

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PR0604-40g; PR0604-200g

Product Name: Acryl / Bis 37.5:1 (Premixed Powder)

Intended Use:

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

Company Headquarters:

Vivantis Technologies Sdn Bhd
Revongen Corporation Center
Level 17, Top Glove Tower,
No. 16, Persiaran Setia Dagang,
Setia Alam, Seksyen U13, 40170 Shah Alam,
Selangor Darul Ehsan, Malaysia.

Tel: +6 03 3359 1166

Fax: +6 03 3358 0303

Email: info@vivanttechnologies.com

Website: www.vivanttechnologies.com

Company Manufacturing:

Vivantis Technologies Sdn Bhd
Level 1, Enterprise 2,
Technology Park Malaysia,
Lebuhraya Puchong-Sg. Besi,
57000 Bukit Jalil,
Kuala Lumpur, Malaysia.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	%
Acrylamide	79-06-1	201-173-7	35-39
Methylene diacrylamide	110-26-9	203-750-9	0-2

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

Carcinogen-	Category 1B
Germ cell mutagenicity-	Category 1B
Toxic to reproduction-	Category 2
Acute toxicity, oral-	Category 3
Specific target organ toxicity (repeated)-	Category 1
Acute toxicity, inhalation-	Category 4
Skin irritation-	Category 2
Eye irritation-	Category 2
Skin sensitization-	Category 1

GHS Label elements, including precautionary statements



Signal word: Danger

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Hazard statements

H301	Toxic if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H372	Cause damage to organs through prolonged or repeated exposure

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P310	If swallowed, immediately call a poison center or doctor/physician
P302+P352	If on skin, wash with plenty of soap and water
P304+P340	If inhaled, remove victim to fresh air and keep at rest in a position
P305+P351+P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	If exposed or concerned, get medical attention/advice

SECTION 4: FIRST-AID MEASURES

In case eye contact, rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case skin contact, wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

In case of inhalation, move to fresh air. If breathing becomes difficult, give artificial respiration.

In case of ingestion, clean mouth with water and afterwards drink plenty of water.

SECTION 5: FIRE FIGHTING MEASURES

Not flammable. Containers may explode when heated.

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

Use water spray, regular foam, dry chemical or carbon dioxide.

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

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Hazardous decomposition products formed under fire conditions: Nitrogen oxides, carbon oxides, ammonia
 Explosion data – sensitivity to mechanical impact: Not sensitive.
 Explosion data – sensitivity to static discharge: Not sensitive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

For environmental precautions, prevent further leakage or spillage if safe to do so.

For cleaning up, pick up and arrange disposal to properly labeled containers. Avoid dust formation. Ventilate area and wash spill site after material pickup is done.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice. Protect from light.

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light and air.

Hygroscopic. Light sensitive and air sensitive.

Incompatible with strong oxidizing agents, iron and iron salts, copper, brass and free radical initiators.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Value	Control parameters
Acrylamide (79-06-1)	TWA (ACGIH TLV)	0.03 mg/m ³
	TWA (OSHA PEL)	0.3 mg/m ³ (vacated) 0.03 mg/m ³ (skin)
	IDLH (NIOSH)	60 mg/m ³
	TWA (NIOSH)	0.03 mg/m ³

Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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Hand protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves' 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.
Skin and body protection	Wear protective gloves and clothing.
Eye/face protection	Use face shield. Tightly fitting safety goggles.

Use engineering measures such as showers, eyewash stations and ventilation system.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White free flowing
Physical state:	Powder
Odor:	No information available
Odor threshold:	No information available
pH:	No data available
Melting point:	No data available
Freezing point:	No information available
Initial boiling point:	No information available
Boiling point:	No data available
Flash point:	Not determined
Auto-ignition temperature:	No data available
Decomposition temperature:	No information available
Upper flammability limits in air:	No data available
Lower flammability limits 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
MMHG @ 37.8°C	No data available
Vapor density:	No data available
Evaporation rate:	No data available
Specific gravity:	No data available
Viscosity:	No information available

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SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid: Strong oxidizing agents; Iron and iron salts; Copper; Brass; Free radical initiators

Hazardous decomposition products: Carbon oxides; Nitrogen oxides (NO_x); Ammonia

Hazardous polymerization: May occur.

Conditions to avoid: Exposure to heat over 90°C. Protect from air, direct sunlight and moisture. Avoid contact with acids.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Product is irritating to eye, skin and respiratory system. Toxic by inhalation and if swallowed.

Acrylamide

Oral LD50: Rat – 124 mg/kg

Dermal LD: Rabbit – 1680 µL/kg
Rat – 400 mg/kg

Methylene diacrylamide

Oral LD50: Rat – 390 mg/kg

Chronic Toxicity

Product is a suspected carcinogen and mutagen. Target organ effect on nerves, liver and heart.

Acrylamide

ACGIH: A3

IARC: Group 2A

NTP: Reasonably anticipated

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

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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

This product is harmful to aquatic organisms.

LC50: Fish – Pimephales promelas – 109mg/l – 96hrs
 Fish – Brachydanio rerio – 120mg/l – 96hrs
 Fish – Pimephales promelas – 124mg/l – 96hrs
 Fish – Oncorhynchus mykiss – 162mg/l – 96hrs
 Fish – Lepomis macrochirus – 85mg/l – 96hrs
 EC50: Daphnia magna (water flea) – 98mg/l – 48hrs

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with all federal, state and local environmental regulation.

For contaminated packing too dispose in accordance with all federal, state and local environmental regulation.

Observe all federal, state and local environmental regulations.

SECTION 14: TRANSPORT INFORMATION

DOT (US)

UN no.: 2810 Class: 6.1 Packing group: III
 Proper shipping name: Toxic Liquid Organic N.O.S (Containing Acrylamide)

IATA

UN no: 2810 Class: 6.1 Packing group: III
 Proper shipping name: Toxic Liquid, Organic, N.O.S (Containing Acrylamide)

SECTION 15: REGULATORY INFORMATION

International inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulation, Part 372:

Chemical name:	Acrylamide
CAS No.:	79-06-1
SARA 313 – Threshold Values%:	0.1%

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Chemical name:	Acrylamide
CAS No.:	79-06-1
Weight:	95-100%
HAPS data:	Present
VOC Chemicals:	Group I

CERCLA

Chemical name:	Acrylamide
Hazardous substances RQs:	5000 lb
Extremely hazardous substances RQs:	5000 lb

U.S. State Regulations

California Proposition 65

Chemical name:	Acrylamide
California Prop. 65:	Carcinogen

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International Regulations

Mexico – Grade

Chemical name: Acrylamide
 Carcinogen status: A3
 Exposure limits: TWA – 0.03 mg/m³
 STEL – 0.06 mg/m³

WHMIS Hazard Class

D1B Toxic materials
 D2A Very toxic materials
 D2B Toxic materials



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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