

NATIONAL AIRCRAFT STANDARD

① INACTIVE FOR DESIGN AFTER 2/15/58 SEE SPECIFICATION
MIL-STD-10. FOR DEFINITION OF DRAWING STATUS NOTES SEE NAS 380.

INSTRUCTIONS:

The companies listed below have agreed to accept the NAS- 30 micro-inch RMS equivalents for their surface finish designations. In certain cases it may develop that coarser or finer finishes than specified by the NAS equivalents have been supplied. Whenever a change in the customary finish is made by the following conversion, the machine shop is obligated to request a review of the drawing in question. If the conversion is not suitable to the originator, a drawing change will be made.

GROUP I	SYMBOL	NAME (A dwg. note sometimes used)	MICRO-INCH RMS EQUIVALENT
A.C. DRM P11.3		Polish	$\sqrt{2}$
Brewster	① $\mathcal{R}$	Buff	$\sqrt{5}$
Curtiss-Wright	SFG, D-10	Lap or Grind & Buff	$\sqrt{10}$
Douglas, El Segundo	G, $\textcircled{G}$	Grind	$\sqrt{20}$
Douglas, Santa Monica	② $\mathcal{R}$	Hand Finish	$\sqrt{40}$
Grunman	$\mathcal{R}$ ③ $\mathcal{R}$	Smooth Machine	$\sqrt{100}$
Harlow		Medium Machine	$\sqrt{250}$
Hughes	④	Rough Machine	$\sqrt{500}$
Kellett	⑤ $\mathcal{R}$	Rough File & Grind	$\sqrt{500}$
Lockheed	D.G.	Disc Grind	$\sqrt{500}$
Republic	⑥ $\mathcal{R}$	Sand Blast	No equivalent
St. Louis Aircraft	⑦ $\mathcal{R}$	Remove Fins & Sprues	No equivalent
Vought-Sikorsky			

GROUP II	SYMBOL	NAME	MICRO-INCH RMS EQUIVALENT
Vultee	$\textcircled{G}$	Grind	$\sqrt{40}$
	③ $\mathcal{R}$	Smooth Machine	$\sqrt{100}$
	⑤ $\mathcal{R}$	Rough File	$\sqrt{250}$

Conversions subject to revision by each company

LIMITS: UNLESS OTHERWISE SPECIFIED:-

APPROVED DATE	CLASSIFICATION	STANDARD
MARCH 1942	CONVERSION TABLE, SURFACE ROUGHNESS DESIGNATIONS	NAS-31 Sheet 1 of 2

ISSUANCE OF THIS STANDARD CONSTITUTES APPROVAL OF BOTH THE EASTERN AND WESTERN DIVISIONS OF THE N.A.S.C.

REVISION: ① 15 Feb. 1958

NATIONAL AIRCRAFT STANDARD

GROUP III Bellanca Martin	SYMBOL	NAME (A dwg. note sometimes used)	MICRO-INCH RMS EQUIVALENT
	① ^r	Buff	✓ ₂
	⑩A ^r	Lap	✓ ₅
	⑩B ^r	Hone	✓ ₅
	⑩C ^r	Hand Polish	✓ ₁₀
	⑩ ^r	Grind	✓ ₂₀
	② ^r	Fine Hand Finish	✓ ₄₀
	③ ^r	Smooth Machine Finish	✓ ₁₀₀
	⑧ ^r	Medium Machine Finish	✓ ₂₅₀
	④ ^r	Rough Machine	✓ ₅₀₀
	⑤ ^r	Rough File & Grind	✓ ₅₀₀
	⑥ ^r	Sand Blast	No Equivalent
	⑦ ^r	Remove Sprues & Fins	No Equivalent

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