

SWITCHING TO PENTANES

MINI-TANK 1100 LT FOR THE POLYURETHANE FOAMING APPLICATIONS



Pentanes application in POLYURETHANE foaming is part of Sinteco's know-how since ever. This led Sinteco to become a leading manufacturer of PENTANES SYSTEMS at global level with worldwide customers and plants installed in all continents.

Switching to Pentane is a drastic change in production: from low-performance non-flammable blowing products to highly performing flammable blowing products.

Passing from foaming with H₂O or HFC generation to using Pentanes comes as a revolution of the production process for most of the companies operating in the polyurethane sector.

Today, the polyurethane market is moving towards new high-performance enviro-friendly targets, such as the need to improve insulation. Thanks to ECODESIGN and RE-POWER-EU, these targets are becoming increasingly important in a number of different productions / applications.

PENTANE FAMILY PRODUCTS:

- N-PENTANE
- ISOPENTANE
- CYCLOPENTANE
- MIX CYCLO-ISOPENTANE
- SPECIAL MIXTURE



Pentane application in foaming processes is not an absolute novelty as this family of blowing liquids started being used instead of HCFC Freons early in the Nineties.

The introduction of these products considerably improved the thermal insulation factor in the manufacture of several panels, equipments, cabinet and electric appliances, first of all household refrigerators.

However, investing in a fixed plant for Pentanes use can prove rather hard for many companies whose consumption is not high enough to justify the investment, and where do not have enough space where to stock a flammable liquid in a fixed storage-tank.

Sinteco has developed an extremely versatile storing system for these liquids that provides a solution to many problems connected with spaces, safety distances, potential fire load... in comparison with the installation of a fixed storage tank.

Using our portable pressure **MINI-TANKS**, with a capacity of 1100 lt, that are the same size of a pallet 1125 x 1125 and a height 1780 mm, makes Pentanes available also to those businesses that have not been able to use them so far.

Using these 6 bar pressure MINI-TANKS made of high thickness steel and equipped with the necessary safety systems, SINTECO can deliver all Pentane types, either pure or blended.

Sinteco's know-how in plant design and manufacture includes the realisation of an automated system for the management of several MINI-TANKS in series to avoid that the foaming process might stop when the product is finished, thereby guaranteeing production continuity by means of an easy and safe system.



THE BENEFITS OF THIS SOLUTION

- Safety to the highest level
- No dangerous operations requested from the personnel involved
- Flexibility in delivery volumes
- Limited amount of flammable product in the factory
- Easy and fast handling
- Possibility to manage different blowing products depending on current production
- Smooth continuous or batch production



Furthermore, Sinteco can give you all the plant engineering support to adjust the production system **on the foaming machine currently in use** to use Pentanes in the process foaming in total safety. We carry out these process safeguards in various production processes including polyurethane foaming and many other plastic materials for over 30 years.

ISOLATION IS YOUR TARGET?

In cooperation with the System-Houses that supply the raw materials (Polyol/ Isocyanate), Sinteco's MINI-TANK solution would enable you to improve the **K factor (thermal insulation Lambda)** using a blend of **special blowing products** studied ad hoc to provide foam with a high isolation capacity.

As confirmed by our tests in different clients production process, we obtained a **22.5 to 23%** increase of the lambda value, which is an essential feature for the manufacturers of panels, refrigerating rooms, refrigerated cabinet, water-boilers, accumulation systems, refrigerators, glass showcases, piping and ducting, etc.

BETTER LAMBDA = SAVE ENERGY

