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MATERIAL SAFETY DATA SHEET

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SECTION 1: CHEMICAL IDENTIFICATION

Code: PR0605-25G ; PR0605-100G
Name: Ammonium Persulfate

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name:	CAS:	EC No.
Ammonium persulfate	7727-54-0	231-786-5

SECTION 3: HAZARDS IDENTIFICATION

WHMIS Classification

C	Oxidizing material	Oxidizer
D2A	Very toxic material causing other toxic effects	Respiratory sensitizer
D2B	Toxic material causing other toxic effects	Skin sensitizer
E	Corrosive material	Corrosive to metals
		Corrosive to skin

GHS Classification

Oxidizing solids -	Category 3
Acute toxicity, oral -	Category 4
Acute toxicity, dermal -	Category 5
Skin corrosion/irritation -	Category 2
Serious eye damage/eye irritation -	Category 2A
Respiratory sensitization -	Category 1
Skin sensitization -	Category 1
Specific target organ toxicity – single exposure -	Category 3
Acute aquatic toxicity -	Category 3

GSH Label elements, including precautionary statements:

Signal word: Danger

Hazard statements

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.

Precautionary statements

P220	Keep away from clothing and other combustible materials.
P261	Avoid breathing dust, fume, gas, mist, vapours or spray.
P280	Wear protective gloves.
P305 + P351 + P338	Rinse cautiously with water for several minutes if contact with eyes. Remove contact lens present and easy to do. Continue rinsing.
P342 + P311	If experiencing respiratory symptoms, call a poison center or doctor or physician.

HMIS Classification

Health hazard:	2
Flammability:	0
Physical hazards:	1

Potential Health Effects

In case of eye contact, may cause eye irritation.
In case of skin contact, may harmful if absorbed through skin and 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, rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of 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 not breathing, give artificial respiration.
In case ingestion, never give anything by mouth to an unconscious person. Rinse mouth with water.

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SECTION 5: FIRE FIGHTING MEASURES

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 and full protective gear.

Hazardous decomposition products formed under fire conditions: Nitrogen oxides, sulphur oxides
Container explosion may occur under fire conditions if specific hazards arising from the chemical.
The product may intensify fire. Use water spray to cool unopened containers.

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 dust formation and breathing vapours, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
For environmental precautions, prevent further leakage or spillage if safe to do so for containment. Do not let product enter drains. Discharge into the environment must be avoided.
For cleaning up, sweep up and shovel. Contain spillage, and collect with an electrically protected vacuum cleaner or by wet-brushing to avoid dust formation. Pick up and transfer to properly labeled containers for disposal according to local regulations. Keep in suitable, closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition and heat.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Value	Control parameters
Diammonium peroxodisulphate	TWA	0.10mg/m^3
	TWAEV	0.10mg/m^3

Remarks: occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.

Respiratory protection — 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. 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 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 breaks 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 fumehood to avoid exposure.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Physical properties:	White color
Odor:	No data available
Odor threshold:	No data available
Density:	1.980 g/cm^3
pH:	1.0-2.0 at 228g/l at 25˚C (77˚)
Melting point / freezing point:	Decomposes before melting
Boiling point:	Decomposes below the boiling point
Flash point:	No data available
Ignition temperature:	No data available
Auto-ignition temperature:	No data available
Lower explosion limit:	No data available
Upper explosion limit:	No data available
Water solubility:	228 g/l at 20˚C (68˚F) – completely soluble
Partition coefficient:	No data available
Relative vapour density:	7.88 (air = 1.0)
Evaporation rate:	No data available

SECTION 10: STABILITY AND REACTIVITY

May decompose on exposure to moist air or water. Stable under recommended storage conditions.

Materials to avoid:	Strong reducing agents, organic materials, powdered metals
Other decomposition products:	No data available
Hazardous decomposition products:	Nitrogen oxides, Sulphur oxides
Possibility of hazardous reactions:	No data available
Conditions to avoid:	No data available

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SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50: Rat – 689 mg/kg
Inhalation LC50: No data available
Dermal LD: Rat - >2000 mg/kg

Skin corrosion/irritation: Rabbit – no skin irritation
Serious eye damage/eye irritation: Rabbit – no eye irritation
Rabbit – mild eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitization: May cause allergic respiratory and skin reactions
Guinea pig – causes sensitization (OECD Test Guideline 406)
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
Specific target organ toxicity – single exposure: May cause respiratory irritation
Specific target organ toxicity – repeated exposure: No data available

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.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
RTECS: SE0350000

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

This product is harmful to aquatic life.
LC50: Fish – Oncorhynchus mykiss (rainbow trout) – 76mg/l – 96hrs
EC50: Daphnia magna (water flea) & other aquatic invertebrates – 120mg/l – 48hrs

Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

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Contact a licensed professional waste disposal service to dispose of this material. 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

DOT (US)

UN no.: 1444 Class: 5.1 Packing group: III
Proper shipping name: Ammonium persulfate
Marine pollutant: No
Poison inhalation hazard: No

IMDG

UN no.: 1444 Class: 5.1 Packing group: III EMS-No: F-A, S-Q
Proper shipping name: Ammonium persulphate
Marine pollutant: No

IATA

UN no: 1444 Class: 5.1 Packing group: III
Proper shipping name: Ammonium persulphate

SECTION 15: REGULATORY INFORMATION

WHMIS Classification

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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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