

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

Document No.: MSDSrev05_PL5201

Date prepared: 10th January 2023

Reviewed: 10th January 2023

SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PL5201; PL5201-S; PL5202; PL5205; PL5205-S; PL5206; PLMM03;
CLMM03

Product Name: *Pfu* DNA Polymerase; Chromo *Pfu* DNA Polymerase; 2X *Pfu* Master
Mix; 2X ViRed *Pfu* Master Mix

Intended Use:

For research use only. Not for use in diagnostic procedures.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

Components: No information available.

SECTION 3: HAZARDS IDENTIFICATION

Classification of the substance or mixture

This product is not classified as hazardous according to Globally Harmonized System (GHS).

Label Elements

GHS label elements

No information available.

Hazard pictograms

No information available.

Signal word

No information available.

Hazard statements

No information available.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse opened eye for several minutes under running water.

In case of skin contact, wash with copious amounts of water even the product does not irritate the skin.

In case of inhalation, obtain medical advice if the patient feels unwell or is concerned.

In case of ingestion, obtain medical advice if the patient feels unwell or is concerned.

Notes to physician:

Most important symptoms and effects, both acute and delayed dizziness.

SECTION 5: FIRE FIGHTING MEASURES

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use carbon dioxide, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and fully protective gear.

For special firefighting procedures, wear self-contained breathing apparatus for firefighting if necessary.

Hazardous decomposition products formed under fire conditions: None known.

Flash point: No data available.

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 precautions, personal protective equipment and emergency procedures not required.

For cleaning up, absorb with liquid-binding material such as sand, diatomite, acid binders, universal binders and sawdust.

For environmental precautions, do not allow to enter sewers/surface of ground water.

SECTION 7: HANDLING AND STORAGE

No special measures required.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Hand protection	Not required.
Respiratory protection	Not required.
Eye protection	Not required.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Handle in accordance with usual precautionary measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless (PL5201, PL5202); Purple (PL5205, PL5206)
Physical state:	Liquid
Odor:	Not available
Odor threshold:	Not available
Density:	Not determined
pH:	pH8
Melting point:	Not determined
Freezing point:	Not determined
Initial Boiling point:	100°C
Boiling point:	Not available
Flash point:	No data available
Ignition temperature:	400°C
Autoignition temperature:	Product is not self-igniting
Decomposition temperature:	Not determined
Upper Flammability limit in air:	No data available
Lower Flammability limit in air:	No data available
Explosive properties:	Product does not present an explosion hazard.
Lower explosion limit:	0.9 Vol %
Upper explosion limit:	0.0 Vol %
Oxidizing properties:	No information available
Solubility:	Soluble in water
Partition coefficient (n-octanol/water):	No data available

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Vapor pressure:	0.1 hPa at 20°C
Vapor density:	Not determined
Evaporation rate:	Not determined
Specific gravity:	No data available
Viscosity:	Not determined
Organic solvents:	50.0%
Water:	48.5%
Solid content:	2.4%

SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid:	No further relevant information available.
Hazardous decomposition products:	No dangerous decomposition products known.
Hazardous polymerization:	No data available.
Conditions to avoid:	No further relevant information available.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50:	No data available
Inhalation LC50:	No data available
Dermal LD50:	No data available
Skin irritation:	No irritant effect
Eye irritation:	Irritating effect
Respiratory or skin sensitization:	No sensitizing effects known
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:	No data available
STOT – repeated exposure:	No data available
Carcinogenicity:	No data available
Likely routes of exposure:	No data available

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Additional toxicological information

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

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

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Not harmful to the aquatic environment

Persistence and degradability:	Not available
Bioaccumulative potential:	Not known
Mobility in soil:	No further relevant information available
Other adverse effects:	No known significant effects or critical hazards.
PBT:	Not applicable
vPvB:	Not applicable

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with regional, national and local laws and regulations.

For packaging waste, dispose as waste material.

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SECTION 14: TRANSPORT INFORMATION

ADG

Not hazardous for transportation.

ADN

Not hazardous for transportation.

IMDG

Not hazardous for transportation.

IATA

Not hazardous for transportation.

Environmental hazards

Marine pollutant: No

Special precautions for user

Not applicable

Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available.

Directive 2012/18/EU

Named dangerous substances: ANNEX I None of the ingredients is listed.

National regulations

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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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.

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