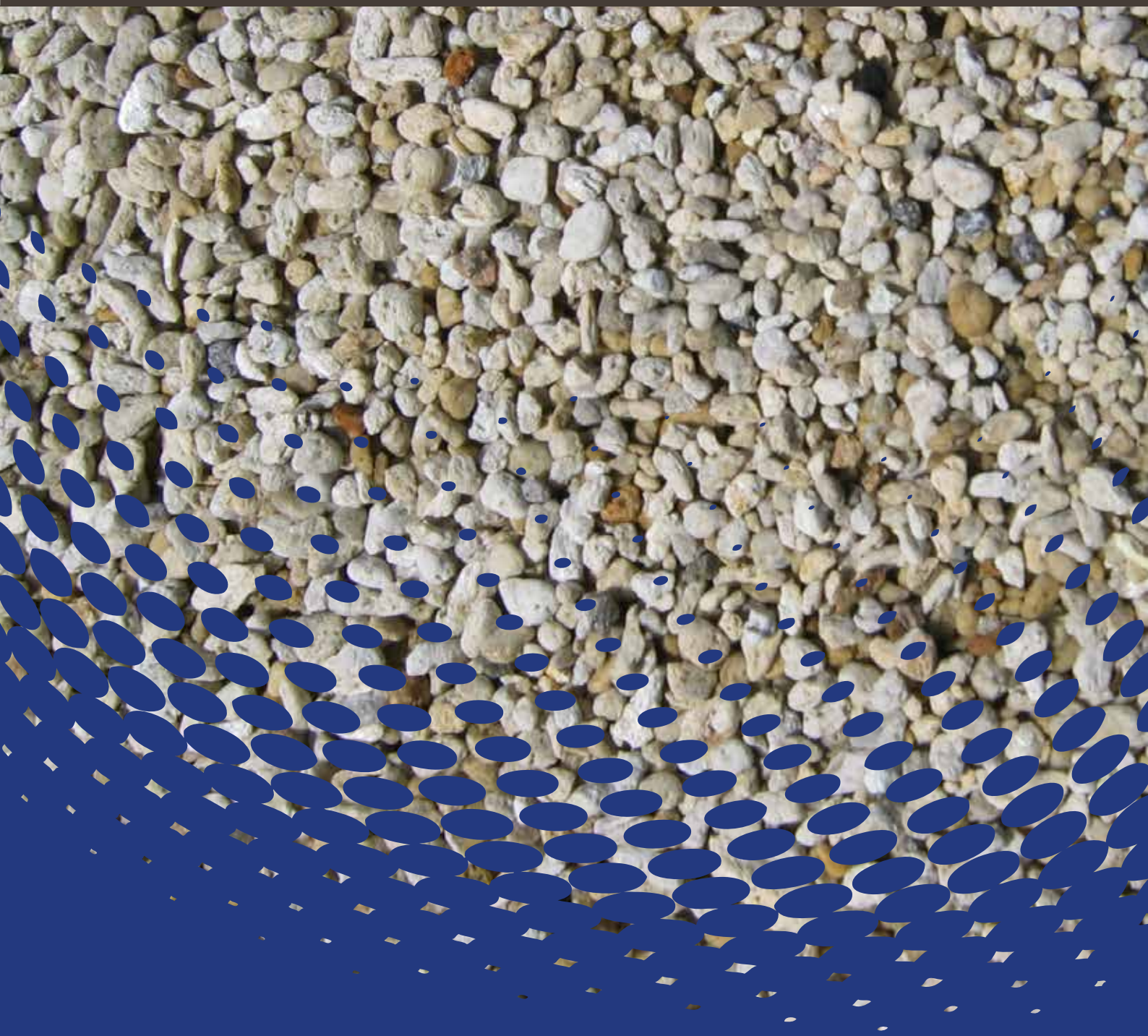
Speciality Milled Pumice

The World's Finest Abrasive Pumice



Inpro

www.perlite.co.nz

OUR COMPANY

Industrial Processors Ltd (INPRO) was incorporated in 1996 with a focus on the extraction, processing and beneficiation of perlite in New Zealand. We have production facilities in both Auckland and Sydney, and our product range has developed over the years to encompass a number of minerals including pumice, vermiculite, cellulose and sand.

