

THERMAL BARRIER COATED

30°C

TEMPERATURE DIFFERENCE

- THREE-IN-ONE RARE-EARTH COATING
REFLECTS OVER 95% OF SOLAR INFRARED
- WATERPROOF
- THERMAL PROOF
- CORROSIVE PROOF



INTRODUCTION

TENSILI's EASYTO™ Rare-Earth Metallic reflective thermal barrier coating is an innovative environmentally friendly, energy-saving and low-carbon footprint coating that integrates reflection and thermal blocking functions. The crystallized rare-earth nano composite in the coating is the key component. The crystallized rare-earth nano composite in the coating can effectively reflect over 95% of the near-infrared in the solar radiation energy to achieve rapid heat dissipation. Therefore no heat is absorbed by the substrate layer and preventing inward conduction of the air temperature rise in the base layer. This is an effectively method of heat insulation. Three layers of coating server different preposes as following;

A) Substrate Layer

- direct coating to the material to protect from corrosive (anti-corrosion)

B) Thermal Barrier

- blocking heat inward conduction (fireproofing layer)

C) Reflector Layer

- reflect infrared radiation and reduce humidity accumulation (water proof)



PRODUCT'S MAIN INGREDIENT

The product ingredient includes, water-based acrylate co-polymers, crystallized rare-earth nano composites, rare-earth metallic oxides, eco friendly additives and water.

APPLICATION

The three-in-one function of waterproof, rust-proof and anti-corrosion. This product is suitable for steel structures, metal roofs, chemical storage tanks, silos, railway stations, farms, hydro transformers and any places that require the integration of heat insulation, waterproof and mild corrosion protection. It can significantly reduce the high temperature caused by the accumulation of heat caused by continuous sunlight on the surface of the object. This is an effectively method of heat insulation. Experiments show that both side of various material layers temperature difference as high as 30°C.

FEATURES

This can replace traditional thermal insulated refractory bricks, rock-wools, fibreglass insulation cotton, etc. The base color comes in white colour, however, it can be customized according to the needs and applications. The coating is very durable from chemical. The coating has been test by submerged under alkali solution for 48 hours without any defect. The coating is weather-resistance. It can withstand various climatic tests, strong adhesion, no peeling, not easy to age, water erosion resistance, excellent UV resistance and long lifespan over 10 years.

STORAGE

Cover should be sealed and store in a cool, clean and dry enrolment. The recommended storage temperature is between 5 °C to 25 °C. Shelf life in barrels: 12 months.

Note: Use within 8 hours once the cap opened. (If there is a little bit layering, it is normal, just stir it evenly)

PRODUCT KEY TESTING INDEX

| | | | |
|-----------------------------------|-----|------------------------------------|-------|
| Contrast ratio (white and light): | 93% | Waterproof rating: | 96hrs |
| Solar reflectance (white): | 86% | Alkali resistance: | 48hrs |
| Near infrared reflectance: | 87% | Colour fading: | 1 |
| Hemispheric emissivity: | 88% | 600hrs Aged reflection difference: | 2% |
| Drying time: | 1hr | Dusted reflection difference: | 15% |

Working condition

| | |
|--------------------------|----------------------------|
| Surface temperature: | min. 5°C - max. 50°C |
| Ambient air temperature: | min. 5°C - max. 50°C |
| Relative humidity: | max. 80% |
| Spray nozzle size: | depends on the application |
| Print Roller / brush: | depends on the application |

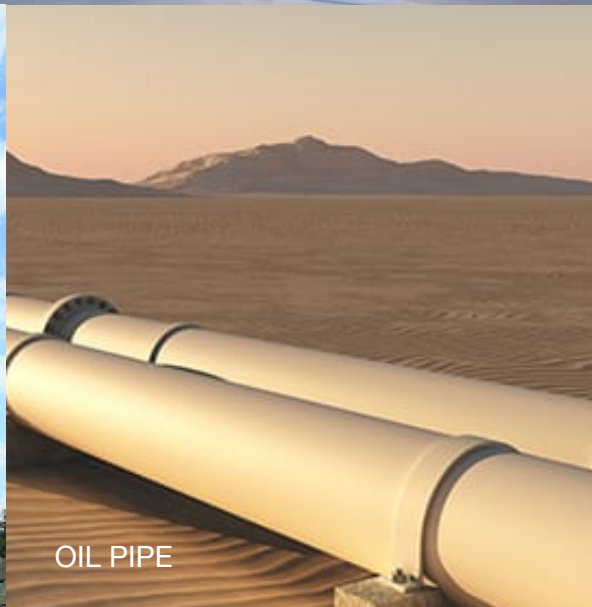
METAL BUILDING



SILO



OIL PIPE



ROOF TOP HVAC




FUEL STORAGE



[MSDS] Material Safety Data Sheet

Prepared to U.S. OSHA, CMA, ANSI, & Canadian WHMIS Standards | 2022

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|-----------------------------------|---|
| Product name: | THERMAL BARRIER COATING |
| MSDS #: | EZ-TB-A-B-C-2022-01 |
| Product Code: | EZ-TB-A-B-C |
| Product Package |  |
| Recommended use: | <p>This product is a direct coating to the material surface. There are three layers of coating to apply on the surface.</p> <p>A: Substrate Layer B: Thermal Barrier Layer C: Reflector Layer</p> <p>This product will block 250-2500nm wavelength light radiants between visible light and near-infrared. It will block out over 95% of solar radiation and protect the base material. This will reduce internal temperature and reduce evaporation or condensation may occur.</p> |
| Manufacturer, Importer, Supplier: | TENSDILI INC. (Canada) |
| Address: | 112 WARREN RD. WHITBY, ONTARIO, CANADA L1N 2C4 |
| Website: | www.easyto.ca |
| Emergency telephone number: | 1-647-829-9277 |

