



MATERIAL SAFETY DATA SHEET

DAEHEUNG CHEMICAL CO., LTD. www.dhcbond.co.kr



Product Name	DH-2000(NH) NEW
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1. Product and Company Identification

- A. Product Name DH-2000(NH) NEW
- B. Recommended use of the chemical and restrictions on use
- Recommended use of the chemical Use of the PVC film (interior film) bonding, as a primer.
 - Restrictions on use of the product Do not use for purposes other than adhesive.
- C. Manufacturer/Supplier/Distributor Information
- Name DAEHEUNG CHEMICAL CO., LTD.
 - Address 68, Sandan-ro 64beon-gil, Pyeongtaek-si, Gyeonggi-do, Korea
 - Emergency phone number 82-31-668-1424

2. Hazards identification

A. Hazard-Risk Classification Skin sensitization : category 1

B. Label elements including precautionary statements

- Symbol



- Signal Word Warning
- Hazard-Risk Statement H317 May cause an allergic skin reaction
- Precautionary Statement
 - Prevention
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray
 - P272 Contaminated work clothing should not be allowed out of the workplace
 - P280 Wear protective gloves/protective clothing/eye protection/face protection
 - Response
 - P302+P352 IF ON SKIN: Wash with soap and water
 - P321 Specific treatment
 - P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
 - P363 Wash contaminated clothing before reuse
 - Storage
 - Store at room temperature not to freeze because it is a water-based product.
 - Disposal
 - P501 Dispose of contents and container in accordance with local regulations.

C. Other Hazard-Risk which are not included in the classification criteria (e.g. dust explosion hazard)

	WATER	EVA	ROSIN	EMULSION
Health	0	1	2	No data available
Fire	0	1	1	No data available
Reactivity	0	0	0	No data available

※ VOCs(Volatile Organic Compounds) not detected.

3. Composition/Information on ingredients

Chemical Name	Other name	CAS number	Content(%)
ETHYLENEVINYL ACETATE COPOLYMER	EVA;	24937-78-8	5~15
ROSIN; ESTER WITH 1,2,3-PROPANETRIOL	FORAL 85;	8050-31-5	30~40
EMULSION	COPOLYMER OF STYRENE AND 1,3-BUTADIENE	70857-14-6	15~25
WATER	DIHYDROGEN OXIDE;	7732-18-5	30~40

4. First aid measures

- A. Eye contact
Immediately flush eyes with plenty of water for at least 20 minutes.
Get medical attention if irritation develops or persists.
- B. Skin contact
For skin contact, wash thoroughly with soap and water for at least 20 minutes.
Remove and isolate contaminated clothing and shoes.
Completely decontaminate clothing, shoes, and leather goods before reuse.
Get medical attention if irritation develops or persists.
- C. Inhalation
Seek emergency medical attention.
Move to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
- D. Ingestion
Do not give an unconscious person anything by mouth.
Get medical attention if irritation develops or persists.

5. Fire-Fighting measures

- A. Suitable (and unsuitable) extinguishing media
Small fires : Dry sand, dry chemical, alcohol foam, water spray, normal foam, CO₂ (Suitable extinguishing media)
Large fires : water spray, normal foam (Suitable extinguishing media)
pulsed infusion (Unsuitable extinguishing media)
- B. hazards arising from the chemical (e.g. nature of any hazardous combustion products)
Containers may explode when heated.
Some of these materials may burn, but most do not ignite readily.
Inhalation of the substance may be harmful.
- C. Special protective equipment and precautions for fire-fighters
Cool containers with water spray until well after the fire is out.
Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
Stay away from the ends of tanks.
Avoid inhalation of material or combustion by-products.
Move containers from fire area if you can do it without risk.
Dike far ahead of liquid spill for later disposal.

6. Accidental release measures

- A. Personal precautions, protective equipment and emergency procedures
Avoid breathing dust/fume/gas/mist/vapours/spray
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Stop leak if you can do it without risk.
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- B. Environmental precautions and protective procedures
Soak up with inert absorbent material(e.g. sand, silica gel, acid binder, universal binder, sawdust).

C. Methods and materials for containment and cleaning up

Wash contaminated property(e.g. automobiles) quickly before the material dries.

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Use clean non-sparking tools to collect absorbed material.

Dike far ahead of liquid spill for later disposal.

7. Handling and storage

A. Precautions for safe handling

Store at room temperature. (Above 10°C)

After use, Should be sealed to prevent the surface film.

Wash thoroughly after handling.

All equipment used when handling the product must be grounded.

Keep cool. Protect from sunlight.

B. Conditions for safe storage (including any incompatibilities)

Store at room temperature. don't be frozen.

Store in closed containers.

Prevent inoculation with microorganisms. Minimize exposure to air.

Do not eat, drink or smoke when using this product.

8. Exposure controls & personal protection

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

Occupational exposure limit values

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

ACGIH limit values

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

Biological limit values

Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	No data available
Emulsion	No data available

B. Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

C. Personal protective equipment

- Respiratory protection	wear suitable respiratory protective equipment.
- Eye protection	Wear chemical safety goggles.
- Hands protection	Use appropriate chemical protective gloves when handling.
- Body protection	Wear protective clothing.
- Hygienic notice	Install wash facilities near the workplace. (10% NaOH)

