

SAFETY DATA SHEET

Section 1: Identification

Product identifier used on the label;

Product name: GOHSENOL™ EG-type

Other means of identification;

No information

Recommended use of the chemical and restrictions on use;

Recommended use: Binding agents, Adhesives, Dispersing agent, Coatings

Restrictions on use: No information

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party;

Name: THE NIPPON SYNTHETIC CHEMICAL INDUSTRY CO., LTD.

Department in Charge: Gohsenol Dept., Basic Products Segment

Address: OSAKA FUKOKU SEIMEI BUILDING, 2-4,
Komatsubara-cho, Kita-ku, Osaka 530-0018, Japan

Telephone number: +81-6-7711-5430

Fax number: +81-6-7711-5452

e-mail address: #ngc-msds-pvoh@mail.nichigo.co.jp

Emergency phone number

+81-6-7711-5430

Section 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards

Combustible Dust

Health Hazards

Reproductive toxicity: Category1

Specific target organs/systemic toxicity following single exposure: Category 2 (eyes, central nervous system)

Environmental Hazards

Not classified

Other Hazards

No information

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbol(s)



Signal word

Hazard Statement(s)

Danger

May damage fertility or the unborn child.
May cause damage to organs (eyes, central nervous system).
May form combustible dust concentrations in the air.

Precautionary Statement(s)

[Prevention]

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use personal protective equipment as required.
If exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

[Emergency response]

[Storage]

[Disposal]

Description of any hazards not otherwise classified;

It may cause dust explosion.
Dust can form an explosive mixture in air.

Ingredient with unknown acute toxicity in the mixture

Not applicable

Section 3: Composition/information on ingredients

Compositions (contents of the product)

Chemical name	CAS No.	Concentration/concentration ranges (wt %)
Polyvinyl alcohol	25213-24-5	≥ 93.5
Methanol	67-56-1	< 3.0
Methyl Acetate	79-20-9	< 1.0

Section 4: First-aid measures

Necessary first-aid measures by relevant routes of exposure;

IF INHALED

If inhaled, remove to fresh air.
Get medical attention.

IF ON SKIN

In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

IF IN EYES	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
IF SWALLOWED	If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed;

May damage fertility or the unborn child.
May cause damage to organs (eyes, central nervous system).

Indication of immediate medical attention and special treatment needed, if necessary;

Treat symptomatically and supportively.

Section 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media;

Suitable extinguishing media:

Use water mist or dry chemical powder.

Unsuitable extinguishing media

Applying direct water may be dangerous because fire may expand to surroundings.

Specific hazards arising from the chemical;

General caution; powdered materials may cause dust explosions under certain conditions.

Special protective equipment and precautions for fire-fighters;

Cut off any ignition sources and extinguish with an appropriate agent.
Cool the surrounding tank and the buildings with direct water jet to avoid risk of fire spreading.
Take action from windward.
Keep out except responsible personnel.
Move container to a safe area if it can be done without risk.

Section 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures;

Keep out except responsible personnel.
Wear suitable protective equipment described in Section 8: Exposure controls/personal protection.
Spills on floors may produce a slippery surface. Immediately clean up and dispose the spilled materials.
Avoid release into the environment because product may cause local effects.

Methods and materials for containment and cleaning up;

Sweep up scattered materials or vacuum them using a vacuum cleaner so as not to cause dust then collect them into an empty container.
This product becomes pasty with water, careful not to slip.
If this product is an aqueous solution, after removing by adsorbing the adsorption material (sawdust,

earth, sand, waste cloth, etc.), wipe well the rest with waste cloth, etc.

Do not eat or drink near handling and storage locations.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent to flowing into drains, sewers, basements or closed areas.

Section 7: Handling and storage

Precautions for safe handling

Protective measures:

Wear suitable protective equipment or install the equipment of local ventilation/general ventilation when working with molten state at high temperature.

Because of high hygroscopicity, after opening heat seal again, or use up the whole quantity.

If the fine powder of the resin occurs, set up local exhaust system, etc. because of dust explosion.

Install appropriate equipment and wear suitable protective apparatus described in Section 8: Exposure controls/personal protection.

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

Avoid the generation of dust.

