

Material Safety Data Sheet

Product Name

COLD BREW OATMEAL JUICE

1. Product and company identification

1.1 Product Name	COLD BREW OATMEAL JUICE
1.2. Recommended use of the chemical and restrictions on use	
Recommended use of products :	Cosmetic ingredients
Restrictions in use:	Cosmetic
1.3 Manufacturer/Supplier/Distributor Information	
Name :	HYUNDAI BIOLAND Co., Ltd
Address :	22 Osongsaengmyeong 2-ro, Osong, Heungdeok, Cheongju, Chungbuk, 28162 Korea
Tel :	043-249-6720
Fax :	043-249-6709

2. Hazards identification

2.1 Hazard•Risk Classification Skin corrosivity/skin irritation : classification2

2.2 Label elements including precautionary statements

Symbol



Signal Words

Warning
H315 Causes irritation to the skin.

Hazard Statements

Precautionary statements

Prevention

P264 Wash the area thoroughly after handling.
P280 Wear (protective gloves·protective clothing·protective glasses·facial protection).

Response

P302+P352 If contacted, wash your hands with plenty of water.
P332+P313 If you get skin irritation, get medical action·advice.
P362+P364 Take off contaminated clothing and clean it before use.

Storage

P403+P233 Store containers tightly sealed in well ventilated areas.

Disposal

P501 (In accordance with the relevant laws) Dispose contents and containers.

1,3-Butanediol

Health

1

Fire

1

Reactivity

0

WATER

Health

0

Fire

0

Reactivity

0

3. Composition/Information on ingredients

INCI Name	trivial name	CAS NO.	EINECS NO.	Content(%)
Water	DIHYDROGEN OXIDE	7732-18-5	231-791-2	68.50%
Butylene Glycol	(+/-)-1,3-BUTANEDIOL	107-88-0	203-529-7	30.00%
Avena Sativa (Oat) Kernel Extract	No data	84012-26-0 (generic)	281-672-4	1.50%

4. First aid measures

4.1 Eye contact	Wash out the eyes with water for at least 20 minutes. Obtain immediate medical cares by a doctor.
4.2 Skin contact	Wash the affected areas with water for at least 20 minutes. Remove the contaminated clothing and shoes. Wash contaminated clothing and shoes before reuse. Get medical attention if skin symptoms occurred.
4.3 Inhalation	Get urgent medical attention. Move to fresh air. If the victim doesn't breathe, perform artificial respiration.
4.4 Ingestion	If you have difficulty breathing, provide oxygen. Don't feed the unconscious with your mouth. Take immediate medical action.
4.5 Indication of immediate medical attention and notes for physician	Ensure that medical personel are aware of the material(s) involved and take precautions to protect themselves. Do not administer adrenaline.

5. Fire-Fighting measures

5.1 Suitable (and unsuitable) extinguishing media	Small fire: dried sand, dried chemical agents, alcohol resistant foam, water spray, general foam, CO2 (appropriate fire extinguish agent) Large fire: water spray/fog, general foam (appropriate fire extinguish agent) High-pressure water infusion (inappropriate fire extinguish agent)
5.2 Specific hazards arising from the chemical	May ignite by heat, spark and flame. Containers may explode when heated. Some can be burn but don't ignite easily. May cause irritant and toxic gas in fire. Inhalation of substances can be harmful. Some liquids can produce steams that cause dizziness and suffocation.
5.3 Special protective equipment and precautions for fire-fighters	1,3-Butanediol The rescuer should wear proper protective gear. Use fire extinguishers keeping a safe distance from the area. Be careful, as it may be molten and transported. Dig a ditch to dispose of the firewater, lock it up, and do not let the matter dissipate. Move the container from the fire area if it is not dangerous.

WATER

In case of fire in the tank, extinguish it at the maximum distance or use unmanned fire extinguishing equipment.
 In case of fire in the tank, cool the container with plenty of water even after fire has been extinguished.
 If there is a high noise from the pressure release system or the tank discolors in case of a fire in the tank, immediately step aside.

In case of fire in the tank, step away from the tank in flames.

In case of tank fire, use unmanned fire extinguisher in case of large fire, and if it is impossible, leave the tank and let it burn.

