

THE TIRE SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF MIL-T-5041 EXCEPT AS SPECIFIED HEREIN

SIZE	PLY RATING	STATIC LOAD RATING LBS.	VERTICAL LOAD LBS. MIN.	INFL. PRESS. PSI RATED	BURST PRESS. PSI MIN.	READ WIDTH IN. MAX.	WEIGHT POUNDS MAX.	STATIC UNBAL. OZ-IN. MAX.	MOLD SKID DEPTH MIN.	DEFLEC. + 3% - 4%	
20x5.5	16 TL	8,750	48,800	270	1215	1.51	22.0	12	Rib	0.26	32.02

1/ New Tire 2/ At least three, but not more than seven continuous circumferential ribs. 3/ TL Tubeless tire

RIM DATA - THE TIRE SHALL BE DESIGNED FOR INSTALLATION ON A 20 x 5.5-10 WIREL IN ACCORDANCE WITH MS 24370.

THE TIRE COVERED BY THIS STANDARD SHALL BE SUITABLE FOR USE AND PROVIDE REASONABLE SERVICE LIFE DURING ALL NORMAL OPERATIONS AT TAKE-OFF SPEEDS OF NOT MORE THAN 184 MPH AND LANDING SPEEDS OF NOT MORE THAN 150 MPH ON ALL TYPES OF RUNWAYS AND AIRCRAFT CARRIERS.

TIRE-1 - THE TIRE SHALL WITHSTAND 45 CYCLES OF TEST A, 45 CYCLES OF TEST B, AND 1 CYCLE OF TEST C WITHOUT FAILURE AND THEN BE SUBJECTED TO A HYDROSTATIC BURST TEST. THE PRESSURE SHALL BE INCREASED UNTIL THE TIRE FAILS AND THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.

TIRE-2 - THE TIRE SHALL BE INFLATED TO 400 PSI AND VERTICALLY LOADED TO 48,800 POUNDS OVER A 1 3/8 INCH DIAMETER STEEL ARRESTING GEAR CABLE (RESTRAINED AT BOTH ENDS) OR A PLAIN ROUND STEEL BAR STOCK IN TWO LOCATIONS 180° APART ON THE TIRE. THE TIRE SHALL THEN WITHSTAND 25 CYCLES OF TEST A WITHOUT FAILURE, AND THEN BE SUBJECTED TO A HYDROSTATIC BURST TEST. THE PRESSURE SHALL BE INCREASED UNTIL THE TIRE FAILS AND THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.

TIRE-3 - WITH THE TIRE INFLATED TO 400 PSI A VERTICAL LOAD OF 59,800 POUNDS SHALL BE APPLIED OVER A 1 3/8 INCH DIAMETER STEEL ARRESTING GEAR CABLE (RESTRAINED AT BOTH ENDS) OR A PLAIN ROUND STEEL BAR STOCK. THE TIRE SHALL NOT LEAK AIR AFTER THIS LOAD IS SUSTAINED FOR AT LEAST 10 SECONDS. THE TIRE SHALL THEN BE SUBJECTED TO A HYDROSTATIC BURST TEST WITH THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION REPORTED IN THE QUALIFICATION TEST REPORT.

TEST A - TAXI - TAKE-OFF - TAXI THE TIRE ON THE FLYWHEEL FOR 10,000 FEET AT 4,550 POUNDS LOAD AT 30 MPH. STOP THE FLYWHEEL UNDER FULL LOAD AND WITHIN TWO MINUTES ACCELERATE (SIMULATING TAKE-OFF) AT AN AVERAGE RATE 6.14 FT/SEC/SEC TO 184 MPH. THE LOAD SHALL BE DECREASED LINEARLY WITH TIME FROM 4,550 POUNDS TO 3,200 POUNDS DURING THE FIRST 25 SECONDS AND FURTHER DECREASED LINEARLY WITH TIME TO 1,500 POUNDS AT THE END OF THE TAKE-OFF ROLL. FLAT PLATE PRESSURE SHALL BE 125 PSI.

TEST B - LANDING TAXI - THE TIRE SHALL BE LANDED AGAINST THE FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 150 MPH. THE AVERAGE DECELERATION RATE SHALL BE 2.9 FEET/SEC/SEC FROM 150 MPH TO 130 MPH AND 10.91 FT/SEC/SEC FROM 130 MPH TO ZERO SPEED. THE LOAD SHALL BE INCREASED LINEARLY DURING THE INITIAL SECOND AFTER LANDING TO 4,000 POUNDS AND MAINTAINED FOR THE NEXT NINE SECONDS, THEN FURTHER INCREASED DURING ONE SECOND TO 7,000 POUNDS, AND THEN REDUCED LINEARLY WITH TIME TO 6,000 POUNDS AT THE END OF THE LANDING ROLL. THE TIRE IS TO CONTINUE ROLLING (WITHIN TWO MINUTES) FROM THAT POINT AT 30 MPH AND AT 2,800 POUNDS LOAD UNTIL AN ADDITIONAL 10,000 FEET HAS BEEN COVERED. THE FLAT PLATE PRESSURE SHALL BE 125 PSI.

