

SAFETY DATA SHEET

According to OSHA Hazcom Standard 29 CFR 1910.1200

BIOSEAL KB

Date of issue: 2013-07-01

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Version: 1.1

1. IDENTIFICATION

A. Product name

- BIOSEAL KB

B. Recommended use and restriction on use

- General use : Adhesives, sealants
- Restriction on use : Use according to purpose

C. Manufacturer / Supplier / Distributor information

- Company name : Zered Inc.
- Address : 22-42 129TH STREET COLLEGE POINT, NY 11356
- Emergency telephone number : 718-689-6746

2. HAZARD IDENTIFICATION

A. GHS Classification

- Skin corrosion/irritation : Category2
- Serious eye damage/irritation : Category2
- Carcinogenicity : Category1B
- Specific target organ toxicity(Repeated exposure) : Category1

B. GHS label elements

○ Hazard symbols



○ Signal words

- Danger

○ Hazard statements

- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H350 May cause cancer
- H372 Causes damage to organs through prolonged or repeated exposure

○ Precautionary statements

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

2) Response

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.

3) Storage

- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification

- Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | Trade names and Synonyms | CAS No. | Content(%) |
|---|--|------------|------------|
| Distillates (petroleum), hydrotreated middle | Distillates, petroleum, hydrotreated middle ; Hydrotreated petroleum middle distillates ; Hydrotreated middle distillates (petroleum) ; Hydrotreated middle petroleum distillates ; | 64742-46-7 | 15 ~ 20 |
| N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine | 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- ; 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- ; N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine ; Ethane-1,2-diamine, n-[3-(trimethoxysilyl)propyl]- ; (2-Aminoethyl)(3-(trimethoxysilyl)propyl)amine ; (Trimethoxysilylpropyl)ethylenediamine ; g-(2-Aminoethyl)aminopropyltrimethoxysilane ; g-(Ethylenediamino)propyltrimethoxysilane ; 3-(2-Aminoethyl)aminopropyltrimethoxysilane ; 3-(N-Aminoethyl)aminopropyltrimethoxysilane ; 3-(Trimethoxysilyl)propylethylenedia | 1760-24-3 | 0.5 ~ 0.8 |
| (±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole | Propiconazole | 60207-90-1 | 0.1 ~ 0.2 |

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contaminated clothing, shoes and isolate.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

C. Inhalation contact

- Take specific treatment if needed.
- When exposed to large amounts of steam and mist, move to fresh air.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Avoid use of water jet for extinguishing
- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

B. Specific hazards arising from the chemical

- Causes damage to organs through prolonged or repeated exposure
- Causes serious eye irritation
- Causes skin irritation
- May cause cancer

C. Special protective actions for firefighters

- Avoid inhalation of materials or combustion by-products.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Keep unauthorized personnel out.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment

- Move container to safe area from the leak area.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.

B. Environmental precautions

- If large amounts have been spilled, inform the relevant authorities.
- Prevent runoff and contact with waterways, drains or sewers.

C. Methods and materials for containment and cleaning up

- Appropriate container for disposal of spilled material collected.
- Disposal of waste shall be in compliance with the Wastes Control Act
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid contact with incompatible materials.
- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.

B. Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Check regularly for leaks.
- Do not apply any physical shock to container.
- Do not apply direct heat.
- Do not use damaged containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- ACGIH TLV
 - Not applicable
- OSHA PEL
 - Not applicable

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

- Respiratory protection
 - Consider warning properties before use.
 - Respiratory protection is ranked in order from minimum to maximum.
- Eye protection
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Hand protection
 - Wear appropriate chemical resistant glove.
- Skin protection
 - Wear appropriate chemical resistant protective clothing.
- Others
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---------------|
| A. Appearance | |
| - Appearance | Not available |
| - Color | colored |
| B. Odor | Not available |
| C. Odor threshold | Not available |
| D. pH | Not available |
| E. Melting point/Freezing point | Not available |
| F. Initial Boiling Point/Boiling Ranges | Not available |
| G. Flash point | Not available |
| H. Evaporation rate | Not available |
| I. Flammability(solid, gas) | Not available |
| J. Upper/Lower Flammability or explosive limits | Not available |
| K. Vapour pressure | Not available |
| L. Solubility | Not available |
| M. Vapour density | Not available |
| N. Specific gravity(Relative density) | Not available |
| O. Partition coefficient of n-octanol/water | Not available |
| P. Autoignition temperature | Not available |
| Q. Decomposition temperature | Not available |
| R. Viscosity | Not available |
| S. Molecular weight | Not available |

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with incompatible materials and condition.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- Respiratory tracts
 - Not available
- Oral
 - Not available
- Eye-Skin
 - Causes skin irritation

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- Acute toxicity

* Oral

- Product (ATEmix) : >5000mg/kg
- [Distillates (petroleum), hydrotreated middle] : LD50 > 5000 mg/kg Rat (OECD Guideline 401 (Acute Oral Toxicity), GLP)(ECHA)
- [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : LD50 2400 mg/kg Rat (OECD TG 401) (OECD SIDS)
- [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : LD50 300 ~ 2000 mg/kg Rat (EU Harmonized) (ECHA)

