SAFETY DATA SHEET (SDS)
Biosaver Anti-Slip DIY Kit

1. IDENTIFICATION OF THE SUBSTANCE

PRODUCT NAME : Biosaver Anti-Slip DIY Kit
USE : ANTI-SLIP CLEAR SAND (BAREFOOT)

MANUFACTURER : FERRO CONSTRUCTION PRODUCTS.CO.,LTD.
144 M.1 Malaiman Rd., Tungkok, Songphinong, Suphanburi 72110, Thailand
Tel. : +66 35-473877-8 Fax : +66 35-473879

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture.

Classification (GHS) :

Classification.	H-Code
Specific target organ toxicity-repeated exposure, category 2, by inhalation (Respiratory tract).	H373
Skin corrosion/Irritation, Category 2.	H315

2.2 Label elements.

Labelling (GHS) :

Pictogram (s) :

Signal word : Warning.

H-Code	Hazard statements.
H315	Causes skin irritation.
H373	May cause damage to organs (Respiratory tract) through prolonged or repeated exposure if inhaled.

P-Code	Precautionary statements.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/Protective clothing/Eye protection.
P260	Do not breathe vapours/Spray.
P302 + P352	**If on skin :** Wash with plenty of soap and water.
P332 + P313	**If skin irritation occurs :** Get medical advice/Attention.
P314	Get medical advice/Attention if you feel unwell.
P501	Dispose of contents/Container to waste disposal.

2.3 Other hazards.

The product hydrolyses under formation of methanol (CAS No. 67-56-1). Methanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance forthe hazard profile of the product is strongly dependent on the specific conditions.

Endocrine disrupting properties-Human health : The substance/Mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57 (f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties-Environment : The substance/Mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57 (f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients :

Chemical name	CAS No.	Content (%)
Silsesquioxanes, Me, ethoxy-terminated, reaction products with polypropylene glycol	115341-02-1	<30
Siloxanes and silicones, di-Me, hydroxy-terminated	70131-67-8	>40
Quartz (Silica Sand)	14808-60-7	>30

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above ≥0.1%.

4. FIRST AID MEASURES

4.1 General information :

Get medical attention if irritation or other symptoms occur. Take a copy of the Safety Data Sheet when going for medical treatment.

4.2 If inhaled.

If inhaled as aerosol, remove to fresh air. Where there is a risk of unconsciousness place and transport on one side in a stable position. Get medical attention if symptoms occur or breathing becomes difficult.

4.3 In case of skin contact.

Remove contaminated clothing and shoes. Wash then immediately with plenty of water and soap. Get medical attention if irritation occurs.

4.4 In case of eye contact.

If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

4.5 If swallowed.

If conscious, give several small portions of water to drink. Never give anything by mouth to an unconscious person. For Ingestion, do not attempt to induce vomiting. Get medical attention immediately.

4.6 Advice for the physician.

Methanol (CAS No. 67-56-1) is readily and rapidly absorbed at all exposure routes and is toxic by all routes. Methanol may cause irritation of the mucosa, as well as nausea, vomiting, headaches, vertigo and visual disorders, including blindness (Irreversible damage to the optic nerve), acidosis, spasms, narcosis and coma. There may be a delay in the onset of these effects after exposure.

5. FIRE-FIGHTING MEASURES

5.1 Flammable properties :

Propertys	Values	Standards
Flash point, oC (Approx.)	>95 oC	DIN EN ISO 2719 (Pensky-Martens, closed cup)
Sustained combustibility, oC (Approx.)	110 oC (230 oF)	ISO 9038
Boiling point/Boiling range (Approx.)	Not applicable	-
Lower explosion limit (Approx.)	Not applicable	-
Upper explosion limit (Approx.)	Not applicable	-
Ignition temperature, oC (Approx.)	380 oC (716 oF)	EN 14522
NFPA Hazard class (Comb./Flam.liquid)	IIIB	-

5.2 Fire and explosion hazards :

Consider possible formation of explosive mixtures with air, for example in uncleaned containers. Formation of methanol vapor in the container headspace is possible especially under influence of heat.

5.3 Recommended extinguishing media :

Water-mist, alcohol-resistant foam, carbon dioxide, sand.

5.4 Unsuitable extinguishing media :

Water-spray, water jet.

