

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product name:

PAC 18 PRIII BM

Product codes:

PAC 18 PRIII BM (bulk): 850002.
 PAC 18 PRIII BM (RIG 1 m³): 850003.

Company information:

Petroquímica Río Tercero SA.
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Emergency telephone numbers (24 hours):

From República Argentina:	0-800-777-4773 (03571) 438444
For international calls:	(54)(9)(3571) 581787 (54)(9)(11) 60527694
Centro Nacional de Intoxicaciones:	0-800-3330-160
Hospital Nacional A. Posadas:	(011) 4669-9200 / 9330

Recommendations and usage restrictions:

Usage recommendations: chemical synthesis, pH regulation, flocculation and coagulation for drinking and residual water treatment, chemical products for paper, textile and leather treatment industry, colorants, linings, cleaning and washing, laboratory.

Usage restrictions: There are not identified usage restrictions if the indications detailed in this Safety Data Sheet are followed.

SECTION 2 – HAZARDS IDENTIFICATION

Hazard nature	Hazard type	Hazard category	Hazard subcategory
Physical	Explosives	Not classifiable	
	Flammable gases	Not classifiable	
	Chemically unstable gases	Not classifiable	
	Flammable aerosols	Not classifiable	
	Non flammable aerosols	Not classifiable	
	Oxidizing gases	Not classifiable	
	Pressure gases	Not classifiable	
	Flammable liquids	Not classifiable	

	Flammable solids	Not classifiable	
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Hazard nature	Hazard type	Hazard category	Hazard subcategory
Physical	Substances and mixtures that react spontaneously	Not classifiable	
	Pyrophoric liquids	Not classifiable	
	Pyrophoric solids	Not classifiable	
	Substances and mixtures that experience spontaneous heating	Not classifiable	
	Substances and mixtures that, in contact with water, detach flammable gases	Not classifiable	
	Oxidizing liquids	Not classifiable	
	Oxidizing solids	Not classifiable	
	Organic peroxides	Not classifiable	
	Substances and mixtures corrosive for metals	1	
Health	Acute toxicity. Orally or through ingestion	Not classifiable	
	Acute toxicity. Through skin	Not classifiable	
	Acute toxicity for inhalation	Not classifiable	
	Corrosion / skin irritation	2	
	Severe eye damage / eye irritation	1	
	Breathing sensitivity	Not classifiable	
	Skin sensitivity	Not classifiable	
	Mutagenicity in germinal cells	Not classifiable	
	Carcinogenicity	Not classifiable	
	Toxicity for reproduction	Not classifiable	
	Systemic toxicity for target organs – unique exposure	Not classifiable	
	Systemic toxicity for target organs – repeated exposure	Not classifiable	
	Hazard for aspiration	Not classifiable	
Environment	Hazardous for the aquatic environment – Acute hazard	Not classifiable	
	Substances or mixtures for the aquatic environment – Chronic or long term hazard	Not classifiable	
	Substances or mixtures hazardous for the ozone layer	Not classifiable	

Another hazards: other hazards have not been identified.

Hazard indications

H290 – can be corrosive for metals.

H318 – causes severe eye damage.

H315 – causes skin irritation.

Warning advice

Precaution

P234 – keep the original package only.

P264 – wash yourself carefully after handling it.

P280 – wear gloves / protective clothing / eye and face protective equipment.

Intervention

P390 – absorb the spill to avoid material damage.

P302 + P352 – if skin contact occurs, wash yourself with abundant soap and water.

P332 + P313 – in case of skin irritation, contact a doctor.

P362 + P364 – take the contaminated clothing off and wash it before using it again.

P305 + P351 + P338 – in case of eye contact, wash them thoroughly with water during some minutes. If using contact lenses, take them off if they can be easily removed. Go on washing them.

P310 – Immediately call a doctor.

Storage

P405 – store it under lock and key.

P406 – store it in a container resistant to corrosion or with interior lining resistant to corrosion.

Disposal

Not required.

Pictograms.



GHS05



GHS07

Warning word: HAZARD / WARNING.

SECTION 3 – COMPONENTS/INFORMATION ON INGREDIENTS

Name	CAS N°	Formula	Composition
Aluminium polychloride (PAC 18)	1327-41-9	$Al_n(OH)_m Cl_{3n-m}$	Aluminium polymers + water

SECTION 4 – FIRST-AID MEASURES

Inhalation. Take the victims to an open air place and keep them in a comfortable breathing position. If they do not breath, apply artificial respiration to them. If you practice mouth to mouth respiration to them, use protection of the kind of the rescue people (pocket face mask, etc.). If breathing is problematic, apply oxygen with qualified personnel. Provide CPR (cardio-pulmonary resuscitation) if the victim does not breath or does not have pulse. Ask/Obtain immediate medical assistance.



