MATERIAL SAFETY DATA SHEET

1. [MANUFACTURER]

Company Name: MARUSYO SANGYO CO., LTD.

Central Office: 171 Tajima-Cho Sano-Shi Tochigi-Ken, Japan

Producing Department: New Development division
PREPAIRED: TAKAYUKI YOSHIKAWA

Contact Address: Phone: 0283-22-1901

E-mail: kaihatu@marusyosangyo.jp

Creation date: 14/Oct/2009

Rev.1 16/Feb/2010

2. [PRODUCT NAME]

[Thermal barrier coating 《Eco Thermo Coat》]

3. [PROPERTY]

Admixture

4. [CHEMICAL NAME]

5. [CHEMISTRY AND CAS No]

Name	Weight %	CAS	Formula
Polyurethane resin:	30 – 40%		
Antimony trioxide:	8 - 15%		
silicon dioxide:	1 – 2 %		
Metal1	8 - 15%		
Metal2	8 - 15%		
Metal3	8 - 15%		
Water:	Other	#7732-18-5	H_2O

^{*}None of the remaining components of the mixture are considered Hazardous Material or carcinogens.

6. [CHEMICAL FORMULA]

Company secret

7. [PHYSICAL/CHEMICAL PROPERTY]

Aspect (Color): Dark blue black
Aspect (Form): Aqueous fluid
Boiling point: About 100°C
Flammable: Not applicable

Solubility: Simple solvency to water
Other: No other data developed.

^{*}Identity withheld as a trade secret.

8. [FIRST AID MEASURES]

Put in eyes:

- 1. Wash with water for 15 minutes.
- 2. If irritation persists, consult physician.

Put on skin:

1. Wash with water and soap

Inhalation:

1. Inhale fresh air

Ingestion:

- 1. Take much water and belch out with finger into throat.
- 2. Go to hospital for diagnosis

Advice to physician:

- 1. No specific advice.
- 2. Treat according to symptoms present.

9. **(FIRE FIGHTING MEASURES)**

Fire control method:

- 1. This product is non-flammable and non-fire supporting. A vessel may melts at over 120 degC.
- 2. Ambulate to safety area.

Digestive aids:

Water, Fire powder, Fire foam

10. [ACCIDENTAL RELEASE/LEAKAGE MEASURES]

Bulk spill:

- 1. Liquid spill from vessel, it aria enclosure with soil and sand.
- 2. Remaining liquid absorb with waste cloth and sponge. It collects in the vessel.
- 3. Wiping operation begin at dose not get a wetting and near the public water way.

Bit spill:

- 1. The liquid absorb with waste cloth and sponge. It collects in the vessel.
- 2. Wipe out with bedewed waste cloth with water.
- 3. Waste cloth and sponge are drying out and burning disposal.

11. [HANDLING AND STORAGE]

Handling:

- 1. All of parsons are wearing protection gloves and goggles.
- 2. Waste solution isn't throws away in the sewer.

Storage:

- 1. Storage at anti-freeze and suitable temperature. (between $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$)
- 2. Does not expose to sunlight.
- 3. Does not Long-term storage keep (see on a bottle label).

12. [EXPOSURE CONTROLS/PERSONAL PROTECTION]

Standard Control Concentration: Not applicable

Threshold Limit Value: Japan Society for Occupational Health - Not applicable

ACGIH - Not applicable

Equipment: All of handling person has better case the joint of equipment location

for washing eyes and the water service that before use, and root had

better secure for that.

Protection:

Safety glasses: Chemical goggles or Safety glasses with side plate.

Protective glove: Polyethylene gloves.

13. **(POTENTIAL NATURE HAZARDS)**

Ignition point: Not applicable. (Normal conditions)

Flash point: Not applicable. (Normal conditions)

Explosion limit: Not applicable.

Spontaneous: None known

Auto reactive: Stable at normal conditions.

Dust explosion: No data developed.

Reactivity: Stable at normal conditions.

Other: No other data developed.

14. **[POTENTIAL HEALTH HAZARDS.]**

Skin: Negligible dermal irritant.

Eyes: Non-eye irritant.

Inhalation: Pulverized liquid as nuisance particulates.

Ingestion:

No effects known.

Delayed Effects:

Not applicable.

Carcinogens: Not applicable.

Primordial of mutation: Not applicable.

Toxicity for gonophores: Not applicable.

Erogenous: Not applicable.

Other: No other data developed.

15. [ENVIRONMENTAL IMPACT]

Degradable: Not regulated.

Amassment: Not regulated.

Toxicity for fish: Not regulated.

Other: Do not spill to public water way.

16. **[DISCARD INFORMATION]** Give other pharmaceutical products the same treatment.

Waste materials hold by law of country and local government, and may request to industrial and trade waste agency.

17. **[TRANSPORT INFORMATION]**

Wrote down to #11 and give other pharmaceutical products the same treatment.

- 1. Do not expose to sunlight.
- 2. Politely transaction. (Be carefully)
- 3. Safety measures do for overturn and fall.
- 4. Vessel breaks carefully.

JAPAN DOT HAZARD CLASS: Not regulated.

JAPAN DOT ID NUMBER: Not applicable.

US DOT HAZARD CLASS: Not regulated.

US DOT ID NUMBER: Not applicable.

18. **[DECREE]**

Not applicable

19. **[REGULATORY INFORMATION]**

Japanese Existing And new CHEMICAL SUBSTANCES (ENCS) Japan

TOXIC SUBSTANCES CONTROL ACT (TSCA) U.S.A

ENCS INVENTORY STATUS: Products are listed on the ENCS Chemical Inventory.

TSCA INVENTORY STATUS: Products are listed on the TSCA Chemical Inventory.

OTHER ENCS ISSUES: None.
OTHER TSCA ISSUES: None.

20. **[FOREIGN INVENTORY STATUS]**

21. [COMMENTS]

This Material Safety Data Sheet and the information it contains are offered to you in good faith as accurate. We have reviewed any information contained in this data sheet that we received from sources outside our company. We believe that information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the users obligations to evaluate and use this product safety and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of this product in a manner that might infringe existing patents. No warranty is made, either express or implied.

^{*}Canadian Domestic Substances List / Canadian Non-Domestic Substances List (DSL/NDSL) Canada

^{*}European Inventory of Existing Commercial Chemical Substances / European List of Notified Chemical Substances (EINECS/ELINCS) European Union

^{*}Korean Existing Chemicals List (ECL) Korea

^{*}Australian Inventory of Chemical Substances (AICS) Australia

^{*}Giftliste 1 (List of Toxic Substances 1) / Inventory (Newly Notified Substances) Switzerland