

EXPANDED PERLITE

CRYOGENIC INSULATION

INTRODUCTION

EXPANDED PERLITE (EP) is an economical insulation for high and low temperature and cryogenic applications. It is widely used because of its low Thermal Conductivity, cost, ease of handling, non-combustibility and low moisture retention.

Perlite Loose Fill Insulation provides dependable results at temperatures ranging from -273°C to $+1000^{\circ}\text{C}$.

WHO WE ARE

Amol Dicalite Limited has 7 Portable Plants, designed specifically for site expansion work based on the experience gained through over 40 years of doing this work in the field. These Portable Plants incorporate the most reliable technology that we have been able to develop over these many years of experience. All these Portable Plants are capable of working anywhere in the world. The Portable Plants are designed in a modular manner. They are shipped in our own 20' containers. Erection and dismantling of plant takes very minimum time. Also we have specially designed internal vibration system for double wall storage tanks like LNG that is successfully developed and proved very efficient. We can give our clients just about any level of forced settlement they require to pre load the resilient blanket on these tanks.



ASU



LNG Tank

EXPANDED PERLITE IS USED TO INSULATE...

COLD BOX OR AIR SEPARATION UNIT

STORAGE TANKS CONTAINING ETHYLENE, PROPYLENE, LOX, LIN, LAR, ETC.

LIQUEFIED NATURAL GAS (LNG) IN STORAGE VESSELS AND SHIPS

VESSELS STORING ANHYDROUS AMMONIA, PROPANE, LPG AND CHLORINE

CRYOGENIC STORAGE VESSELS CONTAINING LIQUID OXYGEN & NITROGEN

DESCRIPTION :

Raw Perlite is a siliceous volcanic glass, containing 2 to 5 percent combined water. When rapidly heated to the proper temperature, the volatilization of the water, coincident with the softening of the glass, causes the Perlite to suddenly expand or "pop" into light weight cellular particles or "bubbles". These bubbles account for the excellent insulating properties and light weight of Expanded Perlite. It is because of these unique properties that Perlite has found wide acceptance in the insulation of cryogenic and low temperature storage tanks, cold boxes, shipping containers and food processing facilities. In addition its thermal properties, Perlite is relatively low in cost, easy to handle and non-flammable.

APPLICATIONS :

1. LOW TEMPERATURE AND CRYOGENIC INSULATION : Increased production of liquefied gases having boiling point as low as -270°C has created a demand for storage facilities capable of economically reducing evaporation losses. While the storage vary as to configuration, type of supports and accessory equipment, the majority of vessels are of double walled construction and the annulus is filled with Expanded Perlite.

2. ATMOSPHERIC SERVICES : The Thermal Conductivity of Expanded Perlite insulation under atmospheric pressure conditions has been seen to correlate directly with density, while Perlite grading has only a minor effect on Thermal Conductivity. Expanded Perlite will break down if subjected to excessive handling and this crushing of particles will result in increased density and a higher Thermal Conductivity.

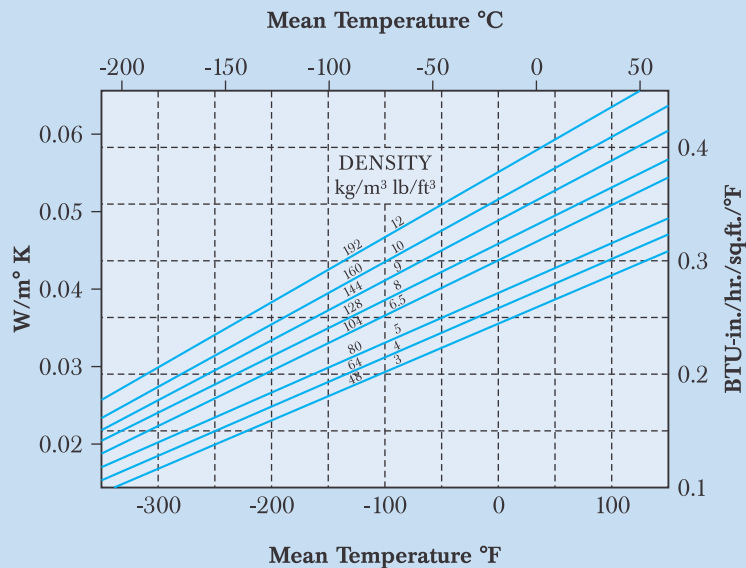
ON-SITE PERLITE® CRYOGENIC INSULATION:



PORTABLE PLANTS

AMOL Dicalite Limited has insulated number of Double Wall Storage Tanks for LNG, Ethylene, Propylene, LOX, LIN, LAR, LPG and Cold Boxes (ASUs) in India, Angola, China, Egypt, Qatar, U.S.A. and other countries.

Amol has experienced people ("Perliters") who operate a fixed Perlite Plant at our factory also operate the Portable Plants since 1990 to execute cryogenic insulation jobs worldwide. The company has a large and highly trained team. The team is very well equipped and well trained to execute jobs in time, on schedule and in budget.



FORCED COMPACTION : AMOL uses special VIBRATION TECHNIQUES pneumatically operated for achieving compaction of material which slows down the settlement rate in tanks. The vibration of tank can be done externally or internally depending on the design of the tank.

CHARACTERISTICS :

DENSITIES : Available in a range from 30 to 190 Kgs/M³. Typical compact density ranges from 55 to 75 Kgs/M³ for low temperature application.

GRAIN SIZE : Particle size varies from 4.00 to 1.2 mm depending on the grade required.

MOISTURE : Free Moisture maximum 0.5%.

ORGANIC CONTENT : Maximum 0.1%.

THERMAL CONDUCTIVITY : Ranges between 0.01 and 0.06 W/m²K depending upon density and temperature. (refer graph)

FIRE RESISTANCE : Perlite is non-combustible.

SAFETY : Expanded Perlite is classified as low risk product.

OTHER SPECIALITY PRODUCTS / APPLICATIONS

FILTERAIDS (Industrial Filtration) | PERLITE ORE (Metallurgical) | SUPER SOIL (Horticulture)

FILLERS (Anti-Caking Agent) | RIGID PIPE SECTIONS & PANELS (Hot Insulation)

Manufactured By :



AMOL DICALITE LIMITED

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