

## Installation Guideline

### isoplan® as Backup Insulation

#### Introduction

One of the basic applications of isoplan® materials is the backup insulation in converters, furnaces, ladles, ... Due to isoplan®'s good processing and handling properties it, is an ideal material used as backup insulation in ferrous and non-ferrous metals industry as well as in oven constructions and further applications all over the world. In this kind of applications isoplan® is typically in contact with the steel shell and the refractory material itself.

#### Storage Conditions

Detailed information can be found in our TechInfo 03 – Storage Conditions Frenzelit Insulation Products.

#### Preparation of installation surfaces

The steel casing, where isoplan shall be installed, should be clean and free from oil, fat, grease and residuals of former refractory materials. The surface must not contain residues, e.g. from former refractory linings.

#### Installation of isoplan® as backup lining

isoplan® can be installed in dry or wet condition. The recommended method depends on the geometry of the existing surface and the material thickness.

#### Dry installation when possible

It is recommended to install isoplan® dry, provided that the material's flexibility is sufficient for the given surface. The thinner the material the better is the formability – see following picture.



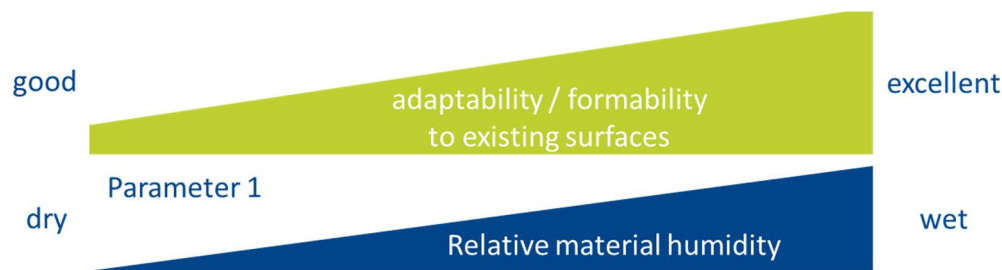
Picture 1: Relation between material thickness and flexibility

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### Wet installation if necessary

If the existing geometry requires a higher grade of flexibility, isoplan® can be moistened – either by immersing the material in water or by applying the water with a brush; other methods are also possible. The water for moistening isoplan® should be drinking water quality. The sogrier the material, the smaller diameters can be bent – see the following picture.



Picture 2: Relation between material humidity and flexibility

### Adhesive

Basically, any kind of adhesive can be used for fixing isoplan on the surface of the casing. The adhesive used for fixing isoplan® to the steel shell doesn't need a high temperature resistance as isoplan® itself. It is only an assembly aid and it is not needed in the application. isoplan® is generally hold on position due to the hot face refractory materials. For instance a refractory mortar can be used for the assembly process.

### Drying and heating up

isoplan® releases water very easily. Thus, the standard drying times and procedures for refractory concrete or brickwork are also sufficient for drying isoplan® in the backup lining.

### Safety

Please find all necessary information about the occupational safety in the material safety information sheet.

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### Disclaimer

Due to the variety of possible further processing, installation and operating conditions, experience shows that it is not possible to draw any binding conclusions about the behavior of our products in a system. Therefore, it is especially the responsibility of the operator, to check the suitability of the chosen product for the relevant application.

The installation of our products and materials must be executed by professionals under consideration of the applicable guidelines. Guidelines as well as further useful information can be obtained on our website ([www.frenzelit.com/techinfos](http://www.frenzelit.com/techinfos)). Our application engineers are pleased to assist you for any non-binding consultation.

Application engineering questions?

We help you at: [gaskets@frenzelit.com](mailto:gaskets@frenzelit.com), Phone: +49 9273 72-140

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