

Safety Data Sheet (SDS) Report

SDS Number: 240722008SHF08

Applicant: NANHAI DISPLAY LIMITED
Rooms 1318-19, Hollywood Plaza,
610 Nathan Road, Mongkok, Kowloon, HK

Issue Date: 2024-08-05

Sample Description:

The sample information was submitted and identified on client's behalf to be:

Product Name : Nano Cloaking Film
Physical State : Solid
Data Received : Jul 22, 2024
Data Reviewed : Aug 05, 2024

Service Requested:

Based on the information provided by the applicant, the Safety Data Sheet (SDS) was generated in accordance with requirements of Global Harmonized System (GHS), for details please refer to attached pages.

Authorized By:

On Behalf Of Regulatory Affairs in Intertek Testing Services Ltd., Shanghai



Anna Wang
Technical Manager

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Nano Cloaking Film

Safety Data Sheet

according to the United Nations GHS (Rev. 8, 2019)

Issue date: 08/05/2024 Revision date: 08/05/2024 Version: 1.0 SDS number: 240722008SHF08

SECTION 1: Identification

1.1. GHS Product identifier

Product form : Mixture
Product name : Nano Cloaking Film
Other identification : Product Identifier: T0F2; Product Code: B880528251

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Optical Film

1.4. Supplier's details

Applicant
NANHAI DISPLAY LIMITED
Rooms 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, HK
999077
T: 86-15902199714, 86-18916202964
joe@nhdffilm.com

Supplier
XIUYA TECHNOLOGY (SHANGHAI) CO., LTD.
Room U22, Building 3, No. 39 Linbao Road, Tinglin Town, Jinshan District, Shanghai 201505, P.R.China
201505
T: 86-21-57525589, 86-15000110024
xu.wangsuo@showyaaa.com

1.5. Emergency phone number

No additional information available

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 1A H314
Serious eye damage/eye irritation, Category 1 H318
Specific target organ toxicity – Single exposure, Category 3, H335
Respiratory tract irritation

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : May cause respiratory irritation, Causes severe skin burns and eye damage, Causes serious eye damage.

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN) :



Signal word (GHS UN) : Danger
Hazard statements (GHS UN) : H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation

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according to the United Nations GHS (Rev. 9, 2021)

Precautionary statements (GHS UN)	: P260 - Do not breathe dusts or mists. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. P264+P265 - Wash hands, forearms and face thoroughly after handling. Do not touch eyes. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/.... P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P302+P361+P354 - IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P316 - Get emergency medical help immediately. P317 - Get medical help. P319 - Get medical help if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P363 - Wash contaminated clothing before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
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2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)	CAS-No.: 25038-59-9	46 – 54
Polyvinyl alcohol	CAS-No.: 9002-89-5	21 – 25
Cellulose, triacetate	CAS-No.: 9012-09-3	14 – 17
Acrylic acid	CAS-No.: 79-10-7	8 – 10

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Acrylic acid	CAS-No.: 79-10-7	(1 ≤ C < 100) STOT SE 3; H335

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

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First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.
Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acrylic acid (79-10-7)

USA - ACGIH - Occupational Exposure Limits

Local name	Acrylic acid
ACGIH OEL TWA	2 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: Skin; A4 (Not classifiable as a Human Carcinogen)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2024

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment (EN 136/140/145)

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Solid, Roll type
Colour	: Grey, Transparent
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: Not available

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Flammability	: Not flammable.
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: 79°C
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 80°C
pH	: Not available
pH solution	: Not available
Viscosity, kinematic (calculated value) (40 °C)	: Not applicable
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.3 g/cm ³
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Solubility	: Not available
Particle size	: Not available

9.2. Data relevant with regard to physical hazard classes (supplemental)

Explosive limits	: Not applicable
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Based on available data, the hazard classification criteria are not met
Acute toxicity (dermal)	: Based on available data, the hazard classification criteria are not met
Acute toxicity (inhalation)	: Based on available data, the hazard classification criteria are not met

Polyvinyl alcohol (9002-89-5)

LD50 oral rat	23854 mg/kg (Source: NLM_CIP)
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Acrylic acid (79-10-7)

LD50 oral rat	1000 - 2000 mg/kg
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Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Based on available data, the hazard classification criteria are not met

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Germ cell mutagenicity	: Based on available data, the hazard classification criteria are not met
Carcinogenicity	: Based on available data, the hazard classification criteria are not met
Reproductive toxicity	: Based on available data, the hazard classification criteria are not met
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Based on available data, the hazard classification criteria are not met
Aspiration hazard	: Based on available data, the hazard classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Based on available data, the hazard classification criteria are not met
Hazardous to the aquatic environment, long-term (chronic)	: Based on available data, the hazard classification criteria are not met

Acrylic acid (79-10-7)

LC50 - Fish [1]	222 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static] Source: IUCLID)
EC50 - Crustacea [1]	95 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Other aquatic organisms [1]	95 mg/l Test organisms (species):
EC50 - Other aquatic organisms [2]	0.06 mg/l
EC50 72h - Algae [1]	0.04 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	0.17 mg/l (Species: Pseudokirchneriella subcapitata)

12.2. Persistence and degradability

Nano Cloaking Film

Persistence and degradability	No additional information available
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12.3. Bioaccumulative potential

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Bioaccumulative potential	No additional information available
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Acrylic acid (79-10-7)

Partition coefficient n-octanol/water (Log Pow)	0.46 (at 25 °C)
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12.4. Mobility in soil

Nano Cloaking Film

Mobility in soil	No additional information available
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Acrylic acid (79-10-7)

Mobility in soil	6 – 137 Source: ECHA
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

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Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

SECTION 14: Transport information

In accordance with UN RTDG / IMDG / IATA /

UN RTDG	IMDG	IATA
14.1. UN number		
Not applicable	3547	3547
14.2. UN Proper Shipping Name		
Not applicable	ARTICLES CONTAINING CORROSIVE SUBSTANCE, N.O.S.	Articles containing corrosive substance, n.o.s.
14.3. Transport hazard class(es)		
Not applicable	8	8
Not applicable		Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

UN RTDG

Not applicable

IMDG

Special provisions (IMDG) : 274, 391
Limited quantities (IMDG) : 0
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P006, LP03
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

IATA

PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : Forbidden
PCA max net quantity (IATA) : Forbidden
CAO packing instructions (IATA) : Forbidden
CAO max net quantity (IATA) : Forbidden
Special provisions (IATA) : A2
ERG code (IATA) : 8L

14.7. Transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Polyvinyl alcohol (9002-89-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Cellulose, triacetate (9012-09-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ISHL (Industrial Safety and Health Law)

Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (25038-59-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on ELINCS (European List of Notified Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Acrylic acid (79-10-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Poisonous and Deleterious Substances Control Law
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16: Other information

Issue date : 08/05/2024

Safety Data Sheet (SDS), India

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.