2. COMPOSITION / INFORMATION ON INGREDIENTS

| INGREDIENT(S) | Ratio |
|--|----------------|
| Water-based modified acrylate copolymer | No information |
| Micro-particle size composite rare earth crystal | No information |
| Rare Earth Oxides | No information |
| Environmental Friendly Additives and | No information |
| Water | No information |

3. EMERGENCY OVERVIEW

| | |
|---|--|
| <ul style="list-style-type: none"> • DANGER • CORROSIVE | <ul style="list-style-type: none"> • MAY CAUSES SKIN AND EYE BURNS • HARMFUL OR FATAL IF SWALLOWED |
| Principal routes of exposure: | |
| Eye contact: | Corrosive material may causes permanent eye damage, including blindness. |
| Skin contact: | Corrosive material may causes permanent damage. |
| Inhalation: | May cause irritation and corrosive effects to nose, throat and respiratory tract. |
| Ingestion: | Corrosive material may causes burns to mouth, throat and stomach. |

4. FIRST AID MEASURES

| | |
|---|---|
| Eye contact: | Immediately flush eyes with running water for 15-20 minutes, keeping eyelids open. Get medical attention immediately. |
| Skin contact: | Immediately flush with plenty of water for 15-20 minutes. Get medical attention immediately. |
| Inhalation: | If breathing is affected, remove to the open area. Get medical attention immediately. |
| Ingestion: | If swallowed, rinse mouth. Give a cupful of water or milk . THEN IMMEDIATELY CONTACT A PHYSICIAN OR POISON CENTRE. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. |
| Aggravated Medical Conditions Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects | |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Suitable extinguishing media: | The product is not flammable. Extinguish fire using agent suitable for surrounding fire. |
| Extinguishing media which must not be used for safety reasons: | None |
| Special protective equipment for firefighters: | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |
| Specific hazards: | Not known |
| Unusual hazards: | Corrosive material (See sections 8 and 10). |
| Specific methods: | Not known |
| Auto ignition temperature: | No information available |

6. ACCIDENTAL RELEASE MEASURES

| | |
|--|---|
| Personal precautions: | Put on appropriate personal protective equipment (see Section 8.). |
| Environmental precautions and cleanup methods: | Clean-up methods - large spillage. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final cleanup. |

7. HANDLING AND STORAGE

| | |
|-----------|--|
| Handling: | Avoid contact with skin, eyes and clothing. Do not taste or swallow. Avoid breathing vapours or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Wash thoroughly after handling. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Mix only with water . Do not mix with any other product or chemical . May react to release hazardous gases. |
| Storage: | Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--|--|
| Engineering measures to reduce exposure: Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained. | |
| Engineering measures to reduce exposure: | Personal Protective Equipment |
| Eye protection: | Chemical-splash goggles. |
| Hand protection: | Chemical-resistant gloves |
| Skin and body protection: | Protective footwear. If major exposure is possible, wear suitable protective clothing and footwear. |
| Respiratory protection: | In case of insufficient ventilation wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. |
| Hygiene measures: | Handle in accordance with good industrial hygiene and safety practice |
| Hazardous Materials Identification System [HMIS] | |
| Health | 3 |
| Flammability | 0 |
| Instability | 0 |

9. STABILITY AND REACTIVITY

| | |
|----------------------------------|-----------|
| Stability: | Stable |
| Polymerization: | None know |
| Materials to avoid: | None know |
| Conditions to avoid: | None know |
| Hazardous decomposition products | None know |

10. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------|----------------------|-------------------------------|----------|
| Physical State: | Thick Liquid / Paste | Colour: | White |
| Appearance: | Thick Liquid / Paste | Odor: | N/A |
| Specific gravity: | N/A | Density: | N/A |
| Bulk density: | N/A | Vapor density: | N/A |
| Viscosity: | N/A | Evaporation Rate: | N/A |
| Solubility: | Insoluble when dry | Solubility in other solvents: | N/A |
| pH: | 6.65 | Dilution pH: | N/A |
| Boiling point/range: | N/A | Decomposition temperature: | N/A |
| Melting point/range: | N/A | Autoignition temperature | N/A |
| Flash point: | N/A | Elemental phosphorus: | 0%by wt. |

11. TOXICOLOGICAL INFORMATION

| | |
|------------------------|-----------|
| Acute toxicity: | None know |
| Chronic toxicity: | None know |
| Specific effects: | |
| Carcinogenic effects: | None know |
| Mutagenic effects: | None know |
| Reproductive toxicity: | None know |
| Target organ effects: | None know |

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: No data available

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