Installation guidelines Nr.1
CERAMIC AIR-BONDED PLASTICS

STORAGE
Plastics should be stored indoors in a cool area away from sources of radiant heat.
If stored outside the material should be protected from direct sunlight.
Storage in freezing conditions should be avoided. Never install frozen material.

PREPARATION OF THE AREA TO BE LINED
Anchors
Before starting any ramming operations, anchor clips and support plates should be attached to the casing.

Forms
In many cases plastic refractories do not need forms except for roofs, burners or openings in the linings.

PLACING PLASTIC REFRACTORIES
The pre-sliced slabs packed in cartons permit an easy installation of successive rows. In order to achieve a firm and homogeneous lining, each place is to be rammed 3 to 4 times by a pneumatic or a hand hammer. The ramming must take place evenly and thoroughly, so that no gaps remain.
After ramming, the surface must be roughened intensively before installing the following layer in order to achieve a optimal junction.
Using pneumatic rammers fitted with 50mm dia. metal or rubber heads should carry out ramming.
If the plastic material is not installed behind a shuttering, then the rammed wall tends to bulge due to vertical ramming. Therefore the bulge (e.g. with a flat spade) is to be cut on the desired wall thickness.
Never ram back the bulged surface on the desired wall thickness.
To control the location of shrinkage cracks, vertical contraction cuts should be made with a trowel approximately every meter, to one third of the lining thickness.
Important point:
_Ramming of the walls should always be carried out in the vertical direction, i.e. perpendicular to the ground.
_Ramming of the roof should always be carried out in the horizontal direction, i.e. parallel to the floor or the roof.

FINISHING WORK AFTER RAMMING
To allow steam to escape during the initial firing, it is advisable to vent the installed plastic on 250mm centers for two thirds the lining thickness using a 3mm-diameter rod. Vent holes should be angled up from the hot face at 30° to 45°.
If the initial firing is not to be carried out soon after installation, then all exposed surfaces should be covered with polythene to avoid the formation of a surface crust.

DRYING AND HEAT UP
Each monolithic refractory lining has to be dried. In the case of **ceramic** air-bonded plastics, it is recommended to heat up the lining after completion as soon as possible.
Linings of plastics with initial air-bond can remain however longer time in unfired state, since they achieve a certain firmness at ambient temperature.
The lining has to be protected in principle from frost, by keeping the furnace temperature higher than 0°C.

A standard curve applying to all situations does not exist, each lining being a particular case. Please contact Calderys for specific drying instructions linked to your installation.

By themselves standard plastics may be initially heated up at rates of up to 50°C/hr.
Therefore the heat-up schedule should take into consideration other elements of the installation such as the drying of dense and insulation castable, thermal expansion of masonry etc…

SAFETY
Protection measures indicated in our MSDS should be observed.

DISCLAIMER
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Users are advised that these guidelines are necessary conditions but may not be sufficient. Specific conditions, such as the nature of the surfaces, the thickness of the linings or their intended use should be taken into account when installing the products.