

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

1-1. Product identifier	Closed-cell Backer rod
1-2. Identification fo the Supplier	
Name	HANSUNG HANALON CO.,LTD.
Address	653-10 Yuram-ri, Paltan-myeon, Hwaseong-si Gyeonggi-do, SEOUL 445-913 KOREA
Emergency phone number	+ 82-31-366-3190
Fax	+ 82-31-366-3198~9
Web site	www.hanalon.com

2. HAZARDS IDENTIFICATION

2-1. GHS classification of the substance/mixture and any national or regional

GHS classification	- Carcinogenicity : Category 1 - Specific target organ toxicity (Single exposure) : Category 3 (Respiratory irritation)
Any national or regional	Not applicable

2-2. GHS label elements, including precautionary statements

2-2-1. Symbols



2-2-2. Signal word

Danger

2-2-3. Hazard statements

H335 May cause respiratory irritation

H350 May cause cancer

2-2-4. Precautionary statements

Prevention	P201 Obtain special instruction before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/fume/mist. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P312 Call a POISON CENTER/doctor if you feel unwell. P304+P340 IF INHALED : Remove person to fresh air and keep comfortable for breathing. P308+P313 IF exposed or concerned : Get medical advice/attention.

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Storage	P405	Store locked up.
	P403+P233	Store in a well-ventilated place.
		Keep container tightly closed.
Disposal	P501	Dispose of contents/container to REGULATORY.

2-3. Other hazards which do not result in classification

NFPA

POLYETHYLENE	- Health : 1 - Fire : 1 - Reaction : 0
BUTANE	- Health : 1 - Fire : 4 - Reaction : 0
ISO-BUTANE	- Health : 0 - Fire : 4 - Reaction : 0
Talc (Containing no asbestos fibers)	- Health : 1 - Fire : 0 - Reaction : 0
GLYCERYL MONOSTEARATE	- Health : 1 - Fire : 1 - Reaction : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	Synonyms (Common name)	Identification Number	Concentration
POLYETHYLENE	Ethene, homopolymer	CAS No. 9002-88-4	91.11%
BUTANE	-	CAS No. 106-97-8	4.97%
ISO BUTANE	2-METHYL PROPANE	CAS No. 75-28-5	2.13%
Talc (Containing no asbestos fibers)	Talc	CAS No. 14807-96-6	1.09%
GLYCERYL MONOSTEARATE	Octadecanoic acid, monoester with 1,2,3-propanetriol	CAS No. 31566-3-1	0.7%

4. FIRST-AID MEASURES

4-1. Eye contact

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- If eye irritation persists : Get medical advice/attention.

- IF IN EYES : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

4-2. Skin contact

- If skin irritation occurs : Get medical advice/attention.

- Call a POISON CENTER/doctor if you feel unwell.

- Take off contaminated clothing and wash it before reuse.

- Wash with water and soap.

- IF ON SKIN (or hair) : Take off immediately all contaminated clothing.

Rinse skin with water/shower.

4-3. Inhalation

- IF exposed or concerned : Get medical advice/attention.

- IF INHALED : Remove person to fresh air and keep comfortable for breathing.

4-4. Ingestion

- IF SWALLOWED : Immediately call a POISON CENTER/doctor.

- Rinse the mouth.

4-5. Indication of immediate medical attention and special treatment needed

- Notify to medical team or managers, and do appropriate measures.

5. FIRE-FIGHTING MEASURES

5-1. Suitable (and unsuitable) extinguishing media

- Small/normal fire : Alcohol-resistant foam, dry chemical, water, carbon dioxide, dry sand

- Large fire : Water spray/fog, fire fighting foam

- Extinguishment by smothering : Dry sand or soil

- Unsuitable extinguishing media : No data available

5-2. Specific hazards arising from the chemical

- Can not be ignited easily.

- Non-flammable. But May occur corrosive or toxic gases in fire-emergency.

5-3. Special precautions for fire-fighters

- Rescuers need to note the personal protective equipment.

- Leave the area and extinguish fire in safe range.

- Avoid release to the environment.

- If not danger, remove containers.

- Extinguish fire in maximum range or use automatic fire apparatus.

- Cool containers exposed to fire with water.

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- Leave from tanks if high-sounds or discolorations are found in power-operated relief valve.
- 5-4. Special protective equipment for fire-fighters
 - Chemical resisted quipment for fire-fighter.

6. ACCIDENTAL RELEASE MEASURES

- 6-1. Personal precautions, protective equipment and emergency procedures
 - Cleaning up immediately, and follow the precaution.
 - If not danger, stop to leak.
 - If no protective quipment, do not touch exposure material and container.
 - Avoid breathing dust/fume/mist.
- 6-2. Environmental precautions
 - Do not let products flow in waterway, drain basement, and sealed room.
- 6-3. Methods and materials for containment and cleaning up
 - Clean up with cleaner and water.

