MATERIAL SAFETY DATA SHEET
VIVANTIS TECHNOLOGIES SDN BHD

Document No.: MSDSrev06_PC0905
Date prepared: 1st April 2025 Reviewed: 10th April 2025

SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PC0905-25ml; PC0905-100ml
Product Name: Diethylpyrocarbonate (DEPC)

Intended Use:
For research use only. Not for use in diagnostic procedures.

Company Address:
Vivantis Technologies Sdn Bhd
No. 12A, Jalan TP5,
Taman Perindustrian UEP,
47600 Subang Jaya,
Selangor Darul Ehsan, Malaysia.
Tel: +6 016 226 0492
Email: info@vivantechnologies.com
Website: www.vivantechnologies.com

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	%
Diethylpyrocarbonate	1609-47-8	216-542-8	95-100

Synonyms: DEPC; DEP; Diethyl dicarbonate; Ethoxyformic acid anhydride; Diethyl Oxydiformate

SECTION 3: HAZARDS IDENTIFICATION

WHMIS Classification

B3	Combustible liquid	Combustible liquid
D2B	Toxic material causing other toxic effects	Irritant

GHS Classification

Flammable liquids -	Category 4
Acute toxicity, oral -	Category 4
Skin irritation -	Category 2
Eye irritation -	Category 2A
Specific target organ toxicity – single exposure -	Category 3

GHS Label elements, including precautionary statements

Signal word: Warning

Hazard statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statements

P261	Avoid breathing dust, fume, gas, mist, vapors or spray.
P305 + P351 + P338	If in eyes, rinse cautiously with water for several minutes if contact with eyes. Remove contact lenses present and easy to do. Continue rinsing.

HMIS Classification

Health hazard:	2
Flammability:	2
Physical hazards:	1

NFPA Rating

Health hazard:	2
Fire:	2
Reactivity hazard:	1

Potential Health Effects

In case of eye contact, may cause eye irritation.
In case of skin contact, may be harmful and causes skin irritation.
In case of inhalation, may be harmful and causes respiratory tract irritation.
In case of ingestion, may be harmful.

SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician.
In case of skin contact, wash off immediately with soap and plenty of water. Consult a physician.
In case of inhalation, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of ingestion, do not induce vomiting and never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE FIGHTING MEASURES

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray to cool unopened containers.
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and fully protective gear.

Hazardous decomposition products formed under fire conditions: Carbon oxides.

Explosion data – sensitivity to mechanical impact: No data available.
Explosion data – sensitivity to static discharge: No data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES
For personal protection, Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
For environmental precautions, prevent further leakage or spillage if safe to do so. Do not let product enter drains.
For 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. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.
Handle and store under argon. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature is 2 - 8 °C.
Over time, pressure may increase causing containers to burst Handle and open container with care. Moisture sensitive.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection	Risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges as a backup to engineering controls. 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 by not touching glove's outer surface to avoid skin contact with the product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands before break and at the end of workday.
Eye protection	Use face shield and safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).
Skin and body protection	Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Use mechanical exhaust or laboratory fume hood to avoid exposure.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless/clear
Physical state:	Liquid
Odor:	No information available
Odor threshold:	No information available
Density:	1.101 g/cm^3 at 25ºC (77ºF)
pH:	No information available
Melting point:	No information available
Freezing point:	No information available
Initial Boiling point:	No information available
Boiling point:	93-94ºC (199-201ºF) at 24 hPa (18 mmHg) – lit.
Flash point:	69ºC (156ºF) - closed up
Autoignition temperature:	No data available
Decomposition temperature:	No information available
Upper Flammability limit in air:	No data available
Lower Flammability limit in air:	No data available

Explosive properties:	No information available
Oxidizing properties:	No information available
Solubility:	No information available
Partition coefficient (n-octanol/water):	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Evaporation rate:	No data available
Specific gravity:	No data available
Viscosity:	No information available

SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions. Water in container will lead to increased pressure and risk of explosion.

Materials to avoid:	Strong reducing agents, strong acids, strong bases, strong reducing agents, ammonia
Hazardous decomposition products:	Carbon oxides.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Heat, flames and sparks.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50:	Rat – 850 mg/kg
Inhalation LC50:	No data available
Dermal LD50:	No data available

Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available
Reproductive toxicity:	No data available
Teratogenicity:	No data available
Aspiration hazard:	No data available
Synergistic effects:	No data available
STOT – single exposure:	May cause respiratory irritation
STOT – repeated exposure:	No data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Carcinogenicity

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

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

RTECS: LQ9350000

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

No data available.

Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
PBT and vPvB assessment:	No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material by burning in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

For contaminated packaging, dispose as waste material.

SECTION 14: TRANSPORT INFORMATION

DOT (US)

NA No.: 1993 Class: NONE Packing group: III
Proper shipping name: Combustible liquid, n.o.s. (Diethyl pyrocarbonate)
Marine pollutant: No
Poison inhalation hazard: No

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: REGULATORY INFORMATION

WHMIS Classification

B3	Combustible liquid	Combustible liquid
D2B	Toxic material causing other toxic effects	Irritant

The 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.

SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

All Vivantis products are supplied for manufacturing, research and laboratory use only. Researchers and laboratory personnel intending to use any of these products for medical investigation on human are solely responsible for such use and for compliance with the pertinent regulations of the United States Food & Drug Administration (US-FDA) and other regulations. We do not assume liability for damages resulting from the handling, use and/or disposal of these products, from their use in violation of patent or other rights or reliance upon this information.