

Disruption in the 3M[™] Novec[™] 73DE Market Creates Significant Cost Savings with New Alternative for Customers

SITUATION

In December 2022, 3M[™] announced the voluntary discontinuation of the Novec[™] line, including the 3M[™] Novec[™] 73DE, by the end of 2025. This decision has significant implications for precision cleaning operations in industries such as aerospace, medical device, and general manufacturing, where the widely used Novec[™] 73DE fluid plays a crucial role. Best Technology is a nationally authorized 3M[™] distributor of the Novec[™] products.



AEROSPACE



MEDICAL DEVICE



GENERAL

CHALLENGE

When qualifying and revalidating for new process chemistries, there are several challenges that need to be addressed. Best Technology approached these challenges head-on, working together with our customers to identify the customers' top concerns.

Because of the short timeframe before 3M[™] Novec is discontinued, our goal was to find a suitable alternative for the 3M[™] Novec[™] 73DE fluid, without the need for additional capital equipment expenses or extensive process revalidation. We needed to ensure that the customers' transition was successful, on time, and within budget by effectively managing multiple project objectives.



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ACTIONS

At Best Technology, we have demonstrated successful experience in transitioning customers from one chemistry to another. Back in the 2000s we successfully worked with our customers to transition them from older generation solvents such as the AK225 to the next generation of solvents. Our tried and tested process ensures success by following a comprehensive set of steps. With disciplined project management, we prioritize the quality of our products, supply chain mitigation and budget considerations to meet our customers' needs. By adhering to this method, we can confidently guarantee a high probability of successfully implementing a chemistry transition.

The Best Technology Proven Process for this chemical transition and qualification is:

- Identify the replacement chemistry with the expertise of Best Technology, taking into account such aspects as a) Chemical performance b) Technical specifications c) Regulatory concerns d) Supply chain risk mitigation e) Production costs of customers
 - Test and qualify the replacement chemistry with ISO-certified testing laboratories
 - Best Technology provides technical information for customer looking to transition from 3M[™] Novec[™] 73DE on the BestSolv[™] Bravo including the SDS and TDS
- At our own facility, Best Technology conducted parts testing using the innovative BestSolv[™] Bravo with the customer present. Testing methodology approved by the customer.
 - Best Technology provided testing reports
 - Customer independently tested parts to confirm parts met their cleanliness specifications.
- Based on the analysis of customer's usage profile, Best Technology presented a model of expected cost-savings
- Rollout of replacement chemical according to customer's timeline was achieved within six months



Vapor degreasing is the cleaning process which involves condensing solvents vapors on the object that is being cleaned. The process doesn't require any water or scrubbing. Instead, the vapor-degreasing machine uses solvent vapors to cleanse and remove contaminants from parts.

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RESULTS¹

Best Technology's aerospace industry customer successfully revalidated within six months and completed the transition from 3M™ Novec™ 73DE to the BestSolv™ Bravo from Best Technology. As a result, the customer has achieved a remarkable 45% savings and ensured a seamless transition with no interruption in production. The customer's satisfaction and substantial cost savings demonstrate a true win-win outcome.

Immediately below in Figure 1 is one of several comparisons of the effectiveness of BestSolv™ Bravo in this application.

Figure 1: 430-SS sample (shown before and after cleaning with BestSolv™ Bravo)



Before Cleaning (with oils & particulates)



After Cleaning

¹Results will vary based on specific application requirements for each customer

BESTSOLV™ BRAVO

BestSolv™ Bravo is an azeotrope chemical. Like the 3M™ Novec™ 73DE, this solvent blend features nonflammability, low surface tension, high solvency and stability. A KB > 90 allows for great performance in vapor degreasing equipment and precision cleaning.

1. Dual sourced – BestSolv™ fluids are dual sourced from multiple countries to allow for a consistent supply chain of the fluids.
2. Cost and performance – BestSolv™ Bravo performs in like fashion to 3M™ Novec™ 73DE. Even with matched performance, BestSolv™ Bravo has significant cost advantages of up to 50%.
3. No capital equipment investment – BestSolv™ Bravo is a drop-in replacement, and can be used in equipment currently in use with 3M™ Novec™ 73DE such as vapor degreasers.

When transitioning chemical solvents, customer internal evaluation is important for validation to specific application requirements. Reach out to Best Technology, Inc. and our chemical team at chemicals@besttechnologyinc.com for information today.