TEST C - REJECTED TAKE-OFF - TAXI THE TIRE ON THE FLYWHEEL FOR 10,000 FEET AT 4,550 POUNDS LOAD AT 30 MPH. STOP THE FLYWHEEL UNDER FULL LOAD AND WITHIN TWO MINUTES ACCELERATE THE FLYWHEEL AT AN AVERAGE RATE OF 6.14 FT/SEC/SEC TO 184 MPH. THEN IMMEDIATELY DECELERATE AN AVERAGE RATE OF 3.91 FT/SEC/SEC TO ZERO SPEED. THE LOAD SHALL BE DECREASED LINEARLY WITH TIME FROM 4,550 POUNDS TO 2,000 POUNDS DURING THE FIRST 44 SECONDS, THEN INCREASED TO 5,000 POUNDS WITHIN ONE SECOND, THEN MAINTAINED AT 5,000 POUNDS FOR 12 SECONDS, THEN INCREASED TO 6,400 POUNDS WITHIN ONE SECOND, THEN MAINTAINED AT 6,400 POUNDS FOR 12 SECONDS, THEN INCREASED TO 6,400 POUNDS WITHIN ONE SECOND, AND THEN REDUCED TO 6,000 POUNDS AT THE END OF THE REJECTION ROLL. THE REJECTION CYCLE TIME IS APPROXIMATELY 113 SECONDS. THE TIRE IS TO CONTINUE ROLLING (WITHIN TWO MINUTES) FROM THAT POINT AT 30 MPH AND AT 2,800 POUNDS LOAD UNTIL AN ADDITIONAL 10,000 FEET HAS BEEN COVERED. THE FLAT PLATE PRESSURE SHALL BE 125 PSI.

AIR RETENTION - THE TIRE SHALL BE INFLATED TO A PRESSURE OF 400 PSI AND ALLOWED TO STAND FOR A PERIOD OF 12 HOURS AT WHICH TIME THE PRESSURE DROP DUE TO GROWTH SHALL BE REPLACED. THE TIRE SHALL THEN STAND FOR AN ADDITIONAL 24 HOURS AT WHICH TIME THE PRESSURE SHALL BE MEASURED AND THE TIRE INSPECTED. THE AIR PRESSURE LOSS SHALL NOT EXCEED 5 PER CENT AND THE TIRE SHALL NOT REVEAL ANY APPEARANCE AND PERFORMANCE DEFECTS SUCH AS SIDEWALL BLISTERS, TREAD SEPARATION, ETC.

QUALIFICATION TEST REPORT - THE QUALIFICATION TEST REPORT SHALL LIST THE RESULTS OF ALL QUALIFICATION TESTS AND THE CONSTRUCTION DETAILS OF THE QUALIFICATION TEST SAMPLE IN THE GENERAL FORM SHOWN IN FIGURE 6 AND 7 OF MIL-T-5041 WITH DIMENSIONS LISTED AT RATED INFLATION. IN ADDITION, IT SHALL ALSO LIST THE ACTUAL DIMENSIONS WHEN THE TIRE IS INFLATED TO 400 PSI. SUBMIT TWO (2) COPIES OF THE QUALIFICATION TEST REPORT, TOGETHER WITH THE DATA AND MATERIAL SPECIFIED ABOVE AND IN MIL-T-5041 TO THE NAVAL AIR SYSTEMS COMMAND, WASHINGTON, D.C. 20361. ATTENTION: AIR-53032

NOTES:

1. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT OR DATE OF INVITATION FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCE ADOPTED INDUSTRY STANDARDS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
2. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

This standard has been approved by the NAVAL AIR SYSTEMS COMMAND Department of the NAVY and shall be used by all military activities as required to employ this standard where suitable.

(A) REVISED AND REDRAWN

P.A. NAVY - AS	TITLE	<b>MILITARY STANDARD</b> <b>MS 3374 (AS)</b>
Other Cost	TIRE, PNEUMATIC, AIRCRAFT, 20 x 5.5, TYPE VII (NAVY)	
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES:	SHEET 1 OF 1

APPROVED 20 DEC 1968 REVISED 4 12 FEB 1982