MATERIAL SAFETY DATA SHEET

VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PC0919-500ml; PC0919-1L
Product Name: Tween 20

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

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	%
Tween 20	9005-64-5	500-018-3	95-100

Synonyms: Polyoxyethylene-20; polyoxyethylenesorbitan monolaurate; polyethylene glycol sorbitan monolaurate

SECTION 3: HAZARDS IDENTIFICATION

WHMIS Classification

Not a hazardous substance or mixture.

GHS Classification

No information available.

HMIS Classification

Health hazard: 0
Flammability: 0
Physical hazards: 0

Potential health effects

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

SECTION 4: FIRST-AID MEASURES

In case of eye contact, immediately flush eyes with water as a precaution.
In case of skin contact, immediately wash skin with soap and copious amount of water.
In case of inhalation, move person to fresh air. If not breathing, give artificial respiration.
In case of ingestion, wash mouth with water. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Not flammable.

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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Hazardous decomposition products formed under fire conditions: Carbon oxides.

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 protection, avoid breathing vapors, mist or gas.

For cleaning up, sweep up and keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection	Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. 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 (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection	Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Use engineering measures such as 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:	Yellow amber
Physical state:	Viscous liquid
Odor:	No information available
Odor threshold:	No information available
Density:	1.095 g/mL at 25°C (77°F)
pH:	pH6-8 (50g/L, H_2O, 20°C)
Melting point:	No information available
Freezing point:	No information available
Initial Boiling point:	No information available
Boiling point:	>100°C (>212°F)
Flash point:	>110°C (>230°F) – closed cup
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:	Water soluble
Partition coefficient (n-octanol/water):	No data available
Vapor pressure:	<1.33 hPa (<1.00mmHg)
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.

Materials to avoid:	Strong oxidizing agents
Hazardous decomposition product:	Carbon oxides
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	No data available

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50:	Rat – 40554.0 mg/kg
Inhalation LC50:	No data available
Dermal LD50:	No data available
Other information:	No data available
Skin:	Human – mild skin irritation – 3 days
Serious eye damage or eye irritation:	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
STOT – single exposure:	No data available
STOT – repeated exposure:	No data available
Aspiration hazard:	No data available
Synergistic effects:	No data available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

Potential health effects:

Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin contact	May be harmful if absorbed through the skin. May cause skin irritation.
Eye contact	May cause severe eye irritation.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
RTECS: TR7400000

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish:	LC50 – other fish – 350mg/l – 24 hrs
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
PBT and vPvB assessment:	No data available
Other adverse effects:	No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste materials in accordance with all federal, state and local regulations.
Offer surplus and non-recyclable solutions to a licensed disposal company.
For contaminated packaging, dispose as waste materials.

SECTION 14: TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: REGULATORY INFORMATION

WHMIS Classification

Not rated.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation 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.

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