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BASF Performance Materials
Construction

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We would like to thank our customers
for their cooperation.

Constructing Tomorrow

Superb foam with the PU fixed poker from BASF.

Simple, fast and high-quality.

BASF
We create chemistry

BASF
We create chemistry

State-of-the-art technology
for sandwich panel production

The rake for every application

Many components are crucial for superlative quality in the production of polyurethane sandwich elements. Along with the precision-tuned formulation and efficient plant parameters, the quality of the final product depends on the foam laydown technique.

The revolutionary, patented rake technology of BASF Polyurethanes makes the production of high-grade PU and PIR sandwich elements simpler, more stable and more cost-effective.

The novel rake is a material-plus-technology combination that replaces conventional laydown devices. With its modular design, the patented rake can be adapted precisely to the construction panel being produced.

Improved technology, better foam

During the foaming process, the polyurethane pours from the outlets in a uniform laminar flow onto the lower cover sheet. The rake principle allows extra-even foam application, therefore achieving stable production conditions much faster than before.

The advantages of the rake principle:

Patented rake technology
Patent number: EP 2234732B1

- Even application of the foam with complete coverage of the lower facing
- Stable processing conditions are rapidly achieved
- Fine-cell structure of the foam produced
- Improved mechanical properties
- Sandwich panels with bubble-free top surface

Bubble-free surface:

Poker types for PU/PIR sandwich elements

Poker type	Length of distr. pipe [mm]	Output [kg/min]	Poker length [mm]	Minimum working width [mm]	Maximum working width [mm]
930 - 8	201	8 – 15	480	935	945
865 - 15	181	15 – 25	450	875	889
910 - 15	195	15 – 25	470	915	931
945 - 15	209	15 – 25	490	955	972
1090 - 15	243	15 – 25	560	1095	1111
1000 - 25	224	25 – 35	515	1005	1025
950 - 25	206	25 – 35	490	955	972
900 - 25	193	25 – 35	465	905	920
850 - 25	182	25 – 35	440	855	868
865 - 35	182	35 – 45	450	875	889
950 - 35	215	35 – 45	460	895	956
990 - 35	221	35 – 45	515	1005	1024
1216 - 10	262	10 – 20	590	1160	1178
1216 - 20	262	20 – 30	590	1160	1178
1216 - 30	262	30 – 40	590	1160	1178
1216 - 40	262	40 – 50	590	1160	1178

Convincing technological and economic benefits

Process costs not only become easier to estimate, but can also be demonstrably reduced. Rake application facilitates the complete wetting of the lower facing.

The outcome is a uniform, fine-cell foam structure that has up to 30 percent better mechanical properties than conventional techniques. Moreover, the panel displays a flawless surface that is free of pinholes.

The BASF rake is suitable for all conventional PU and PIR technologies. Elaborate conversions are not necessary, thus saving customers the cost of extra investment.

Currently, the patented rake is available for sale for everybody who wants to save on costly set-up time and eliminate start-up scrap at the beginning of production.

The PU rake brings simplicity, speed and quality to the production of high-quality sandwich elements.