SAFETY DATA SHEET

PAC 18 PRIII BM

Page	4 of 9
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Skin contact. Immediately wash the affected area with plenty of neutral soap and water during at least 15 / 20 minutes. Repeat washing if irritation persists. Take off contaminated clothing and shoes while washing. Seek immediate medical assistance. Wash contaminated clothing separately before using it again. Eliminate the articles that cannot be decontaminated.

Eye contact: Immediately wash your eyes with plenty of water for at least 15 minutes. Lift and separate eyelids to ensure the product removal. Carefully take contact lenses off -unless they are stuck on your eyes- after the first 5 minutes, and go on washing them during at least other 15 minutes. Repeat washing if irritation persists. Seek immediate medical assistance.

Ingestion. Do not induce vomit. If the victim is conscious and not suffering convulsions, wash the mouth and give 1 or 2 glasses of water or milk. If a spontaneous vomit occurs, lean the victim forward with the head facing down to avoid vomit aspiration, wash the mouth and give more water. If the victim is unconscious or is suffering convulsions, lean the victim down and keep him/her warm, do not provide anything orally. Seek immediate medical assistance.

Notes to the Physician. No additional information.

Recommendations for protecting first aid providers. The rescue team must pay attention to their own protection and wear the recommended PPE (see Section 8 – Exposure controls and personal protection). If eyes and face are affected, treat eyes first.

SECTION 5 – FIRE-FIGHTING MEASURES

Specific extinguishing means: Mist / atomized water or mist. Chemical powder extinguishers or CO2. Alcohol resistant foam.

Specific hazards: Gases and fumes release. Hydrogen chloride release due to heating over the decomposition temperature. Formation of explosive mixtures of hydrogen with air when the product is in contact with metals.

Protection measures: Evacuate and isolate the hazardous area. Eliminate the heating sources. Limit the access of unnecessary people and without the duly protection. Keep yourself at a counterwind direction. Keep yourself away from low areas where toxic gases or fumes can be accumulated. Fight fire from a protected place or from a safe distance. Consider using hoses or monitors handled by a remote control. Remove the container from the fire zone if it means performing a safe manoeuvre. Use pulverized water to cold containers exposed to fire, dilute the product and eliminate vapors, gases and fumes even after the fire has been extinguished. Do not introduce water in the containers. Consider that product containers may explode due to high temperatures. Avoid spilling the product, and contain the extinction water expansion through a container dike, avoiding its entrance to sewers, and superficial or underground courses of water (see Section 6 – Measures in case of accidental spills).

Special protective equipment required for firemen: Use positive pressure autonomous respiratory equipment and fire protection clothing (helmet, jacket, trousers, boots and gloves). Avoid contact with the product during the fire-fighting operations. The structural protective suit of firemen provides limited protection only in fire situations, and it is not effective in contact with the substance. If product contact is foreseeable, equip firefighters with chemical product resistant suits and with autonomous respiratory equipment. If you do not have fire fighters equipment available, equip fire fighters with chemical product resistant clothing and autonomous respiratory equipment, and fight fire from a remote place.

SECTION 6 – MEASURES IN CASE OF ACCIDENTAL SPILLS

Personal precautions, protective equipment and emergency procedure. Evacuate and air the spill or leakage zone. Keep personnel away from low zones and in spill counterwind sense. Eliminate ignition sources. If it is possible, confine the spilled material and stop the leakage if it does not imply any risk for the personnel working. Do not touch the damaged containers and/or the spilled material unless you are wearing the appropriate protection. Use an appropriate safe equipment. See Section 8 - Exposition controls and personal protection. Do not introduce water in the containers.

Environmental precautions. Seal sewers and drains to avoid the entrance of the product to soils, trenches, drains, superficial and/or underground water. Avoid the spill extension with appropriate absorbent materials (soil, dry sand,

vermiculite, diatomaceous soil or other absorbent non-combustible material. If product reaches public drains, and/or superficial/underground courses of water, inform the competent authorities about the situation.