► Pumice

INPRO operates a pumice and sand quarry in the central north island of New Zealand, near Lake Taupo. Various grades of washed and screened pumice are supplied, including those for horticulture and construction and highly processed and milled grades for mild abrasive applications (e.g. printed circuit board cleaning, soaps, dentistry and exfoliants).

► Perlite

INPRO quarries a perlite resource in the central north island of New Zealand, with an estimated extractable volume of over 1,000,000m3. We mine and primarily process the ore from this resource before the graded perlite is transported to our Auckland factory.
A large proportion of INPRO production is exported into the foundry, cryogenics, pipe insulation and filtration markets in Asia, Australia and the Middles East. We also operate a perlite expansion plant supplying products for the domestic horticultural, construction and cryogenic markets in New Zealand.

► Vermiculite

INPRO is the appointed agent of Australian Perlite Pty Ltd for the distribution of vermiculite in New Zealand. Applications for exfoliated vermiculite include fire proofing, refractory blocks, brake linings and horticulture.

► Cellulose

INPRO is the appointed distributor in New Zealand of the cellulose products produced by Creafill USA Ltd.

► Sand

From the pumice and sand quarry we also produce washed and graded sand for the domestic plaster and concrete markets. Specialty dried sands are processed in Auckland for foundry, construction and industrial applications.

COMPETITIVE ADVANTAGES

INPRO milled pumice is chosen over competing international ores for the following reasons:

- The spherical nature, and Mohs hardness of our pumice.
- Our company can supply on demand with a minimum of delay or fuss.
- New Zealand is a major exporter of refrigerated perishable cargoes. As a result, shipping options from Auckland to all major international ports are available with excellent frequency and transit times.
- Our products are always professionally packed and shipped.
- Our quality control procedures maintain the supplied pumice in specification at all times.

INPRO PUMICE

INPRO specialise in producing finely ground pumice (1mm down to 5µm) into grades specifically applicable to the following industries:

- Facial and body scrubs – dead skin cell exfoliation
- Abrasive soaps – dirt and grime removal
- Dental supplies and paste – teeth cleaning and polishing
- Television glass – grinding and polishing
- Electronics – circuit board metal preparation and cleaning
- Calcium silicate insulation – as a ceramic and tile raw material
- Foot and hand scrubs – callus, dead skin and cuticle sloughing
- Kitchen counter tops – stubborn stain removal and surface polishing
- Car polish – old wax removal and painted surface polishing.

► What is pumice?

Pumice is a volcanic ash which is formed when lava is permeated with gas bubbles during the solidification process. Pumice is very fragile and easily breaks apart into small particles.
Because lava has similar properties to glass, pumice is very abrasive but unlike glass it is very soft. Pumice is the softest abrasive media in use today.

► Why is pumice used in consumer and commercial applications?

Pumice is used as a mild but effective abrasion suitable for a multitude of uses, including pumice soap and pumice hand cleaner. Pumice gives soap a light abrasive quality which easily removes almost any grease or grime. Because pumice is a soft media and a natural mineral, it isn't harsh or toxic to people or the environment.

For commercial applications, Pumice has become the most widely used grit in many manufacturing processes which require a mild abrasive characteristic. Pumice can also be ground down into a micro-fine powder for handling the lightest of abrasion needs.
Today, pumice is used more than just as an abrasive soap. Its use as a versatile and mild abrasion additive is continually being expanded and innovated.

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► How should pumice be applied?

Regardless of the application, it is important to perform tests and formulation procedures in order to determine the best grade of pumice to use. For example, the grain sizes required in hand soaps differ from facial uses. Using the incorrect grain size could prove ineffective and possibly damaging to an applied surface.

