



SAFETY DATA SHEET – SDS –

1. Chemical product and company identification

Product name PS-1KS
(Liquid catalyst for diesel fuel)

Company name Eco Advanced Japan.,Inc
Address 1-3 Motoki 1-chome,Adachi-ku,
Tokyo 123-0853,Japan

Telephone number +81-3-3880-6628
Facsimile number +81-3-3886-1899

2. Hazards identification

Because product vapor is heavier than air, it may in a place lower than the air and make explosive gas mixtures. When heated to 100 ° C or higher, a decomposition reaction accompanied by heat generation will occur, and the temperature and pressure will sharply rise. Irritating to eyes and skin.

GHS label elements



| Hazard class | Category | Signal word | Hazard statement |
|--|------------|----------------|---|
| Flammable liquid | Category4 | Warning | Combustible liquid |
| Serious eye damage/eye irritation | Category2A | Warning | Causes serious eye irritation |
| Germ cell mutagenicity | Category2 | Warning | Suspected of causing genetic defects |
| Carcinogenicity | Category2 | Warning | Suspected of causing cancer |
| Reproductive toxicity | Category2 | Warning | Suspected of damaging fertility or the unborn |
| Specific target organ toxicity after single exposure | Category1 | Danger | Causes damage to circulatory and respiratory |
| Specific target organ toxicity following repeated exposure | Category2 | Warning | May cause damage to blood system through prolonged or repeated exposure |
| Acute aquatic hazard | Category3 | No signal word | Harmful to aquatic life |
| Chronic aquatic hazard | Category3 | No signal word | Harmful to aquatic life with long lasting effects |

Hazard class other than listed above are [not classified],[Classification not possible] or out of classification.

3.Composition/information on ingredients

Substance or Mixture : Mixtures

| Name | % by Weight | CAS# |
|----------------------|-------------|------------|
| Pure water | Above 4% | |
| Isopropyl alcohol | 4% | 67-63-0 |
| 2-Ethylhexyl nitrate | 65% | 27247-96-7 |
| Diesel fuel | 25% | 68476-31-3 |
| Fe | Under 0.1% | 7439-89-6 |
| TiO ₂ | Under 1% | 13463-67-7 |
| P | Under 0.1% | 7723-14-0 |
| Al | Under 0.1% | 7429-90-5 |
| Mn | Under 0.1% | 7439-96-5 |

4.First aid measures

| | |
|--------------|---|
| Eye contact | Immediately rinse with plenty of water for at least 15 minutes and see a doctor. |
| Skin contact | Immediately rinse with plenty of water for at least 15 minutes and remove contaminated clothing. Get medical attention of the doctor. |
| Inhalation | Move to a clean place of air. In case of respiratory arrest, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. |
| Ingestion | Do not induce vomiting. If it is conscious, give two glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately. |

5.Fire-fighting measures

Wear compressed self-contained breathing apparatus and fire-fighting should be done from the windward side. Cool the storage container with a large amount of water spray to prevent exothermic decomposition when heated to 100°C or higher.

Fire extinguisher : Powder fire extinguisher, Foam fire extinguisher, Carbon dioxide fire extinguisher, water spray

Harmful pyrolysis products : CO, CO₂, NO_x, Other pyrolysis products

6. Accidental release measures

- (1) Make an emergency contact. Keep the fire away.
Wear appropriate protective equipment.
- (2) Surround it with soil and so on to prevent diffusion into the surroundings and inflow into wastewater.
- (3) Collect leaking liquid in an empty container.
- (4) Absorb liquid nonrecoverable into waste cloth and so on and incinerate it.

7. Handling and storage

Tightly sealed and store in cool, ventilated place without fire.
Handle in accordance with the exposure prevention measures of the next section. Because it has a low flash point, handle it at room temperature. Consider static elimination in order to prevent spark due to static electricity. Isolate the product equipments such as containers, piping, pumps and so on from the heat source. Do not construct a steam trace and so on. When transferring with a pump, always open the valve of the piping and start the pump. When the pump is started despite the valve being closed, the product in the pump will heat under pressure and will rapidly and thermally decompose, and ultimately the pump may burst and catch fire.