Methods and materials for contention and cleaning: For small quantities, cover the spilled material with appropriate absorbent materials (soil, dry sand, vermiculite, diatomaceous soil or other absorbent non-combustible material), recollect it and put it in appropriate containers (see Section 7 – Handling and storage). Rinse the area with water and neutralize the washing water with alkaline material (sodium carbonate or hydroxide, calcium carbonate or hydroxide, etc.) Wash and decontaminate the used tools. Continue with the final disposal of the contaminated material and the neutralized washing water (see Section 13 – Final disposal considerations).

For big quantities, build a contention dike with appropriate absorbent material, and transfer the spilled product to appropriate containers through pumping (see Section 7 – Handling and storage). Dilute the collected product with water and neutralize it with alkaline material (sodium carbonate or hydroxide, calcium carbonate or hydroxide, etc.). Recollect the contaminated soil and the absorbent material and put them in the appropriate containers. Verify that all the tools and equipment used are properly decontaminated after the intervention. Continue with the final disposal of the contaminated material and the diluted and neutralized product (see Section 13 – Final disposal considerations)

SECTION 7 – HANDLING AND STORAGE

Handling: Organize the working place and method in a way to prevent or minimize the contact with the product. Before handling the product, be sure that the container material to be used is appropriate (see paragraph Storage in this section). Use decanting devices resistant to corrosion. Avoid generating dew and breathing vapors or mists with an appropriate airing. After handling it, wash it completely. Do not drink or smoke in the handling place. Have available and know the location of the emergency attention equipment (emergency showers and eye baths). Keep the order and cleaning. Wear the appropriate protection equipment (see Section 8 - Exposure controls and personal protection).

Storage: Store it in fresh, dry and aired place, with impermeable floor. Avoid freezing the product and temperatures over 30°C. Avoid the exposition to the sun light and the contact with incompatible materials (bases and strong acids, aluminum, copper, iron, non-alloy steel and galvanized surfaces). Containers should be duly labeled and built with materials resistant to corrosion: vinyl polychloride (PVC), polypropylene (PP), polyethylene (PE), glass fiber reinforced polyester (GRFP), steel recovered with impermeable material (ebonite, PVC, PP, PE, GRFP or other appropriate material) and concrete coated with epoxy resin. If the warehouse is made of steel, paint the exterior with resistant painting such as epoxy to avoid corrosion due to vapors releases / splashes. Storage warehouses must have recollection facilities and spills conduits. Keep containers well closed when they are not used or empty, and protect them from damages (hits, falls, etc.).

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters (acceptable concentrations): CMP: 2 mg/m³ (soluble salts of Al as Al).

Appropriate engineering controls: Have appropriate airing systems available as near as possible of the generating point in working areas where there is potential substance dispersion. Have showers and eye baths available.

Respiratory protection: If there are vapors / mist, wear face mask with appropriate filters for gases / vapors (B) and particles / aerosols (P2). For emergency situations, wear authorized autonomous equipment of positive pressure or autonomous respiratory equipment with air admission.

Hands protection: Wear protection gloves resistant to chemical products. Appropriate materials: natural rubber, neoprene or polyvinyl chloride (PVC).

Face/Eye protection: Safety eyewear with hermetic closing (goggles). Use face mask if projection or spraying risks exist.

Body and skin protection: To avoid skin contact, wear impermeable clothing chemically resistant including boots, coat, apron, trousers or over-all. Appropriate materials: natural rubber, neoprene, polythene, polyvinyl chloride (OVC), Viton (MR), Saranex (MR), 4H (MR) and answer (MR). Eyebaths and safe showers must be in an easily accessible place.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state: liquid.

Color: amber.

Odor: slight, particular.

pH: 2,0 – 3,0.

Fusion / freezing point: <-15 °C.

Boiling point: 113-114 °C.

Initial boiling point: 105 °C.

Boiling interval: 105 – 120 °C.

Inflammation point: non-inflammable.

Inflammability superior limits: non-inflammable.

Inflammability inferior limits in air: non-inflammable.

Vapor pressure: 2400 Pa (18 mm Hg).

Vapor density (air = 1): not available.

Density: 1,36 – 1,38 Kg/dm³.

Relative density (water = 1): 1,36 – 1,38.

Solubility in water: soluble.

Participation coefficient in n-octanol/water (log K_{ow}): not applicable.

Auto-ignition temperature: not inflammable.

Decomposition temperature: > 200 °C.

Odor range: not available.

Evaporation speed: not available.

Dynamic viscosity: not available.

Kinematic viscosity: not available.

