

PRODUCT TESTING SKYDROL HYDRAULIC FLUID SATURATION

COMPLETED BY:
NIC Industries Quality
Control Group

TESTING CATEGORY:
Chemical Resistance

PROJECT NAME:
500B-4 Aviation Hydraulic
Fluid Saturation Testing

DATE:
02/28/2024

PURPOSE

This document contains the results from after a 96-hour submersion in 500B-4 Aviation Hydraulic Fluid physical testing performed on Cerakote colors:

C-102 Graphite Black
C-148 Burnt Bronze
H-146 Graphite Black
H-148 Burnt Bronze
V-166 Cobra Black
V-168 Cobalt
E-100 Blackout
E-240 Carbon Grey

SCOPE

Testing was conducted per test method standards as stated above. Analysis was to determine the physical properties of the coating.

TESTING PROCESS

Chemical Resistance: After coating and before analysis, both L*a*b*s and gloss are measured for the baseline reference. Approximately 3 inches of the coated 3 x 6 panel are submerged. After every 24 hours, panels are removed from the chemical bath and assessed for color, gloss, and physical defect. Panels are then resubmerged for the next 24-hour testing segment, up to 96 hours. After the test period, results are recorded for color and gloss and are given a final resistance rating based on overall performance.

RESULTS

Cerakote C-102 Graphite Black, C-148 Burnt Bronze, H-146 Graphite Black, H-148 Burnt Bronze, V-166 Cobra Black, V-168 Cobalt, E-100 Blackout and E-240 Carbon Grey score "Excellent" for Chemical Resistance in 500B-4 Aviation Hydraulic Fluid. All coatings changed less than 0.50 ΔE from their original L*a*b*s and resulted in less than 0.50 change in gloss units.

ITEM CODE	LOT NO.	PANEL #	AVG. ΔE SHIFT	AVG. GLOSS SHIFT	RATING
C-102	14870	P1-3	0.10	0.0	Excellent
C-148	14822	P1-3	0.19	0.4	Excellent
H-146	15044	P1-3	0.09	0.2	Excellent
H-148	14737	P1-3	0.20	0.0	Excellent
V-166	14727	P1-3	0.26	0.2	Excellent
V-168	15130	P1-3	0.15	-0.3	Excellent
E-100	15131	P1-3	0.19	0.0	Excellent
E-240	14439	P1-3	0.06	0.0	Excellent

This information is accurate to the best of our knowledge; however, it shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

C-SERIES

C-102 GRAPHITE BLACK
C-148 BURNT BRONZE



H-SERIES

H-146 GRAPHITE BLACK
H-148 BURNT BRONZE



V-SERIES

V-166 COBRA BLACK
V-168 COBALT



E-SERIES

E-100 BLACKOUT
E-240 CARBON GREY