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products,resulting gases.

Methanol, carbon dioxide, formaldehyde carbon monoxide, silicon dioxide incompletely burnt hydrocarbons.

5.6 Fire fighting procedures :

Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Precautions :

Secure the area. Wear personal protection equipment (See section 8). Keep unprotected persons away. Avoid contact with eyes and skin. **Do not** inhale gases/vapours/aerosols. If material is released indicate risk of slipping. **Do not** walk through spilled material.
HAZWOPER PPE Level : D

6.2 Containment :

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

6.3 Methods for cleaning up.

Take up mechanically and dispose of according to local/state/federal regulations. **Do not** flush away with water. **For small amounts :** Absorb with a neutral (Non-Acidic/Non-Basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations.

For large amounts :

Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly ratedelectrical equipment should be used. Clean any slippery coating that remains using a detergent/ soap solution or another biodegradable cleaner. Silicone fluids are slippery ; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

6.4 Further information :

Exhaust vapours. Eliminate all sources of ignition. Consider explosion protection. Observe notes under section 7.

7. HANDLING AND STORAGE

7.1 Handling.

Precautions for safe handling :

Ensure adequate ventilation. Must be syphoned off in situ. Spilled substance increases risk of slipping. Avoid formation of aerosols. In case of aerosol formation special protective measures are required (Exhausting by suction, respiratory protection). Observe information in section 8. Keep away from incompatible substances in accordance with section 10.

Precautions against fire and explosion :

Product can separate methanol. Flammable vapors may accumulate and form explosive mixturewith air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or ther enclosed spaces. Keep away from sources of ignition and **do not** smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

7.2 Storage.

Conditions for storage rooms and vessels :

Observe local/State/Federal regulations.

Advice for storage of incompatible materials :

Observe local/State/Federal regulations.

Further information for storage :

Store in a dry and cool place. Protect against moisture. Store container in a well ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Engineering controls.

Ventilation :

Use only with adequate ventilation.

Local exhaust :

Where mist or vapor may be generated recommended.

8.2 Associate substances with specific control parameters such as limit values.

Maximum airborne concentrations at the workplace :

Substance	Type	mg./m3	ppm	Dust fract.
Methanol	OSHA PEL	260	200	-
Sustained combustibility	ACGIH TWA	-	200	-

Re Methanol (CAS No. 67-56-1) : STEL is 250 ppm, skin notation (ACGIH) ; STEL is 250 ppm, skin notation (NIOSH).
None known.

8.3 Personal protection equipment (PPE).

Respiratory protection :

Respiratory protection is required if aerosol exposure occurs during use, an APF 25 Powered Air Purifying Respirator (PAPR) equipped with P100 (HEPA) particulate filters, and multi-contaminant organic vapor cartridges must be worn.

Hand protection :

Protective gloves made of butyl rubber, nitrile rubber protective gloves.

Eye protection :

Tight fitting chemical safety goggles.

Other protective clothing or equipment :

Additional skin protection, such as saranex coated tyvek apron, over-sleeves, lab coat, coveralls, or protective suit should be worn if splashing could occur. Provide emergency shower and eye-bath.

8.4 General hygiene and protection measures :

Do not breathe dust/vapor/mist/gas/aerosol. Avoid contact with eyes and skin. **Do not** eat, drink or smoke when handling. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance.

Propertys	Values	Standards
Physical state	Liquid (20 oC (68 oF)/1,000 hPa.)	-
Form	Viscous	-
Colour	Clear gray	-
Odour	Weak	-

9.2 Safety data.

Propertys	Values	Standards
Melting point	Not applicable	-
Boiling point/Boiling range	Not applicable	-
Flash point, oC (Approx.)	>95 oC	DIN EN ISO 2719 (Pensky-Martens, closed cup)
Sustained combustibility, oC (Approx.)	110 oC (230 oF)	ISO 9038
Ignition temperature, oC (Approx.)	380 oC (716 oF)	EN 14522
Lower explosion limit	Not applicable	-
Upper explosion limit	Not applicable	-
Vapour pressure, hPa. (Approx.)	1.5 hPa./130 oC (266 oF)	EU-GL.A.4
Vapour pressure, hPa. (Approx.)	11 hPa./150 oC (302 oF)	EU-GL.A.4
Vapour pressure, hPa. (Approx.)	46 hPa./180 oC (356 oF)	EU-GL.A.4
Density, g./cm3 (Approx.)	1.05 g./cm3 at 20 oC (68 oF),at 1,000 hPa.	DIN 51757