* Dermal

- Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
- [Distillates (petroleum), hydrotreated middle] : LD50 > 2000 mg/kg Rabbit (OECD Guideline 402 (Acute Dermal Toxicity),GLP)(ECHA)
- [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : LD50 16000 mg/kg Rabbit (OECD SIDS)
- [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : LD50 > 4000 mg/kg Rat

* Inhalation

- Product (ATEmix) : Not available
- [Distillates (petroleum), hydrotreated middle] : Aerosol LC50 4.6 mg/ℓ 4 hr Rat (OECD Guideline 403, GLP)(ECHA)
- [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : Aerosol LC50 1.49~2.44 mg/L 4 hr Rat (OECD TG 403, GLP) (ECHA)

- Skin corrosion/irritation
 - Causes skin irritation
- Serious eye damage/irritation
 - Causes serious eye irritation
- Respiratory sensitization
 - Not available
- Skin sensitization
 - Not available
- Carcinogenicity
 - * IARC
 - Not available
 - * OSHA
 - Not available
 - * ACGIH
 - Not available
 - * NTP
 - Not available
 - * EU CLP
 - [Distillates (petroleum), hydrotreated middle] : Carc. 1B (Note N)
- Germ cell mutagenicity
 - Not available
- Reproductive toxicity
 - Not available
- STOT-single exposure
 - Not available
- STOT-repeated exposure
 - Causes damage to organs through prolonged or repeated exposure
- Aspiration hazard
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- Fish
 - [Distillates (petroleum), hydrotreated middle] : (Insoluble substances, water solubility 1mg/ℓ or less (Not classified in acute toxicity)) (Estimate)
 - [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : LC50 200 mg/ℓ 96 hr *Lepomis macrochirus* (Static, EPA-660/3-75-009) (SIDS)
 - [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : LC50 0.83 mg/ℓ 96 hr (Rainbow trout) NLM;HSDB
- Crustaceans
 - [Distillates (petroleum), hydrotreated middle] : (Not classified, Regulation EC No. 1272/2008, non-biodegradable, water solubility is less than 1mg/L, Not classified as acute aquatic toxicity. water solubility: 0.002866 EPISUITE)
 - [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : EC50 90 mg/ℓ 48 hr *Daphnia magna* (Static, OECD TG 202) (SIDS)
 - [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : LC50 0.51 mg/ℓ 96 hr (*Opossum shrimp*) (NLM;HSDB)
- Algae
 - [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : EC50 8.8 mg/ℓ 72 hr *Selenastrum capricornutum* (OECD TG 201) (SIDS)
 - [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : EC50 6.3 mg/ℓ 5 day (Algae) (NLM;HSDB)

B. Persistence and degradability

- Persistence
 - [Distillates (petroleum), hydrotreated middle] : 7.71 log Kow (Estimate)
- Degradability
 - [Distillates (petroleum), hydrotreated middle] : non-biodegradable

C. Bioaccumulative potential

- Bioaccumulative potential
 - [Distillates (petroleum), hydrotreated middle] : BCF 1516 (L/kg wet-wt) (Estimate)
- Biodegradation
 - [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : 39 % 28 d (OECD SIDS)

D. Mobility in soil

- [Distillates (petroleum), hydrotreated middle] : non-biodegradable, water solubility is less than 1mg/L, Not classified as acute aquatic toxicity. water solubility: 0.002866 (EPISUITE)

E. Other adverse effects

- [Distillates (petroleum), hydrotreated middle] : fish: NOEC(Rainbow trout) = 10 mg/L/96hr
- [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : Acute aquatic cat.1, Chronic aquatic cat.1 (M=1) (EU Harmonized)

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG CODE/IATA DGR Packing group

- Not applicable

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Air transport(IATA): Not subject to IATA regulations.
- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- POPs Management Law
 - [Distillates (petroleum), hydrotreated middle] : Not applicable
 - [N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine] : Not applicable
 - [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : Not applicable
- Information of EU Classification
 - * Classification
 - [Distillates (petroleum), hydrotreated middle] : H350
 - [(±)-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole] : H302,H317,H360,H400,H410
- U.S. Federal regulations
 - * OSHA PROCESS SAFETY (29CFR1910.119)
 - Not applicable
 - * CERCLA Section 103 (40CFR302.4)
 - Not applicable
 - * EPCRA Section 302 (40CFR355.30)
 - Not applicable
 - * EPCRA Section 304 (40CFR355.40)
 - Not applicable
 - * EPCRA Section 313 (40CFR372.65)
 - Not applicable
- Rotterdam Convention listed ingredients
 - Not applicable
- Stockholm Convention listed ingredients
 - Not applicable
- Montreal Protocol listed ingredients
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for

purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2013-07-01

C. Revision number and Last date revised

- 1 times, 2024-02-19

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).