Advice on general occupational hygiene:

Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Technical measures:

In the storage area, install adequate light and ventilation systems to handle hazardous materials.

Take precautionary measures against static discharge.

Incompatible materials:

Keep away oxidants, acids and bases.

Conditions for safe storage:

Carefully handled so that the container is not damaged.

Store hermetically in dry, cool, dark place with adequate ventilation.

Because of high hygroscopicity, avoid exposure from rain and use heat-seal.

Packing material:

Because of high hygroscopic resin, use moisture-proof packaging material.

Section 8: Exposure controls/personal protection

Occupational Exposure Limits;

OSHA PEL	200 ppm (Methyl alcohol)
ACGIH TLV-TWA (2014)	200 ppm (Methanol)
AGGIH TLV-TWA (2012)	200 ppm (Methyl acetate)
ACGIH TLV-STEL (2014)	250 ppm (Methanol)
ACGIH TLV-STEL (2012)	250 ppm (Methyl acetate)

Appropriate engineering controls;

In a work place where dusts generate, ensure to use sealed instrument or local ventilation.

Individual protection measures, such as personal protective equipment;

Respiratory protection	Wear appropriate protective mask or air aspirator.
Hand protection	Wear protective rubber gloves, leather gloves or work gloves.
Eye protection	Wear safety glasses or goggles.
Skin and body protection	Wear rubber boots and apron.

Section 9: Physical and chemical properties

Appearance (physical state, color, etc.)	Pale yellow powder, granular
Odor	Slight acetic acid odor
Odor threshold	No information
pH	5.0-7.0
Melting point/freezing point	150 - 230 °C
Initial boiling point and boiling range	No information
Flash point	>70°C (Seta closed cup)
Evaporation rate	No information
Flammability (solid, gas)	No information
Upper/lower flammability or explosive limits	35 g/m ³ (Lower explosion limit)
Vapor pressure	No information
Vapor density	No information
Relative density	1.19-1.31
Solubility (ies)	Water: soluble, General solvent: insoluble or sparingly soluble
Partition coefficient: <i>n</i> -octanol/water	No information
Auto-ignition temperature	440 °C
Decomposition temperature	200°C or more
Viscosity	No information

Other information

Bulk density: 0.3-0.75

Section 10: Stability and reactivity

Reactivity

Stable under normal handling condition.

Chemical stability

Stable at room temperature. Decomposition becomes noticeable at high temperature (200°C or more).

Possibility of hazardous reactions

General caution; powdered materials may cause dust explosions under certain conditions.

Conditions to avoid

High-temperature and humidity

Incompatible materials

Keep away oxidants, acids and bases.

Hazardous decomposition products

In case of fire, toxic decomposition products (carbon monoxide) may be generated.

Section 11: Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics;

Information on product:

No information

Information on ingredients:

Polyvinyl alcohol

Acute toxicity (oral):	Rat LD ₅₀ > 2,000 mg/kg
Acute toxicity (dermal):	Rat LD ₅₀ > 2,000 mg/kg
Skin corrosion/irritation:	In patch test of skin of rabbits, slightly irritation was observed.
Specific target organ toxicity repeated exposure:	In the administration study in rats for 25 days (5% aqueous solution (salt concentration 0.9%), 1 mL), hypertension, kidney, liver, cardiac hypertrophy was observed.

Methanol

Acute toxicity (oral):	Rat LD ₅₀ = 6,200 mg/kg
Acute toxicity (dermal):	Rabbit LD ₅₀ = 15,800 mg/kg
Acute toxicity (inhalation: vapors):	Rat LC ₅₀ > 22,500 ppm (4h conversion value: 31,500 ppm)
Serious eye damage/irritation:	In a rabbit Draize test, mean scores of conjunctivitis were judged to be 2 and higher (2.1) at 24, 48 and 72-hour after installation. Chemosis (score of 2.00) observed up to 4-hour had decreased significantly by 72-hour (score of 0.50).
Reproductive toxicity:	In a developmental toxicity test by inhalation exposure to mice during organogenesis period, fetal resorptions and exencephaly were observed. Additionally, similar effects including cleft palate were reported in other inhalation and oral exposure tests.
Specific target organ toxicity single exposure:	The symptoms of acute poisoning from the substance include CNS-depression. Formate accumulates in the blood during a latency period which leads to metabolic acidosis, visual impairment or even total blindness, headaches, dizziness, nausea, vomiting, Kussmaul breathing and coma. In some cases death is the final outcome. The effects of single exposures by inhalation include narcosis.
Specific target organ toxicity repeated exposure:	There is a report that the most noted health consequence of longer-term exposure to lower levels of methanol is a broad range of ocular effects, and that cases of chronic poisoning

