". For further information refer to section 13.

SECTION 7 : HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact during pregnancy/while nursing.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	Comply with applicable regulations.
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	41 - 77 °F
Heat and ignition sources	Keep away from heat and direct sunlight.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenndiol and ethenylbenzene (710292-85-6)

Not applicable

m-Xylylenediamine (1477-55-0)

ACGIH	ACGIH Ceiling (ppm)	
ACGIH	Remark (ACGIH)	Eye, Skin & GI irr

Quartz (SiO2)(14808-60-7)

ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (Respirable fraction)
ACGIH	Remark (ACGIH)	TLV® Basis: Pilm fibrsis; lung cancer. Notations: A2(Suspected Human Carcinogen
OSHA	Remark (OSHA)	(3)See Table Z-3

Additional information The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Exposure controls

Personal protective equipment: Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Hand protection	Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.
Eye protection	Wear security glasses which protect from splashes.
Skin and body protection	Wear suitable protective clothing.
Environmental exposure controls	Avoid release to the environment.
Consumer exposure controls	Avoid contact during pregnancy/while nursing.
Other information	Do not eat, drink or smoke during use.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	Black
Odour	Amine-like
Odour threshold	No data available
PH	11.5
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Vapour pressure	No data available
Relative density	No data available
Relative vapour density at 20 °C	No data available
Density	1.65 g/cm³
Solubility	insoluble in water.
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available

9.2. Other information

No additional information available

SECTION 10 : STABILITY AND CREATIVITY

10.1. Reactivity

Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : fume. Carbon monoxide. Carbon dioxide. Corrosive vapours.

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute toxicity Not classified

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
LD50 oral rat	>2000 mg/kg
LD50 dermal rat	>2000 mg/kg
m-Xylylenediamine (1477-55-0)	
LD50 oral rat	>1090 mg/kg
LD50 dermal rat	>3100 mg/kg
ATE US (oral)	660 mg/kg bodyweight
ATE US (dust,mist)	1.34 mg/l/4h

Skin corrosion/irritation — Causes severe skin burns and eye damage. pH: 11.5

Serious eye damage/irritation — Serious eye damage, category 1, implicit pH: 11.5

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

Germ cell mutagenicity — Not classified
Based on available data, the classification criteria are not met

Carcinogenicity — Not classified

Quartz (SiO2) (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity — Not classified Based on available data, the classification criteria are not met

STOT-single exposure — Not classified

STOT-repeated exposure — Not classified

Aspiration hazard — Not classified

Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye damage.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Information on toxicological effects

Ecology – water Harmful to aquatic life with long lasting effects

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
LC50 fish 1	>= 50 mg/l
LC50 other aquatic organisms 1	>= 31.8 mg/l
EC50 Daphnia 1	2.4 mg/l
NOEC chronic algae	6.25 mg/l
m-Xylylenediamine (1477-55-0)	
LC50 fish 1	75 mg/l
LC50 other aquatic organisms 1	20.3 ppb
EC50 Daphnia 1	15 mg/l
LOEC (chronic)	15 mg/l
NOEC (acute)	10.5 mg/kg
LOEC (chronic)	4.7 mg/l
NOEC chronic crustacea	4.7 mg/l

12.2. Persistence and degradability

HM-500	
Persistence and degradability	May cause long-term adverse effects in the environment
Quartz (SiO2) (14808-60-7)	
Persistence and degradability	Biodegradability: not applicable
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

HM-500	
Bioaccumulative potential	Not established
Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
Bioconcentration factor (BCF REACH)	>= 12.9
Log Pow	5.14
Quartz (SiO2) (14808-60-7)	
Bioaccumulative potential	No bioaccumulation data available

12.4. Mobility in soil

Quartz (SiO2) (14808-60-7)	
Ecology - soil	Low potential for mobility in soil

12.5. Other adverse effects

Other information Avoid release to the environment

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Regional legislation (waste) Disposal must be done according to official regulations.

Product/Packaging disposal recommendations After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials Avoid release to the environment.

SECTION 14 : TRANSPORT INFORMATION

14.1. UN number

3082

14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(reaction product: bisphenol-a-(epichlorhydrin), phenol, polymer with formaldehyde, glycidyl ether (bisphenol f - epichlorhydrin resin with number averadge molecular weight < 700))

-Classification :

14.3. Packing group

III

14.4. Packing group

-Environmentally hazardous material :

14.5. Environmental hazards

Not available

14.6. Special precautions for user
- Overland transport

Classification code (ADR)	C8
Special provisions (ADR)	274
Limited quantities (ADR)	1kg
Packing instructions (ADR)	P002, IBC08
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	2
Orange plates	
Tunnel restriction code (ADR)	E

-Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1kg
Packing instructions (IMDG)	P002
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A
Stowage and segregation	Separated from' acids.
(IMDG) MFAG-No	154

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No data available.

SECTION 15 : REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
SWISS:
-Article 13 Maternity ordinance (SR 822.111.52) :
Expectant and nursing mothers are only permitted to come into contact with this product during the course of their work if, based on a risk assessment carried out in accordance with Article 63 of Ordinance 1 on the Employment Act (ArGV 1) (SR 822.111), the chemicals in question have been found not to cause any specific harm to mothers or children or if such harm can be ruled out by taking appropriate protective measures.

-Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2):
Young people undergoing basic vocational training may only work with this product if the relevant training ordinance makes provision for them to do so with a view to enabling them to achieve their training objectives and if the preconditions for the training plan have been met and the applicable age restrictions have been complied with. Young people who are not completing any basic vocational training are not permitted to work with this product.
Employees of either sex who are under 18 years old are classed as young people.

-Classification and labelling information included in section 2:

The following regulations have been used:
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2016/1179. (ATP 9)

-Container information:
No data available.

-Particular provisions :
No data available.

-Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :
NFPA 704, Labelling: Health=2 Inflammability=1 Instability/Reactivity=1 Specific Risk=none

-Swiss ordinance on the incentive tax on volatile organic compounds :

108-65-6 acétate de 1-méthoxy-2-propyle

15.2. Chemical safety assessment
No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.
The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.
The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations :

DNEL : Derived No-Effect Level
PNEC : Predicted No-Effect Concentration
ADR : European agreement concerning the international carriage of dangerous goods by Road.
IMDG : International Maritime Dangerous Goods.
IATA : International Air Transport Association.
ICAO : International Civil Aviation Organisation
RID : Regulations concerning the International carriage of Dangerous goods by rail.
WGK : Wassergefahrdungsklasse (Water Hazard Class).
GHS07 : Exclamation mark
GHS09 : Environment
PBT: Persistent, bioaccumulable and toxic.
vPvB : Very persistent, very bioaccumulable.
SVHC : Substances of very high concern.