

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

MSDS Name: 1,2-Diethoxycyclobutenedione
Synonyms: 3,4-Diethoxycyclobut-3-ene-1,2-dione
Company Identification: PI Chemicals Ltd.
Room 6-306, Building 2
1341 Pudong South Road
Pudong New Area, Shanghai 200212, China
Telephone Number: 86-21-51389368
Fax Number: 86-21-51389367
Emergency Number: 86-21-51389369

Section 2 – Product Information

Catalog Number: PI-24464
CAS #: 5231-87-8
MDL #: MFCD00001333
EC#: None
Purity: 99.0%

Section 3 – Physical and Chemical Properties

Physical state: Liquid
Color: Pale yellow
Odor: Not available
Molecular Formula: C₈H₁₀O₄
Molecular Weight: 170.16
Freezing/Melting Point: Not available
Boiling Point: 95 deg C (0.1 mmHg)
Flash Point: 110 deg C
Autoignition Temperature: Not available
Refractive Index (nD20): 1.508-1.51
Density: 1.15g/ml
Decomposition Temperature: Not available
Solubility: Insoluble in water

Section 4 – Hazards Identification

- Eye:** Causes eye irritation.
- Skin:** Causes skin irritation. Harmful if absorbed through the skin.
- Ingestion:** May cause irritation of the digestive tract. Toxic if swallowed.
- Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

Section 5 – First Aid Measures

- Eye:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin:** Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
- Ingestion:** Get medical aid immediately. Wash mouth out with water.
- Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 6 – Stability and Reactivity

- Chemical Stability:** Stable under normal temperatures and pressures.
- Materials to avoid:** Strong oxidizing agents.
- Conditions to Avoid:** Incompatible materials.
- Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, nitrogen oxides.
- Hazardous Polymerization:** Will not occur.

Section 7 – Handling and Storage

- Handling:** Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.
- Storage:** Store in a cool, dry place. Store in a tightly closed container.

Section 8 – Personal Protection

- Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 – Fire and Explosion Hazard Data

General Information: As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 10 – Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 11 – Toxicological Information

RTECS#: CAS#5231-87-8: Not available

LD50/LC50: RTECS: Not available.

Carcinogenicity: 1,2-Diethoxycyclobutenedione - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 – Environmental information

Not available

Section 13 – Disposal Consideration

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

Section 14 – Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S. *	TOXIC SOLID, ORGANIC, N.O.S.	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class:	6.1	6.1	6.1
UN Number:	2810	2810	2810
Packing Group:	III	III	III

Section 15 – Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Indication of Danger: Irritant

Risk Phrases:

R 22: Harmful if swallowed.

R 36/37/38: Irritating to eyes, respiratory system and skin.

R 42/43: May cause sensitization by inhalation and skin contact.

Safety Phrases:

S 23: Do not breathe gas/fumes/vapor/spray.

S 24: Avoid contact with skin.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39: Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS#5231-87-8: 3

Canada

CAS#5231-87-8: Not available

US Federal

TSCA

CAS# 5231-87-8 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 – Additional Information

MSDS Creation Date: October 14, 2006

Update: October 24, 2007

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