



Jiangsu Yoke Technology

PhireGuardTM LF-11

PhireGuard LF-11

- The first Yoke Flame Retardant of the PhireGuard Family of Products
- To be used in Flexible and Rigid PU Foams
- Extremely low VOC's and Odour
- Quality Consistency



PhireGuard LF-11

- Visc = 65 cPs
- P = 9.5%, Cl = 32.5%
- Acidity < 0.1 mgKOH/g
- Water < 0.1 %wt
- **2 mp < 10 ppm**



BS5852, crib 5
(with synergist)

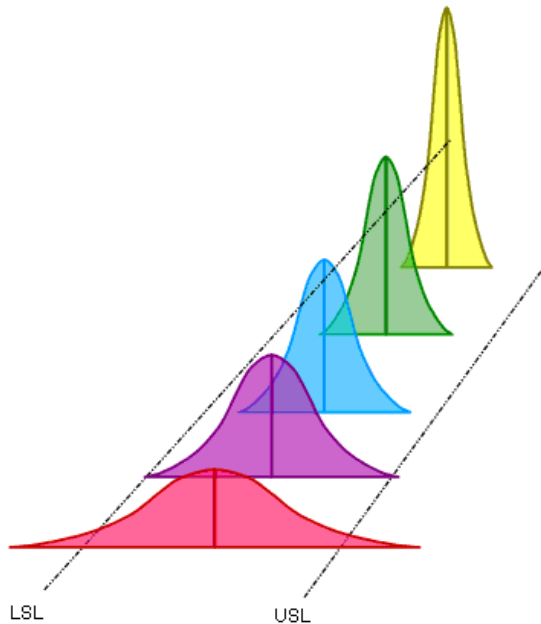


ASTM E84 Class II
DIN 4102, B2
DIN 4101, B1*
European Norm SBI*

*) *In combination with
other FR Technologies*

6-Sigma

- The launch of PhireGuard LF-11 is associated with the endorsement by Yoke of the 6-Sigma Process Control methodology



PhireGuard LF-11 Process Performance

$$Cpk = \min \left[\frac{(USL - \mu)}{3\sigma}, \frac{(\mu - LSL)}{3\sigma} \right]$$

Where Cpk is the process Capability Index, σ the standard deviation, μ the average, USL the upper specification limit and LSL the lower specification limit.

	LSL	USL	μ	σ	Cpk
Water, %wt	0	0.1	0.0346	0.0087	1.33
Acid, mg KOH/g	0	0.1	0.0181	0.0093	0.65
Viscosity, cPs	60	70	67.21	0.755	1.228
2 mp, ppm	0	10	2.425	2.223	0.363



In Summary

PhireGuard™ LF-11

A multi-usage Flame Retardant for Polyurethane Rigid and Flexible Foams aimed at applications Low Odour and Low VOC's performance are being aimed at.