MATERIALS SAFETY DATA SHEET

NANO COATING TECH
INNOVATIVE COATING SOLUTION FOR ALL
Nanocoatingtech.co.th

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifiers

Product name	:	Water and Dust Repellent Nano Coating Solution
Product code	:	A1-2
Brand	:	Nano Coating Tech

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Building & Construction Materials

1.3. Details of the supplier of the safety data sheet

Company	:	Nano Coating Tech Co., Ltd. 208/1 Ranong 1 road, Thanonnakornchaisri, Dusit, Bangkok 10300. Thailand (Head official)
Telephone	:	+66 828 239796

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 2), H225
Skin irritation (Category 2), H315
Specific target organ toxicity – single exposure (Category 3), Central nervous system, H336
Aspiration hazard (Category 1), H304
Hazardous to the aquatic environment – Chronic (Category 2), H411
For the full text of the H-Statements mentioned in this Section, see Section 16

2.2. Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word	Danger
Hazard statement(s)	
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.

Supplemental Hazard Statements
None

2.3. Other hazards: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

Synonyms	: Colloidal silica in Hexyl hydride Colloidal silica in Hexane	
Content	: 20%V of Colloidal silica 80%V of Hexane	
Molecular weight	: 71.9 g/mol	
CAS-No.	Colloidal silica: 7631-86-9	Hexane: 110-54-3
EC-No.	Colloidal silica: 231-545-4	Hexane: 203-777-6

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Move the affected person to fresh air. If breathing is difficult, give oxygen. Consult a physician. Hexane vapours may cause dizziness, drowsiness, and central nervous system depression.

In case of skin contact

Wash off immediately with plenty of soap and water. Remove contaminated clothing. Consult a physician if irritation persists. Prolonged or repeated exposure may cause skin dryness or cracking.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes. Remove contact lenses if present. Consult a physician if irritation persists.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention immediately. Hexane ingestion may be harmful and can cause aspiration pneumonia.

4.2. Most important symptoms and effects, both acute and delayed

- May cause central nervous system effects: dizziness, drowsiness, headache, nausea.
- Prolonged or repeated exposure may lead to neuropathy (peripheral nerve damage).
- Skin irritation and dryness.
- Eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

- Symptomatic treatment.
- In case of inhalation of high concentrations, provide oxygen and monitor for respiratory distress.
- No specific antidote available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Water spray may be used to cool containers but is not effective to extinguish flames on large spills.

5.2. Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. Vapours may form explosive mixtures with air. In case of fire, may produce carbon oxides (CO, CO_2) and low molecular weight hydrocarbons.

Vapours are heavier than air and may travel to ignition sources.

5.3. Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective clothing.

5.4. Further information

Use water spray to cool unopened containers to prevent pressure build-up. Do not allow fire-fighting water to enter drains or watercourses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Evacuate all non-essential personnel from the area.
- Remove all sources of ignition (sparks, flames, hot surfaces).
- Avoid breathing vapours; provide adequate ventilation.
- Hexane vapours are heavier than air and can accumulate in low areas, forming explosive mixtures.
- Use personal protective equipment as described in Section 8 (gloves, goggles, protective clothing, respiratory protection).

6.2. Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Do not allow product to enter drains, surface water, or soil.
- Contain any escaped material immediately to avoid environmental contamination.

6.3. Methods and materials for containment and cleaning up

- Small spills: Absorb with inert material (sand, earth, vermiculite) and collect in suitable, labeled containers for disposal.
- Large spills: Use explosion-proof pumps or wet-brushing.
- Ensure electrical equipment is explosion-proof.
- Dispose of collected material according to local regulations (see Section 13).

6.4. Reference to other sections

- See Section 7 for safe handling.
- See Section 8 for personal protection.
- See Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Avoid contact with skin and eyes.
- Avoid inhalation of vapours or mist; Hexane vapours can cause dizziness, drowsiness, and central nervous system effects.
- Keep away from sources of ignition – no smoking, sparks, open flames, or hot surfaces.
- Take measures to prevent the build-up of electrostatic charge (use grounding and bonding).
- Ensure adequate ventilation, preferably with local exhaust at points of vapour release.
- For further precautions, see Section 2.2 (Hazard identification and H/P statements).

7.2. Conditions for safe storage, including any incompatibilities

- Store in a cool, dry, well-ventilated place, away from direct sunlight and heat sources.
- Keep containers tightly closed and upright.
- Store under inert gas if possible to reduce oxidation risk.
- Hexane is highly flammable; keep away from oxidizing agents, strong acids, and halogenated compounds.
- Storage class (TRGS 510): Flammable liquids.
- Avoid storage in confined spaces where vapours could accumulate.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- Occupational exposure limits (OELs) for Hexane (n-Hexane, CAS 110-54-3):
  - ACGIH TLV (USA): 50 ppm (TWA)
  - OSHA PEL (USA): 500 ppm (ceiling)
  - EU Indicative Occupational Exposure Limit: 20 ppm (8h TWA)
- Colloidal silica: No occupational exposure limits established; treat as nuisance dust.

