Version 1
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TECHNICAL DATA SHEET
TOGO 30
(open-cell polyurethane)

1. GENERAL DESCRIPTION

TOGO 30 is two-component polyurethane systems (polyol and isocyanate) created in order to obtain open-pore polyurethane foam. Freon is not used for foaming of the systems **TOGO 30**.

Polyurethane system **TOGO 30** is made according to European Union Regulation No. 305/2011, responsibility for its contents lies solely with the manufacturer named therein. The system of assessment and verification of constancy of performance of the construction product performed under Conformity Assessment System 3.

2. HARMONISED STANDARD

TOGO 30 harmonised standard: LST EN 14315 -1:2013 "Thermal insulating products for buildings. In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products. Part 1. Specification for the rigid foam spray systems before installation".

3. COMPONENTS

Two-component low density rigid foam **TOGO FOAM** is formed from:
Component A – ISO (MDI (Methylene diphenyl diisocyanate))
Component B – TOGO 30 (Polyol mixture with catalysts, flame-retardants, foaming agents and water.)
Production container (NET):
Component A: 250 kg.
Component B: 220 kg.

4. APPLICATION

Main use: for thermal insulation of residential, public, industrial and commercial buildings.

5. FEATURES OF COMPONENTS

Component A: a brown colour mixture of aromatic polyisocyanates based on diphenylmethane diisocyanate

Density at +25 °C	1,23 g/cm^3
Viscosity at +25 °C	200 ± 30mPa.s

Component B: multicomponent white colour liquid of liquid consistency

Density at +25 °C	1,38 g/cm^3
Viscosity at +25 °C	400 ± 50mPa.s

6. REACTION TIME OF TOGO FOAM DURING FREE-RISING TIME

Reaction time was measured in the laboratory environment (environment temperature +20 °C)

Start	3 ± 1 sek.
Consistency / jelly	8 ± 2 sek.
Consistency dry surface	10 ± 3 sek.

7. RECOMMENDED SPRAYING CONDITIONS

a) Foam systems TOGO 30 shall be sprayed using high pressure equipment by heating components and mixing them in a 1:1 ratio by volume.
b) Density of the sprayed foam TOGO 30 is 27 - 33 kg/m3, depending on the amount of sprayed layers.
c) **Before starting work, Component B has to be mixed thoroughly.**
d) Heating the components by recirculation and spraying:

Component A	No need to mix
Component B	It needs to be mixed continuously and intensively with a static mixer

e) Reactor temperature settings:

Recirculation (during blowing)	~ +30 °C

f) Spraying temperature settings (**actual**):

Component A	From +38 to +45 °C *
Component B	From +38 to +45 °C *
Hose temperature	From +35 to +45 °C
Pressure parameters	From 80 to 110 bar
Ambient temperature	From +15 to +38 °C *
Surface temperature	From +15 to +35 °C *
Ambient humidity	From 45 to 50 %
Humidity of porous surfaces up to	18%

* it is recommended to measure temperature (actual) by the pyrometer.

g) Surface has to be clean, dry and free of dust in order to ensure a good adhesion of formed thermal-insulating foam with the surface.
h) Spraying on cold and wet surface may cause incorrect formation of polyurethane foam, which may affect quality parameters, dimensional stability and adhesion. Foam reacts slower (it takes longer for

it to grow) and not always grows to thickness of 100 %. In this case the first layer is used as the "primer" (flash) which heats the surface for the second layer.

8. PRODUCTION STORAGE CONDITIONS

IMPORTANT:

- **TOGO 30** system components are sensitive to humidity and has to be stored in sealed containers;
- Storage temperature must be from +15°C to +25°C;
- Lower temperature significantly increases viscosity of polyol, thus aggravating spraying and increasing possibility of crystallization in isocyanate;
- Higher temperature may cause changes in polyol.
- In order to retain the described features of the systems, the barrels have to be stored tightly closed!
- The term of validity of properly stored components:

Component A (isocyanate)	9 months
Component B (polyol)	3 months

9. SAFETY RECOMMENDATIONS

There is no danger when systems **TOGO 30** are used correctly. Avoid contact with skin and eyes. All instructions indicated in the safety data sheet shall be implemented.

The above mentioned information is not mandatory; it is for guidance purpose only. The legal or natural persons providing insulation services shall be responsible for the possible consequences of non-compliance with the recommendations.