

SAFETY DATA SHEET

BARUN

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Version: R0001.0003

1. IDENTIFICATION

A. Product name

-BARUN

B. Recommended use and restriction on use

- General use : Buinding interior & exterior mid base coat
- Restriction on use : Not available

C. Manufacturer / Supplier / Distributor information

o Manufacturer information

- Company name : TERRACO KOREA
- Address : 518-13 SIGOK-RI, SONG-HAK-MYUN, CHE-CHEN CITY, CHUNG-BOOK, KOREA
- Dept. : TERRACO KOREA R&D
- Telephone number : 82-043-645-8814
- Emergency telephone number : 82-043-645-8814
- Fax number : 82-043-645-8840
- E-mail address : terraco@terraco.co.kr

o Supplier/Distributor information

- Company name : TORO LIFE Co., Ltd
- Address : 386-22, Wanju-Ro, Yongjin-Eup, Wanju-Gun, Jeollabuk-Do, KOREA
- Telephone number : 070-4047-4564
- Emergency telephone number : 02-1644-4562
- Fax number : 02-6008-1703
- E-mail address : tororo@torolife.com

2. HAZARD IDENTIFICATION

A. GHS Classification

- Skin corrosion/irritation : Category2
- Serious eye damage/irritation : Category1
- Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)
- Aspiration hazard : Category1

B. GHS label elements

o Hazard symbols



o Signal words

- Danger

o Hazard statements

- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation
- H318 Causes serious eye damage
- H335 May cause respiratory irritation.

o Precautionary statements

1) Prevention

- P261 Avoid breathing dust/fume.
- P264 Wash hands thoroughly after handling.

- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

2) Response

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P331 Do NOT induce vomiting.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.

3) Storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- 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 : (NFPA Classification)

o NFPA grade (0 ~ 4 level)

- Health : 3, Flammability : 0, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Limestone	-	1317-65-3	65-75
Portland cement, chemicals	-	65997-15-1	20-30
Alumina cement, chemicals	-	65997-16-2	1-10
other	-	-	0.1-3

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.
- 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.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Wash thoroughly after handling.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.

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.
- If swallowed, large amounts of water to drink and do not induce vomiting.

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.

5. FIREFIGHTING MEASURES**A. Suitable (Unsuitable) extinguishing media**

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

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Move containers from fire area, if you can do without the risk.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Keep containers cool with water spray.
- Fine powder may cause ignition.

6. ACCIDENTAL RELEASE MEASURES**A. Personal precautions, protective equipment and emergency procedures**

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Avoid dust formation.
- Moist with water to prevent dust scattering.
- Avoid skin contact and inhalation.

B. Environmental precautions

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

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Dust spills : Cover dust spills with plastic sheet or waterproof cloth to minimize spreading and avoid contact with water.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- For disposal of spilled material in appropriate containers collected and clear surface.

7. HANDLING AND STORAGE**A. Precautions for safe handling**

- Avoid direct physical contact.
- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Minimize occurrence of dust and accumulation.'

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not apply any physical shock to container.
- Keep sealed when not in use.
- No open fire.
- Prevent static electricity and keep away from combustible materials or heat sources.
- Collected them in sealed containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- **ACGIH TLV**
 - [Portland cement, chemicals] : TWA 1 mg/m³, Respirable Particulate Matter (containing no asbestos and <1% crystalline silica)
- **OSHA PEL**
 - [Limestone]: 15 mg/m³ (Total dust), 5 mg/m³ (Respirable fraction)
 - [Portland cement, chemicals]: 15 mg/m³ (Total dust), 5 mg/m³ (Respirable fraction)

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

C. Individual protection measures, such as personal protective equipment

- **Respiratory protection**
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
 - Respiratory protection is ranked in order from minimum to maximum.
 - Consider warning properties before use.
 - Dust, mist, fume-purifying respiratory protection
 - Any air-purifying respirator with a corpuscle filter of high efficiency
 - Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
 - Self-contained breathing apparatus with a corpuscle filter of high efficiency
 - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- **Eye protection**
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- **Hand protection**
 - Wear appropriate glove.
- **Skin protection**
 - Wear appropriate clothing.
- **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Solid(Powder)
- Color	White
B. Odor	Odorless
C. Odor threshold	Not applicable
D. pH	10-12
E. Melting point/Freezing point	Not applicable
F. Initial Boiling Point/Boiling Ranges	Not applicable
G. Flash point	Not applicable
H. Evaporation rate	Not applicable
I. Flammability(solid, gas)	Not applicable
J. Upper/Lower Flammability or explosive limits	Not applicable
K. Vapour pressure	Not applicable
L. Solubility	Not applicable
M. Vapour density	Not applicable
N. Specific gravity(Relative density)	1.06
O. Partition coefficient of n-octanol/water	Not applicable
P. Autoignition temperature	Not applicable
Q. Decomposition temperature	Not applicable
R. Viscosity	Not applicable
S. Molecular weight	Not applicable

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

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)**
 - May be fatal if swallowed and enters airways
 - May cause respiratory irritation.
- **(Oral)**
 - Not available
- **(Eye·Skin)**
 - Causes serious eye damage
 - 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
 - [Cellulose, 2-hydroxypropyl methyl ester] : LD50 > 10000 mg/kg
 - * **Dermal**
 - Not available
 - * **Inhalation**
 - Not available
- **Skin corrosion/irritation**
 - Causes skin irritation
- **Serious eye damage/irritation**
 - Causes serious eye damage
- **Respiratory sensitization**
 - Not available
- **Skin sensitization**
 - Not available
- **Carcinogenicity**
 - * **IARC**
 - Not available
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - [Portland cement, chemicals] : A4
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- **Germ cell mutagenicity**
 - Not available
- **Reproductive toxicity**
 - Not available
- **STOT-single exposure**

- May cause respiratory irritation.
- **STOT-repeated exposure**
 - Not available
- **Aspiration hazard**
 - May be fatal if swallowed and enters airways

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - [Cellulose, 2-hydroxypropyl methyl ester] : LC50 2540000000 mg/l 96 hr (Estimate)
- **Crustaceans**
 - [Cellulose, 2-hydroxypropyl methyl ester] : EC50 1640000000 mg/l 48 hr (Estimate)
- **Algae**
 - [Cellulose, 2-hydroxypropyl methyl ester] : EC50 675000000 mg/l 96 hr (Estimate)

B. Persistence and degradability

- **Persistence**
 - [Cellulose, 2-hydroxypropyl methyl ester] : log Kow -5.30 (Estimate)
- **Degradability**
 - Not available

C. Bioaccumulative potential

- **Bioaccumulative potential**
 - [Cellulose, 2-hydroxypropyl methyl ester] : BCF 3.162 (Estimate)
- **Biodegradation**
 - Not available

D. Mobility in soil

- Not available

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat sepatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- 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

- 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
- Air transport(IATA): Not subject to IATA regulations.

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- **POPs Management Law**
 - Not applicable
- **Information of EU Classification**
 - * **Classification**
 - Not applicable
- **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

- 2018-07-11

C. Revision number and Last date revised

- 2 times, 2018-07-11

D. Other

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