In case of fire in the tank, cool the container with plenty of water even after fire has been extinguished.
 If there is a high noise from the pressure release system or the tank discolors in case of a fire in the tank, immediately step aside.

In case of fire in the tank, step away from the tank in flames.

Containers may heat up, explode, and dissipate water may burn the skin and eyes.

6. Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
 - Remove all sources of ignition.
 - Stop the leak if it's not dangerous.
 - Pay attention to the substances and conditions that should be avoided.
 - Ventilate the contaminated area.
 - Do not touch or walk on exposed objects.
 - Prevent dust from forming.
 - Do not enter the space without proper protective equipment, such as air respirators or transmit masks, until adequate air (oxygen concentration 18 to 23.5%) is obtained.
- 6.2 Environmental precautions and protective procedures
 - Prevent inflow into waterways, sewers, basement, and airtight spaces.
- 6.3 Methods and materials for containment and cleaning up
 - Wash the contaminated area with plenty of water in case of a small leak.
 - In case of small leakage, absorb sand and non-flammable substances and place them in a container.
 - Make a ditch far from the liquid leakage in case of a large leak.
 - Put the leak in a clean, dry container with a clean shovel, close it loosely, and move the container from the spillage area.
 - Cover with plastic sheets to prevent spread and keep dry in case of powder leakage.

7. Handling and storage

- 7.1 Precautions for safe handling
 - Pay attention to the substances and conditions that should be avoided.
 - Wash thoroughly after handling.
 - Refer to engineering management and personal protection.
 - Watch out for high temperatures.
 - Be careful not to spill the substance, as it may reduce the oxygen concentration in the air and cause suffocation in the enclosed area.
 - Check the oxygen concentration before entering the area because there is a risk of loss of consciousness or death due to lack of oxygen in the high concentration state of high concentration.

As liquid rapidly evaporates during a material spill and replaces air, there is a risk of serious suffocation when in a sealed area, so be careful not to spill.

Be careful not to spill the substance because it reaches the harmful concentration of this gas from the air very quickly.

Do not spray as it can reach harmful concentrations of air particles very quickly.

Keep it below 20°C as foreign substances evaporate somewhat slowly at 20°C to reach harmful concentrations.

Check the oxygen level before entering the area.

Do not spray or spray as it will evaporate faster if sprayed or sprayed.

Store in the shade.

Store in a cool, dry place.

Pay attention to the substances and conditions that should be avoided.

Use as Packaged ,room temperature storage (1~30 °C)

7.2 Conditions for safe storage
(including any incompatibilities)

8. Exposure controls & personal protection

8.1 Control parameters (e.g. occupational exposure limit values, biological limit values)

Domestic regulations

1,3-Butanediol No data available

WATER No data available

ACGIH regulations

1,3-Butanediol No data available

WATER No data available

Biological exposure criteria

1,3-Butanediol No data available

WATER No data available

Other exposure criteria

1,3-Butanediol No data available

WATER No data available

8.2 Appropriate engineering management

Use process quarantine, local ventilation or keep the air level below the exposure standard.

8.3 Personal protective gear

Wear insulated gloves.

Respiratory protection

1,3-Butanediol

Wear respirators certified by the Occupational Safety and Health Agency to suit the physical and chemical characteristics of the gas/liquids exposed.

For gas/liquid materials, the following respiratory protection is recommended:

– Isolated full-face gas mask (for organic compounds (for acid gas for acid gas) or isolated, whereas either a full-face gas mask (for acid gas for organic gas) or a direct-converged, full-face gas mask (for acid gas for organic compounds) or aelectric gas mask (for toxic gas).

In case of lack of oxygen (< 19.5%), wear a transmitter mask or self-contained air respirator.

WATER

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For gas/liquid materials, the following respiratory protection is recommended:
 – Isolated full-face gas mask (for organic compounds (for acid gas for acid gas) or isolated, whereas either a full-face gas mask (for acid gas for organic gas) or a direct-converged, full-face gas mask (for acid gas for organic compounds) or aelectric gas mask (for toxic gas).

In case of lack of oxygen (< 19.5%), wear a transmitter mask or self-contained air respirator.

Eye protection

Wear airy goggles to protect your eyes against particulate matter that may irritate your eyes or cause other health problems.

