

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : MVX Anti-Microbial coat

Brand : Miracle Titanium MVX

Product Use: Antimicrobial coat

Uses as coating film for the surfaces of buildings, construction materials, various products, stainless steel, plastics and fabric textile. After coated and dried, it is utilized for the purposes of Anti-Microbial, De-odor, dirt prevention, and air purification.

Manufacturer Information: MVX Hi-Tech. Co. Ltd.	
Manufacturer Address	1-20 Takamidai 4-chome, Yahatanish ward, Kitakyushu city Japan.
Manufacturer Telephone	93- 9816229
Manufacturer Fax	93- 9816229

Emergency Phone # (For both supplier and manufacturer): +18-93- 9816229

Preparation Information: MVX Hi-Tech .Co. Ltd

In case of emergency contact toxicological information, emergency Tel +18-93- 9816229

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

This product is classified and displayed according to G H S
(World harmonization system on classification and labeling of chemical products).

- Flammable liquids (Not Flammable liquids)
- Acute Oral toxicity (Category-5)
- Acute toxicity, Inhalation (Category-5)
- Skin irritation (Category-5)
- Eye irritation (Not eye irritant)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

- Pictogram: Not dengerus
- Signal word No Danger
- Hazard statement(s) the material not contain hazard materials.
- Precautionary statement(s) Avoid breathing dust / mist / spray

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and Easy to do. Continue rinsing. Call a POISON CENTER or doctor/ physician.

HMIS CLASSIFICATION PHYSICAL HAZARDS:

POTENTIAL HEALTH EFFECTS

Inhalation > 5000 mg/kg
Skin > 5000 mg/kg
Eyes Not classified as eye irritant
Ingestion > 5000 mg/kg

HEALTH	0
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Mixture of Titanium dioxide and silver zeolite
Formula : Not available
Molecular Weight : Not available

SILVER ZINC ZEOLITE		
CAS No 130328-20-0	Skin Irrit2, Eye Irrit2, Acute Tox 4dust, No phys haz, STOT SE 3resp; H315, H319, H332, H335 Xn; R20 R36/37/38	0.1%
TITANIUM DIOXIDE		
CAS No 13463-67-7 EC No 236-675-5	Not Acute Tox, Non-Skin Irrit, No phys haz ;-	1.5%
PEROXOTITANIC ACID		0.2%
WATER		98.2 %

4. FIRST AID MEASURES

GENERAL ADVICE

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out from the area.

IF INHALED

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

IN CASE OF SKIN CONTACT

Wash off with soap and plenty of water consult a physician.

IN CASE OF EYE CONTACT

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

IF SWALLOWED

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.
Consult a physician.

5. FIREFIGHTING MEASURES

CONDITION OF FLAMMABILITY

Not Flammable in the presence of a source of ignition.

SUITABLE EXTINGUISHING MEDIA

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Flash back possible over considerable distance. Container explosion may occur under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus for firefighting if necessary.

HAZARDOUS COMBUSTION PRODUCTS

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Titanium/titanium oxides

EXPLOSION DATA – SENSITIVITY TO MECHANICAL IMPACT

Not explosion product

EXPLOSION DATA – SENSITIVITY TO STATIC DISCHARGE

Not explosion product

FURTHER INFORMATION

Keep in room temperature and avoid the direct sunlight

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Avoid contact with skin and eyes. Avoid inhalation of mist.

CONDITIONS FOR SAFE STORAGE

Handle under room temperature, protect from moisture. Store under room temperature. Keep container tightly closed in a dry and well ventilated place and avoid the directly sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

PERSONAL PROTECTIVE EQUIPMEN**RESPIRATORY PROTECTION**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

HAND PROTECTION

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

EYE 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 AND BODY PROTECTION

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, and the type of protective equipment must be selected according to the specific workplace.

HYGIENE MEASURES

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

SPECIFIC ENGINEERING CONTROLS

Use mechanical exhaust or laboratory fume hood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
COLOR	Uniform pale yellow
ODOR	No smell
pH in 1%	8.11
DENSITY	1.0114 g/mL at 19.9°C
VISCOSITY	Non-Newtonian liquid
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Auto ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	No data available
Water solubility	No data available
Partition coefficient n-octanol/water	No data available
Relative vapor density	No data available

10. STABILITY AND REACTIVITY**CHEMICAL STABILITY**

Stable under recommended storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS

No data available

CONDITIONS TO AVOID

Sunlight

MATERIALS TO AVOID

Strong oxidizing agents, Strong acids

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Titanium/titanium oxides other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION**ACUTE TOXICITY**

Ingredient	W _i	ATE _{exp}	ATE _{pe}	ATE _{i/wi}
ZEOLITE	0.01		Not indicated	
TITANIUM DIOXIDE	0.02	>10000	-	>500000
			ATE _{mixt}	>476190

ACUTE TOXICITY FOR THE PRODUCT**ORAL LD50**

LD50 Oral - rat > 5000 mg/kg

INHALATION LC50

LC50 Inhalation - rat - 4 h > 5000 mg/kg

DERMAL LD50

LD50 Dermal – rat > 5000 mg/kg

OTHER INFORMATION ON ACUTE TOXICITY

No data available

SKIN CORROSION / IRRITATION

Skin - rabbit - not skin irritation - 72 h

NO DAMAGE / EYE IRRITATION

Eyes - rabbit - Not eye irritation - 24 h

RESPIRATORY OR SKIN SENSITIZATION

Not a sensitizer

GERM CELL MUTAGENICITY

Non-mutagenic as it did not induce (point) gene mutations

IN VITRO MAMMALIAN CHROMOSOMAL ABERRATION

Not induce chromosomal aberration up to the concentration of 5 mg/ml of culture medium, both in the presence and absence of metabolic activation system in Human Peripheral Blood Lymphocytes

CARCINOGENICITY

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

REPRODUCTIVE TOXICITY

No data available

TERATOGENICITY

No data available

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE (GLOBALLY HARMONIZED SYSTEM)

No data available

SPECIFIC TARGET ORGAN TOXICITY- REPEATED EXPOSURE (GLOBALLY HARMONIZED SYSTEM)

No data available

ASPIRATION HAZZARD

POTENTIAL HEALTH EFFECTS

INHALATION

If inhaled may be Causes respiratory tract irritation.

INGESTION

May be harmful if swallowed.

SKIN

May be Causes skin irritation.

Eyes

May be Causes eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated completely.

SYNERGISTIC EFFECTS

No data available

ADDITIONAL INFORMATION

No data available

12. ECOLOGICAL INFORMATION**TOXICITY****DAPHNIA MAGNA**

The no observed effect concentration (NOEC) over 48 hours and acute median effective concentration (EC₅₀) on Daphnia magna is >100mg/L

ALGA

The no observed effect concentration (NOEC) over 72 hours exposure period is >100mg/L

E_yC₅₀ >100mg/L

FISH

The no observed effect concentration (NOEC) over 96 hours and acute median effective concentration (EC₅₀) on fish is >100mg/L

SOIL

No data available

13. DISPOSAL CONSIDERATIONS**PRODUCT**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

CONTAMINATED PACKAGING

Dispose of as unused product.

14. TRANSPORT INFORMATION

UN

ADR, IMDG, IATA: Not Danger

UN number: Not regulated

Proper shipping name: (Titanium oxide solution)

Reportable Quantity (RQ): Not regulated

Marine pollutant: Not regulated

Poison Inhalation Hazard: No

15. REGULATORY INFORMATION

GHS Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

FURTHER INFORMATION

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