One other very important factor to achieving desired results is consistency during manufacturing and grading of particle size across multiple batches. Only suppliers that constantly monitor and check for particle size and shape conformity should be chosen. This ensures quality of the final product.

For maximum effect and proper use, circular motions should be used when applying abrasive soap, scrubs, cleaners or polishers so as to prevent "burning" an area from concentrated actions.
Abrasive cleaners should not be used with a large amount of force. It is not necessary and will only cause scratches or redness. Instead, a very light application of the scrub should be used, followed by a thorough wash and dry of the cleansed area. If polishing the finish on a car, simply remove any residue with a soft lint-free cloth.

Moderation and a light touch are the keys to using any abrasive soap, cleaner or polisher.

Chemical Analysis		Physical Properties	
Silica	74.0%	Specific Gravity (g/ml)	2.2-2.4 g/ml
Aluminum Oxide	14.0%	Colour	Light Brown
Ferric Oxide	1.0%	Fusion Point	1260 - 1340 C
Calcium Oxide	1.3%	Softening Point	871 - 1093 C
Magnesium Oxide	0.3%	Test Methods	
Sodium Oxide	3.0%	1 Chemical by XRF	
Potassium Oxide	4.0%	2 Moisture by drying 110 C for 1.5 hrs	
Titanium Oxide	0.1%	3 LOI - muffle furnace at 1100 C/1.5 hrs	
Heavy Metals	Trace	4 Spec gravity by water immersion	
Sulphate	Trace	5 PSD by dry sieve on BS410 sieves	
Moisture	0.5%	6 Loose bulk density by DIN 53194	
Loss in Ignition	2.5-3.2%		
pH (water extract)	6.5 - 8.0		

Micron	British	US	Fine	Medium	Coarse
0.600mm	25	30			0-15%
0.300mm	52	50		0-10%	90-100%
0.150mm	100	100		40-60%	
0.106mm	150	140	0-10%		
0.075mm	200	200		85-100%	
0.045mm	350	325	80-100%		

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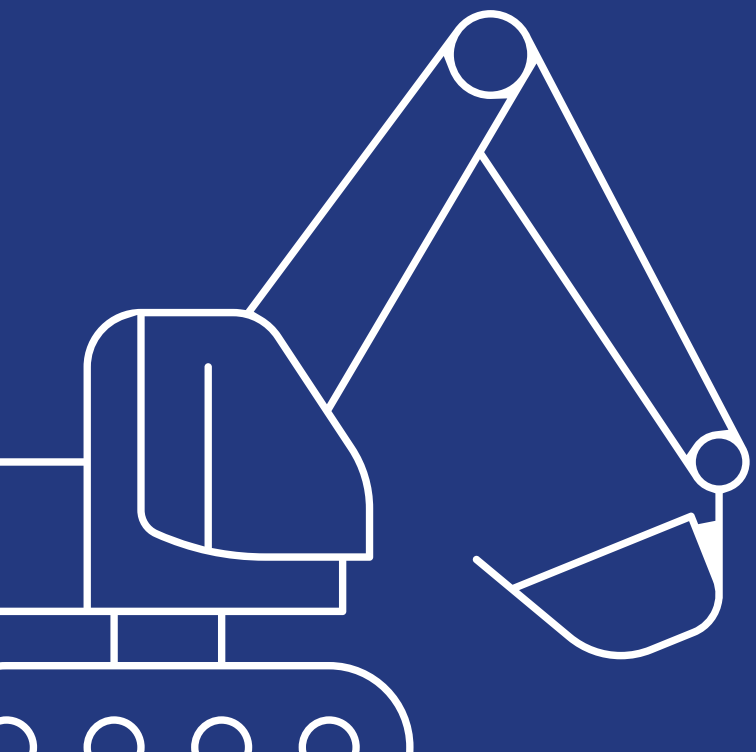

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