Install emergency cleaning (shower-type) and cleaning facilities in a location that is easily accessible to workers.

Wear closed type goggles to protect your eyes against gases that may irritate your eyes or cause other health problems.

Install emergency cleaning (shower-type) and cleaning facilities in a location that is easily accessible to workers.

Wear protective goggles or airy goggles to protect your eyes against steam that may irritate your eyes or cause other health problems.

Install emergency cleaning (shower-type) and cleaning facilities in a location that is easily accessible to workers.

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Wear protective goggles or airy protective goggles to protect your eyes against steam that may irritate your eyes or cause other health problems.

Install emergency cleaning (shower-type) and cleaning facilities in a location that is easily accessible to workers.

Wear following protective goggles if that may irritate your eyes or causes other health problems. – gas type: closed type protective goggles – steam : protective goggles or airy protective goggles – particulate matter: airy protective goggles.

Install emergency cleaning (shower-type) and cleaning facilities in a location that is easily accessible to workers.

Hand protection

Wear appropriate protective gloves considering the physical and chemical properties of the chemical.

Body protection

Wear protective clothing of appropriate material considering the physical and chemical properties of the chemical.

9. Physical and chemical properties

a) Appearance	Colorless ~ Light yellow liquid
b) Odor:	Typical
c) Odor threshold:	No data available
d) pH:	6.0 ~ 8.0
e) Melting point/Freezing point:	No data available
f) Initial boiling point and Boiling range:	No data available
g) Flash point:	No data available
h) Evaporation rate:	No data available
i) Flammability (solid, gas):	No data available
j) Upper/lower flammability or Explosive limits	No data available

k) Vapor pressure:	No data available
l) Water solubility:	No data available
m) Vapor density:	No data available
n) Relative density:	1.000 ~ 1.040
o) Partition coefficient: n -octanol/water:	No data available
p) Auto-ignition temperature :	No data available
q) Decomposition temperature:	No data available
r) Viscosity:	No data available
s) Molecular weight:	No data available

1,3-Butanediol

a) Appearance	
form	Liquid (viscosity, hygroscopicity)
color etc	Colorless
b) Odor:	Odorless
c) Odor threshold:	No data available
d) pH:	6.1 (@ 20 °C, concentration : 1 w/w %)
e) Melting point/Freezing point:	-50 °C
f) Initial boiling point and Boiling range:	207.5 °C
g) Flash point:	121 °C
h) Evaporation rate:	No data available
i) Flammability (solid, gas):	Inflammability
j) Upper/lower flammability or Explosive limits	- / -
k) Vapor pressure:	0.0201 mmHg (@ 25 °C)
l) Water solubility:	1000000 mg/l (@ 25 °C)
m) Vapor density:	3.2
n) Relative density:	1.0059 (@ 20 °C)
o) Partition coefficient: n -octanol/water:	(-0.29) (estimated value)
p) Auto-ignition temperature :	394 °C
q) Decomposition temperature:	No data available
r) Viscosity:	24.6 cSt (@ 50 °C; 96 cSt @ 25 °C)
s) Molecular weight:	90.14

WATER

a) Appearance	
form	Liquid
color etc	colorless (clear)
b) Odor:	Odorless
c) Odor threshold:	No data available
d) pH:	7
e) Melting point/Freezing point:	0 °C
f) Initial boiling point and Boiling range:	100 °C
g) Flash point:	No data available
h) Evaporation rate:	No data available
i) Flammability (solid, gas):	
j) Upper/lower flammability or Explosive limits	(- / -) (not applicable)

k) Vapor pressure:	23.8 mmHg (25°C)
l) Water solubility:	100 g/100mℓ
m) Vapor density:	No data available
n) Relative density:	1
o) Partition coefficient: n -octanol/water:	-1.38
p) Auto-ignition temperature :	No data available
q) Decomposition temperature:	No data available
r) Viscosity:	No data available
s) Molecular weight:	18.02

10. Stability and reactivity

10.1 Chemical stability and possibility of hazardous reactions

	Containers may explode when heated.
1,3-Butanediol	Some can be burn but do not ignite easily. Non-inflammable, the substance itself does not burn, but it may decompose during heating and cause corrosive/toxic fumes. May cause irritant, corrosive and toxic gas in fire.
WATER	Stable under room temperature and normal pressure conditions. Containers may explode when heated.