from occupational exposure to methanol were manifested by bilateral blindness. Additionally, there is the report that cases of chronic poisoning from repeated exposure to methanol vapour are manifested by headache, giddiness, insomnia, and gastric disturbances.

Delayed and immediate effects and also chronic effects from short- and long-term exposure;

May damage fertility or the unborn child

May cause damage to organs (eyes, central nervous system).

Numerical measures of toxicity (such as acute toxicity estimates);

Not applicable

Whether the chemical is listed in the NTP Report on Carcinogens or has been found to be a potential carcinogen in the IARC Monographs, or by OSHA;

IARC: Not listed

NTP Report: Not listed

OSHA: Not listed

Section 12: Ecological information

Ecotoxicity:

Information on product: No information

Information on ingredients:

Polyvinyl alcohol

Aquatic acute toxicity: Oryzias latipes(Orange-red killifish) 48h-LC₅₀ > 1,000 mg/L

Aquatic chronic toxicity: No information

Methanol

Aquatic acute toxicity: Fish (Bluegill) 96h-LC₅₀ = 15,400 mg/L

Crustacea (Brown shrimp) 96h-LC₅₀ = 1,340 mg/L

Aquatic chronic toxicity: No information

Persistence and degradability:

Information on product: Result: Biodegradable

Information on ingredients:

Polyvinyl alcohol

Biodegraded by sludge containing such as Pseudomonas.

Methanol

Biodegradable substance

Bioaccumulative potential:

Information on product: No information

Information on ingredients:

Polyvinyl alcohol

Not or low bioaccumulative

Mobility in soil:

Information on product: No information

Information on ingredients: No information

Other adverse effects:

The product should not be allowed to enter drains, water courses or the soil.

Section 13: Disposal considerations

Waste treatment methods

Dispose of waste in accordance with applicable local, regional and international regulations and standards.

When disposing, consult to a certificated waste trader or local offices if they deal with the waste.

Used container should be recycled after cleaning or dispose of in compliance with related laws and local regulations.

Contents should be removed completely when dispose of empty containers.

Section 14: Transport information

UN number Not applicable

UN proper shipping name Not applicable

Transport hazard class(es) Not applicable

Packing group Not applicable

Environmental hazards Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and IBC code

Not applicable

Special precautions for user

When transporting, avoid direct sunlight. Confirm no leakage to containers. When loading, prevent containers from falling, dropping off or damaging. Take preventive measures of collapse.

Section 15: Regulatory information

OSHA: Hazardous chemical

TSCA inventory: Methanol are listed on the TSCA Inventory.

TSCA SNUR: Not listed

SARA Title III: Section 302 (Extremely Hazardous Substances): Not listed

Section 304 (Hazardous Substances): Not listed

Section 313 (TRI Chemicals): Methanol

Clean Air Act: This product does not contain any substances regulated as hazardous air pollutants under Section 112 of the Clean Air Act.

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act.

Section 16: Other information, including date of preparation or last revision

Update history:

Date of issue: 25th May, 2015

References:

Information of THE NIPPON SYNTHETIC CHEMICAL INDUSTRY CO., LTD.

NITE GHS classification results (2015).

ACGIH, American Conference of Governmental Industrial Hygienists (2015) TLVs and BEIs.

[Disclaimer]

This SDS has been prepared based on the best available information however, it may not be sufficient in some cases. It is user's responsibility to modify or update any contents in this SDS regarding information on hazardous properties and/or instruction for safe handling of the product when they become available. Precautionary measures in this SDS are only applicable for normal handling conditions and it is necessary to take appropriate additional measures to ensure safe handling which depend on your specific use conditions or situations.