9. Physical and chemical properties

A. Appearance

Physical state	Viscous liquid
Color	light grey

B. Odour	Synthetic resin odour
C. Odour threshold	No data available
D. pH	6~8
E. Melting point/freezing point	Not Applicable
F. Initial boiling point and boiling range	Above 100 °C
G. Flashing point	Not Applicable
H. Evaporation rate	No data available
I. Flammability(solid, gas)	No data available
J. Upper/lower flammability or explosive limits	Not Applicable
K. Vapor pressure	No data available
L. Solubility	Dispersible in water
M. Vapor density	Above 1.0
N. Relative density	Above 1.0
O Partition coefficient:n-octanol/water	No data available
P. Auto-ignition temperature	Not Applicable
Q. Decomposition temperature	No data available
R. Viscosity	6,000~7,000 cps (25 °C)
S. Formula mass	No data available

10. Stability and reactivity

A. Chemical stability and possibility of hazardous reactions	Stable under normal conditions Containers may explode when heated. Inhalation of the substance may be harmful Non-flammable, the substance itself is not burned but decomposes on heating and may cause corrosive / toxic fumes
B. Conditions to avoid	Avoid the fire, spark, flame, UV, X-RAY and other ignition sources
C. Incompatible materials	Irritant, toxic gas Flammable materials Water reactive materials
D. Hazardous decomposition products	Fire may produce irritating, corrosive and/or toxic gases.

11. Toxicological information

A. Information on the likely routes of exposure	No data available
B. Health hazards information	
Acute toxic	
Oral	
Ethylene-vinyl acetate copolymer	No data available
Water	LD50 90000 mg/kg Rat (LD50 > 90 ml/kg (Rat))
Rosin	LD50 > 2000 mg/kg Rat
Emulsion	No data available
Dermal	
Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available
Inhalation	
Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

Skin Corrosion/Irritation

Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	Skin irritation with rabbit results in moderate irritation.(GLP : yes)
Emulsion	No data available

Serious eye damage/eye irritation

Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	Skin irritation with rabbit results in moderate irritation.(GLP : yes)
Emulsion	No data available

Respiratory sensitization

Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	No data available
Emulsion	No data available

Skin sensitization

Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	Negative test results using guinea pig(GLP : yes)
Emulsion	No data available

Carcinogenicity

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

IARC

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

OSHA

Ethylenevinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

ACGIH

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

NTP

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

EU CLP

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

Germ cell mutagenicity	
Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	Microbial return mutation test result Negative
Emulsion	No data available
Reproductive toxicity	
Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	No data available
Emulsion	No data available
Specific target organ toxicity (single exposure)	
Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	No data available
Emulsion	No data available
Specific target organ toxicity (repeated exposure)	
Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	No data available
Emulsion	No data available
Aspiration hazard	
Ethylene-vinyl acetate copolymer	No data available
Water	Not Applicable
Rosin	No data available
Emulsion	No data available

12. Ecological information

A. Aquatic and terrestrial ecotoxicity

- Fish

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	LC50 > 400 mg/ℓ 96 hr
Emulsion	No data available

- Shellfish

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	EC50 259 mg/ℓ 48 hr
Emulsion	No data available

- Birds

Ethylene-vinyl acetate copolymer	No data available
Water	No data available
Rosin	EC50 > 1000 mg/ℓ 72 hr
Emulsion	No data available

B. Persistence and degradability

- Persistence

Ethylene-vinyl acetate copolymer	Not Applicable
Water	log Kow -1.38
Rosin	log Kow < 1.5
Emulsion	No data available

– Resolvability	
Ethylene–vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

C. Bioaccumulative potential

– Concentration	
Ethylene–vinyl acetate copolymer	112 ug/L 2.1 hour(s) BCF (Residue) Duckweed (Lemna minor) 60 ug/L.
Water	No data available
Rosin	No data available
Emulsion	No data available

– Bio resolvability	
Ethylene–vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

D. Mobility in soil

Ethylene–vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

E. Other adverse effects

Ethylene–vinyl acetate copolymer	No data available
Water	No data available
Rosin	No data available
Emulsion	No data available

13. Disposal considerations

A. Disposal method	Dispose of contents and container in accordance with local regulations.
B. Disposal precaution	Dispose of contents container according to the regulations.

14. Transport information

A. Land transport(USDOT)	Not classified as a dangerous good under transport regulations
B. Sea transport(IMDG)	Not classified as a dangerous good under transport regulations
C. Air transport(IATA/ICAO)	Not classified as a dangerous good under transport regulations
D. TRANSPORT Notice	Store at room temperature not to freeze because it is a water–based product.

15. Regulatory information

A. Industrial Safety and Health Act	No data available
B. Chemical Control Act	No data available
C. Dangerous Material Safety Control Act	Not Applicable(Not regulated as a hazardous material)
D. Wastes Management Act	Designated Wastes
E. Other requirements in domestic and other countries	
– Domestic regulation	
Persistent Organic Pollutant Control Act	
Ethylene–vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

- Other countries

USA(OSHA)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA(CERCLA)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA(EPCRA 302)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA(EPCRA 304)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA(EPCRA 313)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA (Rotterdam Convention material)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA (Stockholm Convention material)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

USA (Substance Montreal Protocol)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

EU (Classification)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

EU (Risk Phrases)

Ethylene-vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable

Emulsion	Not Applicable
EU (Safety Phrases)	
Ethylene–vinyl acetate copolymer	Not Applicable
Water	Not Applicable
Rosin	Not Applicable
Emulsion	Not Applicable

16. Other information

A. Information source and references

Source of data : Korea Occupational Safety and Health Agency (KOSHA)>

Ethylene–vinyl acetate copolymer

Water

NLM

Rosin

IUCLID(Skin corrosive/irritant)

IUCLID(Serious eye damage/eye irritation)

IUCLID(Skin sensitization)

IUCLID(Germ Cell Mutagenicity)

IUCLID(Fish)

IUCLID(Shellfish)

IUCLID(Birds)

IUCLID(Persistence)

B. Issuing date September 1, 2017

C. Revision number and date 0

D. Others