8. Exposure controls/personal protection

OCCUPATIONAL EXPOSURE LIMIT : TWA 1ppm (8hours/day, 40hours/week)

Local exhaust : It is necessary to maintain the floating vapor concentration within the allowable one.

General ventilation : It is desirable, if any

Respiratory organ : If there is a risk of exceeding the allowable concentration, use appropriate protective equipment.

Eye : Protective glasses or Face shield

Skin : Impervious gloves

Other : Wear protective clothing when there are many opportunities for the product to contact with skin and clothing.

9. Physical and chemical properties

Appearance : Dark brown liquid

Boiling point : No data

Melting point : No data

Flash point : Closed cap/61°C

Vapor pressure : 1.7mmHg

| | |
|-------------------------|----------------------------|
| Solubility : Cold water | Insoluble |
| Mineral oil | Soluble |
| Other | Soluble in organic solvent |

10. Stability and reactivity

Chemical stability : Stable. However, unstable at 100 °C or more.
 Contact prohibited substances : Strong oxidizing, Strong reducing agent
 Conditions to be avoid : High temperature, Spark, Naked flame

11. Toxicological Information

| Hazard class | Isopropyl alcohol | 2-Ethylhexyl nitrate | Diesel fuel | Fe | TiO2 | P | Al | Mn |
|---|-------------------|----------------------|-------------|----|------------|---|-----------|------------|
| Acute toxicity (Oral) | — | — | — | — | — | — | — | — |
| Acute toxicity (Dermal) | — | — | — | — | — | — | — | — |
| Acute toxicity (Inhalation : Vapor) | — | — | — | — | — | — | — | — |
| Acute toxicity (Inhalation : Dust, Mist) | — | — | — | — | — | — | — | — |
| Skin corrosion/irritation | — | — | — | — | — | — | — | Category3 |
| Serious eye damage/eye irritation | Category2 | Category2B | — | — | Category2B | — | — | Category2B |
| Respiratory sensitization | — | — | — | — | — | — | — | — |
| Skin sensitization | — | — | — | — | — | — | — | — |
| Germ cell mutagenicity | — | — | Category2 | — | — | — | — | — |
| Carcinogenicity | — | — | Category2 | — | Category2 | — | — | — |
| Reproductive toxicity | Category2 | — | — | — | — | — | — | Category1 |
| Reproductive toxicity (Effects on or via lactation) | — | — | — | — | — | — | — | — |
| Specific target organ toxicity (Single exposure) | Category1 | — | Category1 | — | — | — | — | — |
| Specific target organ toxicity (Repeated exposure) | Category1 | — | — | — | — | — | Category1 | Category1 |
| Aspiration toxicity | — | — | Category1 | — | — | — | — | — |

“—” in the table means [not classified] or [Classification not possible]

12. Ecological Information

| Hazard class | Isopropyl alcohol | 2-Ethylhexyl nitrate | Diesel fuel | Fe | TiO2 | P | Al | Mn |
|------------------------------|-------------------|----------------------|-------------|----|------|---|-----------|-----------|
| Acute aquatic hazard | — | Category3 | — | — | — | — | — | — |
| Chronic aquatic hazard | — | Category3 | — | — | — | — | Category4 | Category4 |
| Hazardous to the ozone layer | — | — | — | — | — | — | — | — |

“—” in the table means [not classified] or [Classification not possible]

Act on Prevention of Marine Pollution and Maritime Disaster : Noxious liquid substance y class

13. Disposal attention

Incineration is desirable. For incineration of the product, spray burn in facilities equipped with liquid spray nozzles.

14. Transport Information

UN-No. Non-Applicability
UN Haz Class Non-Applicability

Handle carefully to avoid physical damage and rainwater to containers.

15. Regulatory Information

MARPOL 73/78
Fire Service Act
Industrial Safety and Health Act
Water Pollution Control Law
Act on Prevention of Marine Pollution and Maritime Disaster.

16. Other Information

Reference material Globally Harmonized System of Classification and Labeling of Chemicals Rev.6
METI
EPA
QSAR

Date of creation / revision 16. 11. 2016

This SDS is based on accurate information, but it does not guarantee its accuracy or completeness. In use of this product, compliance with the relevant laws and regulations in accordance with the application, and must be considered safe handling of the product.