7. HANDLING AND STORAGE

- 7-1. Precautions for safe handling
 - Notice precautions of MSDS/Label after empty container.
 - Handling and storage with care.
 - Do not contact with skin for a long time.
 - Do not handle until all safety precautions have been read and understood.
 - Notice the engineering management and personal protection.
 - Avoid breathing dust/fume/mist.
 - Wash hand thoroughly after handling.
 - Do not eat, drink or SMOKE when using this product.
 - Handling and storage in outdoor or well-ventilated place.

Protective equipment : Chemical resisted respiratory protection, protective gloves.
- 7-2. Conditions for safe storage, including any incompatibilities
 - Do not eat, drink or SMOKE when using this product.
 - Keep container tightly closed in well-ventilated area.

Storage temperature : Room-temperature

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8-1. Control paramenters

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BUTANE	The regulation of Korea	- TWA : 800 ppm 1,900 mg/m ³
	ACGIH	- TWA : 1,000 ppm
	Biological limit values	No data available
ISO BUTANE	The regulation of Korea	No data available
	ACGIH	- TWA : 1,000 ppm
	Biological limit values	No data available
Talc (Containing no asbestos fibers)	The regulation of Korea	- TWA : 6 mg/m ³ Soapstone (total mists)
		- TWA : 3 mg/m ³ Soapstone (inhaled mists)
		- TWA : 2 mg/m ³ Talc
		(Containing no asbestos fibers)
	ACGIH	- TWA : 2 mg/m ³ Inhaled talc
		(Containing no asbestos fibers)
	Biological limit values	No data available
8-2.	Appropriate engineering controls	
	- Keep air pollutions under exposure standard when occur fume or mist in handle.	
8-3.	Individual protection measures (personal protective equipment)	
	Respiratory protection	- Chemical resisted respiratory protection
	Eye protection	No data available
	Hand protection	No data available
	Skin and body protection	No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

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|-------|---|-------------------|
| 9-1. | Appearance | |
| | Physical state | Solid |
| | Color | White |
| 9-2. | Odor | Odorless |
| 9-3. | Odor threshold | No data available |
| 9-4. | pH | No data available |
| 9-5. | Melting point/freezing point | No data available |
| 9-6. | Initial boiling point and boiling range | No data available |
| 9-7. | Flash point | No data available |
| 9-8. | Evaporation rate | No data available |
| 9-9. | Flammability (solid, gas) | No data available |
| 9-10. | Upper flammability or explosive limits | No data available |
| 9-11. | Lower flammability or explosive limits | No data available |

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9-12. Vapour pressure	No data available
9-13. Vapour density	No data available
9-14. Relative density	Apparent density : 30.8 kg/m ³
9-15. Solubility	No data available
9-16. Partition coefficient :n-octanol/water	No data available
9-17. Auto-ignition temperature	No data available
9-18. Decomposition temperature	No data available
9-19. Viscosity	No data available
9-20. Molecular weight	No data available

10. STABILITY AND REACTIVITY

- 10-1. Chemical stability and possibility of hazardous reactions
- Can not be ignited easily.
 - Non-flammable. But May occur corrosive or toxic gases in fire-emergency.
- 10-2. Conditions to avoid
- No data available
- 10-3. Incompatible materials
- Reducing materials
- 10-4. Hazardous decomposition products
- Irritation, corrosive gases may be occurred in fire-emergency.

11. TOXICOLOGICAL INFORMATION

- 11-1. Information on the likely routes of exposure

POLYETHYLENE	- May be harmful for human.
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BUTANE	- May be harmful for human.
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ISO BUTANE	- May be harmful for human.
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- 11-2. Health hazards information