8.2. Exposure controls

Appropriate engineering controls

- Handle in accordance with good industrial hygiene and safety practice.
- Use local exhaust ventilation to control vapours and prevent accumulation of flammable Hexane vapours.
- Ensure explosion-proof electrical equipment in areas with vapours.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with chemical-resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 480 min

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0.2 mm
Break through time: 60 min

Body Protection

Impervious clothing, flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

If exposure exceeds limits, use air-purifying respirators with organic vapour cartridges (type ABEK, EN 14387) or full-face supplied air respirator. Ensure respirators are tested and approved under appropriate standards (NIOSH, CEN).

Control of environmental exposure

Prevent spills from entering drains, watercourses, or soil. This product is toxic to aquatic life at high concentrations; contain spills immediately.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: cleared-yellow

b) Odour	hydrocarbon-like
c) Odour Threshold	1-10 ppm
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -95 °C
f) Initial boiling point and boiling range	68-70 °C
g) Flash point	-22.0 °C - closed cup
h) Evaporation rate	3.0
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 18 %(V) Lower explosion limit: 1.2 %(V)
k) Vapour pressure	124 mmHg at 20.0 °C 150 mmHg at 25.0 °C
l) Vapour density	3.0
m) Relative density	0.655 g/mL at 20°C 0.660 g/mL at 25 °C
n) Water solubility	Practically insoluble
o) Partition coefficient: n-octanol/water	log Pow: 3.9
p) Auto-ignition temperature	225.0 °C
q) Decomposition temperature	No data available
r) Viscosity	0.30 mPa·s
s) Explosive properties	Not explosive under normal conditions.
t) Oxidizing properties	Not oxidizing

9.2. Other safety information

Surface tension 18-19 mN/m at 25.0 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction is known under normal conditions of use.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Heat, flames, sparks, static discharge, and other sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 25,000 mg/kg (A1-2)
Remarks: Central nervous system depression; may cause altered sleep time, loss of righting reflex, and somnolence.
LC50 Inhalation - Rat - 8 h - 16000 ppm (A1-2)
LD50 Dermal - Rabbit - 3,000 mg/kg (A1-2)

Skin corrosion/irritation

Skin – Rabbit (A1-2)
Result: Mild skin irritation

Serious eye damage/eye irritation

Eyes – Rabbit (A1-2)
Result: Mild eye irritation - 24 h

Respiratory or skin sensitisation

Skin – Human (A1-2)
Result: Mild skin irritation
Pulmonary cell – Human (A1-2)
Result: Passed

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity to humans. (A1-2)

Reproductive toxicity

No data available (A1-2)

Specific target organ toxicity - single exposure

Inhalation, Oral- May cause drowsiness or dizziness due to central nervous system depression. (A1-2)

Specific target organ toxicity - repeated exposure

Inhalation- Prolonged exposure may cause damage to the peripheral nervous system.(A1-2)

Aspiration hazard

May be fatal if swallowed and enters airways. (A1-2)

Additional Information

RTECS: MN9275000
Central nervous system depression, prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, Narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (A1-2)
Kidney - Irregularities - Based on Human Evidence (A1-2)

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) – 2.5 mg/l– 96h (A1-2)
Toxicity to daphnia	EC50 - Daphnia magna (Water flea) – 3.9 mg/l - 48 h (A1-2)
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae) - > 100.00 mg/l - 72 h (A1-2)

12.2. Persistence and degradability

Readily biodegradable under aerobic conditions.

12.3. Bioaccumulative potential

Bioaccumulation is possible (log Pow = 3.4).

12.4. Mobility in soil

Highly volatile; expected to have high mobility in soil. Evaporates rapidly from soil and water surfaces.

12.5. Results of PBT and vPvB assessment

This substance is not considered to be PBT or vPvB according to current regulatory criteria.

12.6. Other adverse effects

Harmful to aquatic life with long lasting effects due to volatility and narcotic effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1. UN number

ADR/RID: 1208	IMDG: 1208	IATA: 1208

14.2. UN proper shipping name

ADR/RID:	Modified Colloidal Silica

14.3. Transport hazard class(es)

ADR/RID: 3	IMDG: 3	IATA: 3

14.4. Packaging group

ADR/RID: II	IMDG: II	IATA: II

14.5. Environmental hazards

ADR/RID: No	IMDG Marine pollutant: No	IATA: No

14.6. Special precautions for user

Highly flammable liquid and vapor. Keep away from heat, sparks, open flames, and sources of ignition. Use explosion-proof equipment and take measures to prevent static discharge.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 (REACH) and Regulation (EC) No. 1272/2008 (CLP).

15.2. Chemical safety assessment

A chemical safety assessment has **not** been carried out for this substance.

SECTION 16: Other information

Disclaimer/Statement of Liability

This material is intended for industrial manufacturing only. Not for food, drug, cosmetic or consumer use. The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to its use in combination with any other material or in any process.