SECTION 10 – STABILITY AND REACTIVITY

Chemical stability: stable in the recommended storage conditions (see Section 7- Handling and Storage). It decomposes for exposure to heating.

Reactivity: there are not reactivity associated hazards identified.

Possibility of hazardous reactions: there are not hazardous reactions identified.

Conditions to avoid: contact with heating and incompatible materials. Direct exposition to the sun light.

Incompatible materials: Bases and strong acids, aluminum, copper, iron, non-alloy steels and galvanized surfaces.

Hazardous decomposition products: hydrogen chloride release due to heating over the decomposition temperature.

SECTION 11 – TOXICOLOGIC INFORMATION

Acute toxicity through oral way or ingestion

According to the available information, the classification criteria are not complied.
Orally or ingestion: DL50 rats (male / female) > 2.000 mg/kg bw.

Acute toxicity for inhalation

According to the available information, the classification criteria are not complied.
Through inhalation: CL50 rats (male / female) 4 h > 5 mg/l (air).

Acute toxicity through skin

According to the available information, the classification criteria are not complied.
Through skin: DL50 rats (male / female) 24 hs. > 2.000 mg/kg bw (aluminum chlorohydrate).

Corrosion / skin irritation.

Corrosive for skin: category 2.

Severe eye damage / eye irritation.

It causes severe eye irritation: category 1.

Breathing sensitivity.

According to the available information, the classification criteria are not complied.

Skin sensitivity.

According to the available information, the classification criteria are not complied.

Mutagenicity in germ cells.

According to the available information, the classification criteria are not complied.

Carcinogenicity.

According to the available information, the classification criteria are not complied.

Reproductive toxicity.

NOAEL: 90 mg Al / Kg corporal weight / day.

Specific organs toxicity (simple exposition).

No information available.

Specific organs toxicity (repeated exposition).

No information available.

Aspiration hazard.

There is not aspiration risk based on the chemical structure.

SECTION 12 – ECOTOXICOLOGICAL INFORMATION**Ecotoxicity.**

Acute toxicity in fishes (Pimephales promelas) CL50 (96 h): 609 mg/l. NOEC (96 h) < 156 mg/l.

Acute toxicity in aquatic invertebrates (Daphnia Magna) CE50 (48 h): 0,212 – 1,26 mg Al /l.

Acute toxicity in microorganisms (activated muds of domestic residual waters): CE50 (3 h): >100 mg/l.

Acute terrestrial toxicity: without information.

Chronic toxicity in fishes in an early life period (Pimpephales promelas): NOEC (7 days): 770,5 µg/l (fresh water).

Chronic toxicity in aquatic invertebrates (Ceriodaphnia dubia): NOEC (8 days): 3,5 mg/l.

Persistence and degradability.

Not applicable (inorganic substance).

Potential of bioaccumulation.

Non bioaccumulable substance.

Mobility in soil.

No information available.

13.-SECTION 13 – FINAL DISPOSAL CONSIDERATIONS

Treat contaminated water with alkaline material (sodium carbonate or hydroxide, calcium carbonate or hydroxide, etc.). Contaminated absorbents, used containers and generated wastes / neutralization water will be disposed according to the applicable local norms.

SECTION 14 – TRANSPORTATION INFORMATION**Ground transportation (ADR/RID).**

ONU Number: 3264.

Official transportation designation (ONU): UN 3264 corrosive liquid, acidic, inorganic, (NOS).

Type: 8.

Packing group: III.

Label ADR / RID: 8.

Hazard code: 80.

Environmental hazards: no.

Exempt quantity: 100 kg.

Sea transportation (IMDG/IMO).

ONU number: 3264.

Official transportation designation (ONU): UN 3264 corrosive liquid, acidic, inorganic (NOS).

Type: 8.

Packing group: III.

IMDG Label: 8.

Environmental hazard: not a sea pollutant.

Air transportation (IATA/ICAO).

ONU number: 3264.

Official transportation designation (ONU): UN 3264 corrosive liquid, acidic, inorganic (NOS).

Type: 8.

Packing group: III.

Environmental hazard: no.

Transport in bulk with arrangements of the annex II of the Marpol 73/78 Agreement and the IBC Code: not applicable.

SECTION 15 – REGULATORY INFORMATION

The aluminum polychloride is included in the list of the Mercosur Agreement – General norms for the transportation of hazardous goods.

SECTION 16 – ADDITIONAL INFORMATION

NFPA Risk Classification.

Health: 1
Inflammability: 0
Reactivity: 1 (*)
Special: --

(*) Only if it heats.

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