- 11-2-1. Acute toxicity

POLYETHYLENE	- Oral : LD50 > 8,000 mg/kg Rat ※ Source : RTECS - Dermal : No data available - Inhalation : mists LC50 75.5 mg/L 30 min Rat ※ Source : RTECS
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BUTANE	- Oral : No data available
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	- Dermal : No data available	
	- Inhalation : LC50 277 374 ppm 4 h Rat	
ISO BUTANE	- Oral : No data available	
	- Dermal : No data available	
	- Inhalation : LC50 658 mg/L 4 h Rat	
11-2-2. Skin corrosion/irritation		
Talc (Containing no asbestos fibers)	- 30 µg/ 3 days (human) : light-irritation ※ Source : RTECS	
11-2-3. Eye damage/irritation		
BUTANE	- Non-irritation (rabbit)	
ISO BUTANE	- Non-irritation (rabbit)	
Talc (Containing no asbestos fibers)	- Rabbit/non-irritation ※ Source : IUCLID	
GLYCERYL MONOSTEARATE	- Eye irritation ※ Source : Seton compliance resource center	
11-2-4. Sensitization - Respiratory		No data available
11-2-5. Sensitization - Skin		No data available
11-2-6. Germcell mutagenicity		
BUTANE	- Bacterial Reverse Mutation Test : Negative	
ISO BUTANE	- Bacterial Reverse Mutation Test : Negative	
Talc (Containing no asbestos fibers)	- Salmonellar : Negative ※ Source : NLM	
11-2-7. Carcinogenicity		
POLYETHYLENE	- IARC : Group 3	
BUTANE	- Ministry of Employment and Labor : 1A (Only more than 0.1% Butadiene) - EU CLP : Carc. 1A	
ISO BUTANE	- EU CLP : Carc. 1A	
Talc (Containing no asbestos fibers)	- IARC : Group 3 - ACGIH : A4	
11-2-8. Toxic to reproduction		No data available
11-2-9. Specific target organ toxicity (Single exposure)		
POLYETHYLENE	- In inhaled(mists), lung inflammation occurred(mouse). ※ Source : Kochetkova, 1971	
BUTANE	- In high concentration, may be occurred anesthesia or repress	

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to central nervous system.

11-2-10. Specific target organ toxicity (Repeated exposure)	No data available
11-2-11. Aspiration Hazard	No data available
11-3. Other adverse effects	
No data available	

12. ECOLOGICAL INFORMATION

12-1. Ecotoxicity

Talc (Containing no asbestos fibers)

- Fish : LC50 > 10,000 mg/L 24 h Brachydanio rerio
- ※ Source : IUCLID
- Crustacean : No data available
- Algae : No data available

GLYCERYL MONOSTEARATE

- Fish : No data available
- Crustacean : LC50 0.018 mg/L 48 h
(Eaters/Water Solubility at 25 °C (mg/L) : 0.012 3)
- ※ Source : ECOSAR
- Algae : EC50 0.017 mg/L 96 h
(Eaters/Water Solubility at 25 °C (mg/L) : 0.012 3)
- ※ Source : ECOSAR

12-2. Persistence and degradability

ISO BUTANE

- Persistence : log Kow 2.76

Talc (Containing no asbestos fibers)

- Persistence : log Kow -1.50
- ※ Source : QSAR

GLYCERYL MONOSTEARATE

- Persistence : log 6.62
- ※ Source : NLM

12-3. Bioaccumulative potential

BUTANE

- Biodegradability : 65.7 (%) 35 days

GLYCERYL MONOSTEARATE

- Biodegradability : BCF (1.57 ~ 1.97)
- Biodegradability : 65.7 (%) 35 days

12-4. Mobility in soil

No data available

13. DISPOSAL CONSIDERATIONS

13-1. Methods of disposal

- Follow federal, state and local regulations.

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13-2. Caution of disposal

- Consider the notice in regulations.

14. TRANSPORT INFORMATION

14-1. IMDG Code

BUTANE	- UN NO. 1011 - BUTANE - Classification. 2.1 - Packing Group : - - Environmentally hazardous substance : No data available - Precautions in fire-emergency : F-D - Precautions in exposure : S-U
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ISO BUTANE	- UN NO. 1069 - ISO BUTANE - Classification. 2.2 - Packing Group : - - Environmentally hazardous substance : No data available - Precautions in fire-emergency : F-D - Precautions in exposure : S-U
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14-2. Other transport regulations

DRG	No data available
RID	No data available
ADR	No data available
AND	No data available

14-3. Special precautions which a user needs to be aware of, or needs to comply with

No data available

15. REGULATORY INFORMATION

15-1. Korea Industrial Safety and Health Act

BUTANE	- Exposure standard material
Talc (Containing no asbestos fibers)	- Working environment measurement (per 6 months) - Exposure standard material

15-2. Korea Toxic Chemicals Control Act No data available

15-3. Korea Hazardous Materials Safety Control Act No data available

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15-4. Korea Wastes Control Act

BUTANE	- Designated waste
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ISO BUTANE	- Designated waste
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GLYCERYL MONOSTEARATE	- Designated waste
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15-5. Other internal and foreign acts

BUTANE	- Classification result of EU : F+;R12 - Risk Phrases of EU : R12 - Safety Phrases of EU : S2, S9, S16
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ISO BUTANE	- Classification result of EU : F+;R12 - Risk Phrases of EU : R12 - Safety Phrases of EU : S2, S9, S16
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16. OTHER INFORMATION

Issued Date	April 29, 2021
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MSDS No.	01-20130805-0200E
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Revision No.	-
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Revision Date	-
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Reference	
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° This MSDS is composed in line with the Korea Occupational Safety and Health Act Article 41 to protect the health of the employees, and for documentation.

° This MSDS is composed with reference to documents and criteria provided by KOSHA.

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