Propertys	Values	Standards
Water solubility, oC (Approx.)	Insoluble at 20 oC (68 oF)	-
pH	Not applicable. Insoluble in water.	-
Partition coefficient : N-Octanol/Water	Not applicable	-
Viscosity, kinematic, mm2/s (Approx.)	500 mm2/s at 20 oC (68 oF)	DIN 51562
Drying time (Hard dry), hour (Approx.)	1.04 hours	TIS 2241-2548
Non-Volatile matter, % (Approx.)	90.52%	TIS 2241-2548
Water resistance	As prescribed by the criteria.	TIS 2241-2548
Alkali resistance	As prescribed by the criteria.	TIS 2241-2548
QUV Test	As prescribed by the criteria.	TIS 2241-2548

9.3 Further information.
Hydrolysis products reduce the flash point. Explosion limits for released methanol : 5.5-44% (V).

Propertys	Values	Standards
Odour threshold	No data available	-
Thermal decomposition	No data available	-

10. STABILITY AND REACTIVITY

10.1 General information :
If stored and handled in accordance with standard industrial practices no hazardous reactions are known.
10.2 Conditions to avoid.
Moisture, heat, open flames, and other sources of ignition.
10.3 Materials to avoid.
Reacts with water, basic substances and acids. The reaction takes place with the formation of methanol.
10.4 Hazardous decomposition products.
Methanol by hydrolysis. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 oC (302 oF) through oxidation. Measurements have shown the formation of small amounts of benzene at temperatures above about 180 oC (356 oF).
10.5 Further information :
Hazardous polymerization cannot occur.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects.
11.1.1 General information.
Data derived for the product as a whole are of higher priority than data for single ingredients.

1.1.2 Acute toxicity.
Assessment :
No data on acute inhalation toxicity is available for this product. In case of aerosol formation : Avoid inhalative exposure!
Product details :

Exposure routes	Values/Effect
Oral	LD50 >2000 mg./kg. Neither mortality nor clinical signs of toxicity were observed with the given dose. **Species :** Rat, **Method :** OECD 423, **Source :** Conclusion by analogy

11.1.3 Skin corrosion/Irritation.
Product details :

No skin irritation (**Species :** Rabbit, **Source :** Conclusion by analogy)

11.1.4 Serious eye damage/Eye irritation.
Product details :

No eye irritation (**Species :** Rabbit, **Source :** Conclusion by analogy)

11.1.5 Respiratory or skin sensitisation.
Product details :

Exposure routes	Values
Skin contact	Does not cause skin sensitisation. (**Species :** Guinea pig, **Test system :** Buehler test, **Method :** OECD 406, **Source :** Conclusion by analogy)

11.1.6 Germ cell mutagenicity.
Assessment :
For this endpoint no toxicological test data is available for the whole product.
11.1.7 Carcinogenicity.
Assessment :
For this endpoint no toxicological test data is available for the whole product.
11.1.8 Reproductive toxicity.
Assessment :
For this endpoint no toxicological test data is available for the whole product.
11.1.9 Specific target organ toxicity-Single exposure 9.
Assessment :
For this endpoint no toxicological test data is available for the whole product.
11.1.10 Specific target organ toxicity-Repeated exposure.
Assessment :
For this endpoint no toxicological test data is available for the whole product.
11.1.11 Aspiration hazard.
Assessment :
Based on the physical-Chemical properties of the product no aspiration hazard must be expected.

11.1.12 Endocrine disrupting properties.

The substance/Mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57 (f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.1.13 Further toxicological information.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other information : None known.

Other information : May cause skin irritation at prolonged/repeated contact with the product.

12. ECOLOGICAL INFORMATION

12.1 Toxicity.

Assessment :

Evaluation on basis of physical-Chemical properties : No expected damaging effects to aquatic organisms. According to current knowledge adverse effects on water purification plants are not expected.

12.2 Persistence and degradability.

Assessment :

Contact with water liberates methanol and silanol and/or siloxanol-compounds. Methanol is readily biodegradable. Silicone content : biologically not degradable. Elimination by adsorption to activated sludge.