10.2 Conditions to avoid (e.g. static discharge, shock or vibration, etc)

1,3-Butanediol	A source of ignition, such as heat, spark, flame, etc
WATER	Heat, pollution

10.3 Incompatible materials

1,3-Butanediol	Combustible material, reducing substance
WATER	Water reactive substance

10.4 Hazardous decomposition products

1,3-Butanediol	May cause irritating and highly toxic gas by thermal decomposition or combustion during burning. Irritant, corrosive, toxic gas
WATER	No data available

11. Toxicological information

11.1 Information on the likely routes of exposure

1,3-Butanediol	Can cause irritation when exposed. No data available Can be absorbed into the body by inhalation. Can be absorbed into the body by inhalation and digestive system. Through skin, digestive system, can be absorb into the body by inhalation of aerosol. Can be absorbed into the body by steam inhalation. Can be absorbed into the body by inhalation, skin, digestive system.
WATER	No data available Can be absorbed into the body by inhalation. Can be absorbed into the body by inhalation and digestive system.

Through skin, digestive system, can be absorb into the body by inhalation of aerosol.

Can be absorbed into the body by steam inhalation.

Can be absorbed into the body by inhalation, skin, digestive system.

11.2 Health hazards information

Acute toxic

- Oral

1,3-Butanediol	LD50 18610 mg/kg Rat
WATER	LD50 90000 mg/kg Rat (LD50 > 90 ml/kg (Rat))

- Percutaneous

1,3-Butanediol	LD50 > 20000 mg/kg Rabbit
WATER	No data available

- Inhalation

1,3-Butanediol	(No data.)
WATER	No data available

- Skin corrosive/irritant

1,3-Butanediol	Rabbit/low irritation
WATER	Not applicable

- Serious eye damage/eye irritation

1,3-Butanediol	Rabbit/low irritation
WATER	Not applicable

- Respiratory sensitization

1,3-Butanediol	No data available
WATER	Not applicable

- Skin sensitization

1,3-Butanediol	Human / No effect
WATER	Not applicable

- Carcinogenicity

Industrial Safety and Health Act

1,3-Butanediol	No data available
WATER	No data available

Employment and Labor Notice

1,3-Butanediol	No data available
WATER	No data available

IARC

1,3-Butanediol	No data available
WATER	No data available

OSHA

1,3-Butanediol	No data available
WATER	No data available

ACGIH

1,3-Butanediol	No data available
WATER	No data available

NTP

1,3-Butanediol	No data available
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WATER	No data available
EU CLP	
1,3-Butanediol	No data available
WATER	No data available
- Germ Cell Mutagenicity	
1,3-Butanediol	No data available
WATER	No data available
- Reproductive toxicity	
1,3-Butanediol	Rat / No effect
WATER	No data available
- Specific target organ toxicity (single exposure)	
1,3-Butanediol	No data available
WATER	No data available
- Specific target organ toxicity (repeated exposure)	
1,3-Butanediol	Rat / 2yr / Rat / No effect
WATER	No data
- Aspiration hazard	
1,3-Butanediol	No data available
WATER	No data available
- Other Hazardous Effects	
1,3-Butanediol	No data available
WATER	No data available

12. Ecological information

12.1 Aquatic and terrestrial ecotoxicity

Fish

1,3-Butanediol LC50 9493.724 mg/l 96 hr

WATER No data available

Crustaceans

1,3-Butanediol LC50 8684.336 mg/l 48 hr

WATER No data available

Birds

1,3-Butanediol EC50 4758.681 mg/l 96 hr

WATER No data available

12.2 Persistence and degradability

Persistence

1,3-Butanediol log Kow (-0.29) (estimated value)

WATER log Kow -1.38

Degradeability

1,3-Butanediol (No data available)

WATER No data available

12.3 Bioaccumulative potential

Accumulative

1,3-Butanediol	(No data available)
WATER	No data available
Biodegradability	
1,3-Butanediol	(No data available)
WATER	No data available
12.4 Mobility in soil	
1,3-Butanediol	No data available
WATER	No data available
12.5 Other Hazardous Effects	
1,3-Butanediol	No data available
WATER	No data available

13. Disposal considerations

13.1 Disposal method

1,3-Butanediol	1) If it's possible to separate the oil from the water, pre-treatment by oil and water separation method.
WATER	Consider the precautions specified in the regulations that Waste Management Act.

