



CRYOPERL® – OPTIMUM CHARACTERISTICS FOR CRYOGENIC INSULATION.



Perlite contains 2 to 5% water of crystallisation, meaning it is capable of expanding enormously. The raw, ground perlite is expanded in a special furnace in a processing plant at approximately 1,000 degrees Celsius: it expands to 15 to 20 times its original volume.

CRYOPERL® – from specialists with decades of experience

Over more than 60 years we have built up our reputation as a leading global brand for perlite-based industrial products. We supply many sectors with reliable products made from carefully refined perlite, including the construction and chemical industries, the food and drink and cosmetic/pharmaceutical industries, the professional horticulture sector and, of course, low-temperature insulation.

The raw material for CRYOPERL® is perlite. Insulation using natural raw products made from volcanic rock have been used for decades as proven and valued low-temperature insulation materials. Perlite has exceptional insulation properties which provide a reliable and constant insulating effect.

We extract the raw material ourselves from a mine on the Greek island of Milos; research, development and, of course, refining the perlite to create the specific end product are completed in interlinked processes at our three locations in Germany. This forms the basis for the many benefits that we are able to offer you with CRYOPERL®: reliable delivery, efficient logistics, consistently high product quality, state-of-the-art equipment, and highly professional, qualified engineers for installing and disposing of the insulation material. These are the benefits that make CRYOPERL® the first choice for well-known players such as Linde and Air Liquide.

It has good flow properties which means that the material itself can reliably accommodate complex plant geometries. This not only speeds up the process but is also a real bonus in terms of safety: plant chambers do not need to be entered when filling or removing the insulation material.



Unbeatable 24-hour on-site service impresses at every level.

Operational safety is the watchword: CRYOPERL® is not flammable, is chemically inert and pH neutral, and can be disposed of in an environmentally safe manner without any problems after being replaced – alternatively, it can be ecologically reused.

TAKE ADVANTAGE OF VALUABLE SERVICES FROM KNAUF.



WEBSITE

Find information, download technical documents or request a non-binding sample calculation – all in a few clicks on our website.

www.cryoperl.de



QUALIFIED PARTNER

We are happy to carry out the service for you on site in accordance with the defined requirements. And our long-term partner will be on hand to assist with qualified experts and the most up-to-date technology.



MATERIAL RECOVERY

We can also take care of the disposal of old material if required. So that you can give your business your full attention.

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CRYOPERL® – WE CARE FOR COLD.

Full service cryogenic insulation.



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Knauf Ceiling Solutions
Ceiling systems

Knauf Bauprodukte
Professional solutions for home

Knauf Design
Surface expertise

Knauf Gips
Drywall construction systems
Soil systems
Plaster and facade systems

Knauf Insulation
Insulation systems for renovation and new construction

Knauf Integral
Gypsum fiber technology for floors, walls, and ceilings

Knauf PFT
Machine technology and systems engineering

Marbos
Mortar systems for pavements in underground construction

Sakret Bausysteme
Dry mortar for new construction and renovation

YOU ALREADY HAVE ENOUGH TO DO.

Refitting a cryogenic plant is a highly complicated project – creating a new one, even more so. It presents enormous challenges for those responsible for the work. Numerous individual process steps have to be planned, coordinated and safely implemented. And all of this within a defined time frame and costing schedule.

Given the size of this type of project and the vast number of extremely important elements, the question of technical insulation is often not given the highest priority. However, those responsible for the project still need an answer for this – and an answer to all the questions concerning planning, materials, availability, reliability, downtime and, of course, cost.

CRYOPERL® – making it easy, keeping it simple

CRYOPERL® is a full-service cryogenic insulation package. CRYOPERL® simplifies the whole process of looking after your plant and deals with all your questions on cryogenic insulation – one important element fewer to take up your time. Just provide us with the ready-to-fill plant and tell us the fill points – we'll handle the rest.



Full service for every cryogenic application:

- › Filling or refilling your plant with perlite extracted and refined by us
- › Meeting your requirements in cubic meters
- › Matched to the geometry of your plant
- › Within the agreed time period
- › Complete offer with transparent pricing structure

CRYOPERL® is suitable for oxygen and nitrogen plants up to 70 metres high.



We come to you to minimise your plant downtime.

CRYOPERL® – THE RIGHT QUANTITY, AT THE RIGHT TIME, WHERE IT'S NEEDED.

CRYOPERL® is a suitable insulation material for all double skin constructions, whether evacuated or not. If required, we can supply CRYOPERL® in bulk bags up to 1.7 m³, for example for small to medium sized objects or for refilling a construction. Our mobile plant technology allows perlite to be expanded and refined to CRYOPERL® on site in the immediate vicinity of the plant. This option is particularly useful when filling large to very large plants – not least for ecological and economic reasons. Expanding the material on site reduces shipping costs considerably.

Here's how it works full-service cryogenic insulation with CRYOPERL®

All you have to do is provide Knauf Performance Materials with the essential basic data – that's all there is to it! We use this to generate a complete customised package for you. Clear, comprehensive and completely transparent in every respect.

What we need from you:

- › **Requirement in cubic meters** (volume to be filled)
- › **Plant characteristics** (cross section, height of filling openings and plant, filling quantity etc.)
- › **Preferred delivery date** for new filling or refilling
- › **Maximum possible downtime**
- › **Ready-to-fill plant**

What we offer – the complete CRYOPERL® service:

- › **Material costs**
- › **Logistics/delivery**
- › **Service/engineering** Suction (for refurbishments) and filling
- › **Removal of old material if required**
- › **Backfilling**
- › **Time plan**

Close to our customers with our mobile system technology which reduces freight costs considerably – whether in Germany or across Europe.

CRYOPERL® – RELIABLE AND FLEXIBLE WORLDWIDE.

Qualified CRYOPERL® engineers know how to minimise the downtime of your plant and how to complete the evacuation and refilling process quickly and reliably. To achieve this, we use mobile technology with modern vacuum silo vehicles.

When expanding on site, we also use mobile expansion furnaces. The units, which are the size of a standard 40-foot ISO container, can be used throughout Europe and worldwide at any suitable location.

CRYOPERL® – the benefits of a complete package:

- › Planning peace of mind due to a complete and transparent package
- › Transparent calculations due to clear cost structure with itemisation
- › Minimum downtimes due to reliable planning, modern technology, proven materials, personnel from our partner Imgrund qualified to recognised standards, and controlled processes
- › Operational safety due to proven materials, qualified processes, and procedures to recognised safety standards
- › Optimised plant efficiency due to short reaction times, free topping up if required after the insulation settles as a result of plant vibration during operation
- › Short lead times due to flexible use of time and space, personal contact, 24-hours service on site