Data on substances :

Product of hydrolysis (Methanol) :

Methanol is readily biodegradable.

12.3 Bioaccumulative potential.

Assessment :

Bioaccumulation is not expected to occur.

12.4 Mobility in soil.

Assessment :

No adverse effects expected.

12.5 Results of PBT and vPvB assessment.

No data available.

12.6 Endocrine disrupting properties.

The substance/Mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57 (f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects.

None known.

13. DISPOSAL CONSIDERATIONS

13.1 Product disposal.

Recommendation :

Material that can not be used, reprocessed or recycled should be disposed of in accordance with federal, state, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

13.2 Packaging disposal.
Recommendation :
Completely discharge containers (No tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/State/Federal regulations. Uncleaned packaging should betreated with the same precautions as the material.

14. TRANSPORTATION AND SHIPPING DATA

14.1 THAI DOT.
Valuation : Not regulated for transport.
14.2 USA DOT.
Valuation : Not regulated for transport.

15. REGULATIRY INFORMATION

15.1 Not hazardous product in accordance with thai national laws or transportation regulation.
(Hazardous Materials Information System-HMIS RATING)
TSCA SNUR (Significant New Use Rule) :
This material is subject to a TSCA 5 (e) Consent Order. It must only be used and distributed according to the terms of the order (Or Significant New Use Rule). Restriction : For commercial or industrial use only. If it is applied as an aerosol, APF 25 respiratory protection is required.
Not allowed for use in consumer or Do-It-Yourself (DIY) retail products.
TSCA 12 (b) Export Notification :

Chemical name	CAS No.	Reporting required under TSCA
Silsesquioxanes, Me, ethoxy-terminated, reaction products with polypropylene glycol	115341-02-1	One time export notification under TSCA 5 (e) required.
Siloxanes and silicones, di-Me, hydroxy-terminated	70131-67-8	One time export notification under TSCA 5 (e) required.
Quartz (Silica Sand)	14808-60-7	One time export notification under TSCA 5 (e) required.

CERCLA Regulated Chemicals :
This material does not contain any CERCLA regulated chemicals.
SARA 302 EHS Chemicals :
This material does not contain any SARA extremely hazardous substances.
SARA 311/312 Hazard Class :
Skin corrosion or irritation. Specific target organ toxicity (Single or repeated exposure).
SARA 313 Chemicals :
This material does not contain any SARA 313 chemicals above de minimus levels.
HAPS (Hazardous Air Pollutants) :

Chemical name	CAS No.	Upper limit (%)
Methanol	67-56-1	<=0.5000

16. OTHER INFORMATION

16.1 Additional information :

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200).This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This SDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

Biosaver restricts the use of its products inside the human body or in contact with bodily fluids and mucosa. For further details please review our Health Care Policy on www.biosaver.co
Biosaver may cancel any delivery obligation(s) if the Health Care Policy is not observed.

16.2 Glossary of Terms :

ACGIH	:	American Conference of Governmental Industrial Hygienists.
DOT	:	Department of Transportation.
hPa.	:	Hectopascals.
mPa*s	:	Milli Pascal-Seconds.
OSHA	:	Occupational Safety and Health Administration.
PEL	:	Permissible Exposure Limit.
ppm	:	Parts per Million.
SARA	:	Superfund Amendments and Reauthorization Act.
STEL	:	Short Term Exposure Limit.
TSCA	:	Toxic Substances Control Act.
TWA	:	Time Weighted Average.

Common name	Flash point determination methods
Tagliabue (Tag) closed cup	ASTM D56
Cleveland open cup	ASTM D92, DIN 51376, ISO 2592
Pensky-Martens closed cup	ASTM D93, DIN 51758, ISO 2719
Setaflash or Rapid closed cup	ASTM D3278, DIN 55680, ISO 3679
Abel-Pensky closed cup	DIN 51755

16.3 Conversion table :

Pressure	:	1 hPa.*0.75=1 mm. Hg.=1 torr; 1 bar=1000 hPa.
Viscosity	:	1 mPa.*s=1 centipoise (cP).

Disclaimer : The data shown in this SDS is not warrantee because the condition of use are above our control. Additionally, we will not respondse any injury to customer of third persons which may caused by incorrect use of the product or even follow the safety procedure.