13.2 Disposal precaution

1,3-Butanediol	Consider the precautions specified in the regulations that Waste Management Act.
WATER	Consider the precautions specified in the regulations that Waste Management Act.

14. Transport information

14.1 UN number

1,3-Butanediol	No transport risk material UN classification information.
WATER	No transport risk material UN classification information.

14.2 UN proper shipping name

1,3-Butanediol	Not applicable
WATER	Not applicable

14.3 Transport hazard class

1,3-Butanediol	Not applicable
WATER	Not applicable

14.4 Container class

1,3-Butanediol	Not applicable
WATER	Not applicable

14.5 Marine pollution

1,3-Butanediol	No data available
WATER	No data available

14.6 Special precaution which a user must know about transport

Emergency measures in case of fire

1,3-Butanediol	Not applicable
WATER	Not applicable

Emergency measures in case of leakage

1,3-Butanediol	Not applicable
WATER	Not applicable

15. Regulatory information

15.1 Industrial Safety and Health Act

1,3-Butanediol	No data available
WATER	No data available

15.2 Chemical Control Act

1,3-Butanediol	No data available
WATER	No data available

15.3 Dangerous Material Safety Control Act

1,3-Butanediol	Class4, Type 3 petroleums (Water soluble liquid) 4000ℓ
WATER	No data available

15.4 Wastes Management Act

1,3-Butanediol	Designated waste
WATER	No data available

15.5 Other requirements in domestic and other countries

Domestic regulation

Other domestic regulations

1,3-Butanediol	Not applicable
WATER	Not applicable

External regulation

U.S. Management Information (OSHA Regulation)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (CERCLA Regulation)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (EPCRA 302 Regulation)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (EPCRA 304 Regulation)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (EPCRA 313 Regulation)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (Rotterdam Convention Material)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (Stockholm Convention Material)

1,3-Butanediol	Not applicable
WATER	Not applicable

U.S. Management Information (Montreal Protocol Material)

1,3-Butanediol	Not applicable
WATER	Not applicable
EU Classification information (Defined classification result)	
1,3-Butanediol	Not applicable
WATER	Not applicable
EU Classification information (Risk statements)	
1,3-Butanediol	Not applicable
WATER	Not applicable
EU Classification information (Safety statements)	
1,3-Butanediol	Not applicable
WATER	Not applicable

16. Other information

A. Source of data

1,3-Butanediol
 ICSC(Form)
 ICSC(Color)
 HSDB(Odor)
 ECHA(pH)
 ChemIDplus(Melting point/Freezing point)
 ICSC(Initial boiling point and Boiling range)
 ICSC(Flash point)
 ICSC(Flammability (solid, gas))
 ChemIDplus(Vapor pressure)
 ChemIDplus(Water solubility)
 ICSC(Vapor density)
 HSDB(Viscosity)
 ChemIDplus(Partition coefficient: n -octanol/water: (Kow))
 ICSC(Auto-ignition temperature)
 HSDB(Viscosity)
 ChemIDplus(Molecular weight)
 IUCLID,NLM(Oral)
 NLM,THOMSON(Percutaneous)
 IUCLID(Skin corrosive/irritant)
 IUCLID(Serious eye damage/eye irritation)
 IUCLID(Skin sensitization)
 IUCLID(reproductive toxicity)
 IUCLID (Specific target organ toxicity (repeated exposure))
 ECOSAR(Fish)
 ECOSAR(Crustaceans)
 ECOSAR(Bird)
 ChemIDplus(Persistence)
 WATER
 NLM

- B. First preparation date 2022-03-24
- C. Number of revisions and the final revision date of revision
Number of revisions 0
Final revision date of revision 2022-03-24
- D. Expiry date: Expiration date : -3 years without use, -1 year after first use
- E. Other

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.

(Sign )
Quality Control Manager : Ki Taeg Kim