Executive summary for the hinge arm

SEM Desktop

The analysis software for SEM takes a case from the findings to the report. Here, the status of the hinge arm at the time of the decision, as an executive summary for everyone involved.

INGO KONRAD DENTZ IKAR SOLUTIONS OÜ · SEM ACADEMY NOVEMBER 2026 ANONYMIZED CASE UNDER NDA



IKAR SOLUTIONS · SEM · CUSTOMER REPORT

Executive Summary

S02 · Global warpage · Hinge arm of an exterior flap

SITUATION	S02 Global warpage · Hinge arm of an exterior flap · PP GF50 Project phase: Pre-series · Time window: Weeks, scheduled · Economic frame: Process only, no mold modification · Organizational constellation: OEM Warpage about 4.2 mm, flushness of flap to module not achieved. Customer audit and pre-series are a few weeks away.
STATUS OF THE ANALYSIS	M03 Anisotropic shrinkage / fiber orientation, confidence medium · set as hypothesis 4 findings, 4 in the reporting period · Status: Interventions planned
OPTIONS	• **Switch to LGF or isotropic grade** · M03 · Optimal solution · planned Blocked by the context: Gate relocation for fiber balance (blocked by K3 budget frame: Process only, no mold modification)
RECOMMENDATION	Switch to a long-glass-fiber PP-GF50 for the audit and pre-series. The grade meets the tensile strength required by the field environment and matches the compensation in the existing mold with a calculated 3.5 mm. PC-SAN-GF30 warps least, misses the minimum tensile strength and drops out. The price premium is justified by the sample run of six material concepts and the scatter of the series material in the scans.
UNCERTAINTY	Still open: M02 High overall volumetric shrinkage, confidence medium; M15 Mold thermal imbalance, confidence low Verification open Heat ageing on complete modules is still running. The new grade is sensitive in processing; observation in the pre-series settles this.
NEXT STEPS	1. M15 B3 · Warpage decomposed into shares by simulation Repeat measurement 2. M02 Hold pressure response at +10% Highest discriminating power, affects M03, M02, M01 (3 of 7) 3. M03 Warpage direction check Confirmation M03

Customer report, reconstructed and without dates. The engineer writes the recommendation; everything else comes from the case.

ONE DOCUMENT FOR EVERY READER, FROM THE SAME CASE

	Reads	For
MANAGEMENT	Situation, recommendation, uncertainty	Approval of the material
PURCHASING	Options and recommendation	Justification of the price premium to the supplier
CUSTOMER	First page, plus the supporting detail to expand	Status before the audit, content for D4 to D6 in the 8D
TEAM	Next steps and supporting detail	Test steps with planned dates, findings with confidence trend

NEXT IN THIS SERIES

Part 4 · Learning SEM

Taking the way of working into your own team.

CONTACT

Is a defect pattern holding up your launch or series production?

Describe part, tool and problem. The first assessment is free and without obligation. info@ikarsolutions.com