Aerafin[™] 35

Automotive interior applications

Odor and VOC concerns with automotive interiors *Led by OEM requirements and consumer complaints*



Comparative testing/methodology

Aerafin 35 vs. Vestoplast 703



Material tested – Polymer only* (Not a formulated adhesive)

- Material form Pellet
- Unprocessed sample
- Tested at Imat-uve (An independent OEM accredited laboratory)







* Absolute test values for a formulated adhesive might change, but directional trends should hold

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Aerafin 35 odor test results VDA270 A3

Product	Odor rating (Imat-uve)	<u>s</u>	Headspace
Aerafin™ 35	2.5		80°C
Vestoplast® 703	2.5		2 hours Odor active

 \rightarrow VDA270 uses a limited scale with a **mixed intensity and hedonic tone** evaluation, so test has a high variance

 \rightarrow Aerafin 35 show **comparable** odor as Vestoplast 703 and is meeting OEM requirement (3)

Aerafin 35 odor test results VDA270 A3





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Aerafin 35 VOC test results VDA278

Product	VOC [mg/kg] (Imat-uve)	S S	Desorption
Aerafin [™] 35	1260		90°C
Vestoplast® 703	1930	- ()	30 minutes
		_ &	< C25

- \rightarrow As VDA278 evaluates emission up to C25 it also screens for **oligomeric content**
- → Aerafin 35 VOC is **comparable** to Vestoplast 703, but both are above OEM limit (100 mg/kg)
- \rightarrow In a formulated adhesive Aerafin 35 has a better chance of meeting VOC limit
- → Aerafin 35 does not emit any declarable or prohibited substances listed on GADSL

Aerafin 35 FOG test results VDA278



- \rightarrow As VDA278 evaluates emission up to C32 it also screens for **oligomeric content**
- → Aerafin 35 shows FOG values lower than competitive material but higher than targeted OEM level (250mg/kg)
- → In a formulated adhesive Aerafin 35 has a much better chance of meeting target FOG level
- → Aerafin 35 does not emit any declarable or prohibited substances listed on GADSL

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Aerafin 35 Fogging test results DIN75201-B

Product	Fogging [mg] (Imat-uve)	L	Condensation
Aerafin™ 35	4.04		100°C
Vestoplast® 703	9.23	Ō	16 hours
		838	Condensable constituents

→ As DIN75201-B screens for **condensable constituents** it is not restricted to oligomers

→ Aerafin shows **better fogging** performance than competition

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Aerafin 35 Fogging test results DIN75201-B



2 mg



Advantages for formulators Automotive interior application



Shows **comparable odor to** Vestoplast 703 (meets OEM requirement)



VOC is **comparable** to Vestoplast 703 (does not emit any declarable or prohibited substances listed on GADSL)



FOG significantly lower than Vestoplast 703



Shows **better fogging** performance than competition

Aerafin 35 based formulated adhesives will enable better VOC and FOG performance relative to competitive APOs

Approved for external use.

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