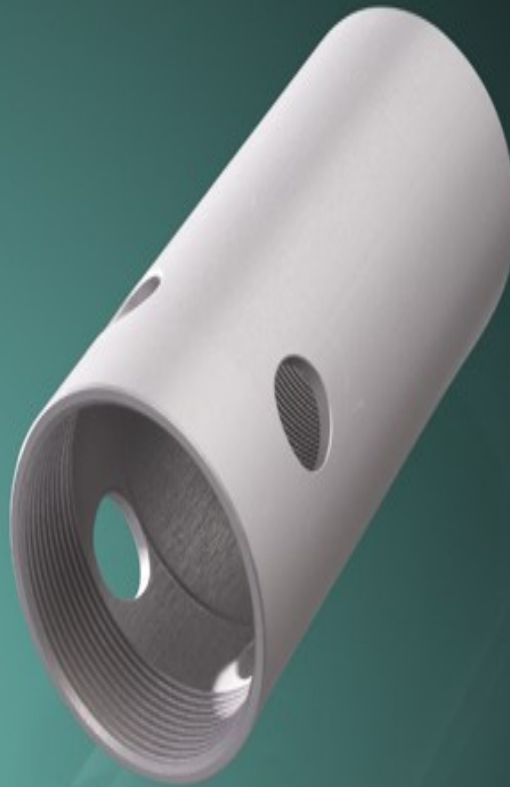


# ENGINEERING DATA-SHEET

## TUFRAM<sup>®</sup> FC-12



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## TUFRAM® FC-12

### Process Description

During the multiple steps of the TUFRAM process, there are a number of variables that can be controlled to produce different surface enhancement characteristics. Through experience and research, the exact control required to produce the desired results of a specific coating type has been refined. There are many different types of coatings within the TUFRAM family of coatings. Each one has unique characteristics to meet application needs or can be modified to achieve special performance requirements.

TUFRAM® FC-12 meets the MIL-8325-Type III.

### Engineering Data

Type of baselayer	: Hard anodizing
Type of process	: Spraying
Type of coating system	: 2 coat system (excluding baselayer)
Practice average thickness Top Coat	: 5 ~ 12 µm
Practice average thickness Base Layer	: 25 ~ 50 µm Hard anodizing
Colour	: Dark grey
Tempering	: 360°C
Operating temperature (peak) *5)	: 260°C
Operating temperature (continuous) *5)	: 200°C
Maximum pencil hardness (scratch) *6)	: 2H
Maximum pencil hardness (cut) *6)	: 5H
Average polar contact angle *1) (Water)	: 119°
Average non-polar contact angle *1) (Diiodomethane)	: 112°
Dynamic COF *2)	: 0,13
Wear Resistance *3)	: n/a
Breakdown voltage	: 1305 V
Corrosion Resistance (valuation grad Rp10) *4)	: 48 hours
Corrosion Resistance (valuation grad Rp8) *4)	: 48 hours
Special characteristics	: Special combination of polymers and dry lubricants allow low COF on aluminum

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### Test parameters and Explanation

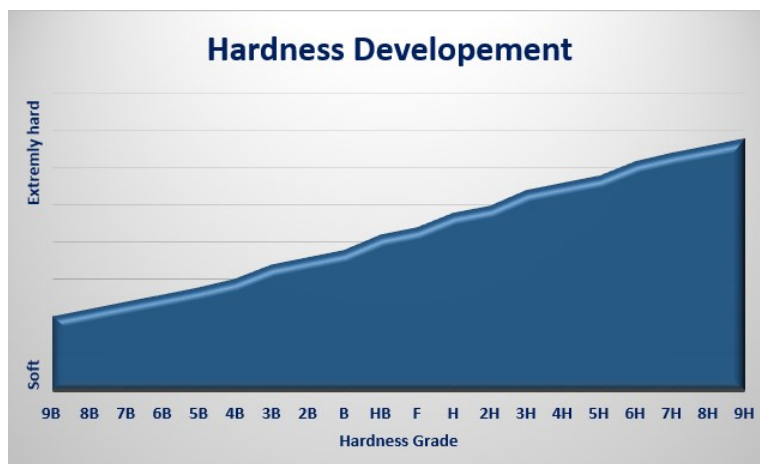
To get a truly authentic picture all samples were coated under production conditions.

- \*1) = Measure by the DataPhysics OCAH 200 on water (polar) and Diiodomethane (non-polar). The higher the value, the better the properties.
- \*2) = Values determined after 10.000 turns, a force of 5N and at a speed of 10 cm per second. As friction partner a 100Cr6 steel ball was used.
- \*3) = Test according to Taber-Abraser with a CS10 wheel. Values determines after 7 runs of 1.000 turns at a speed of 72 turns per minute, a frictional force of 10N, at a temperature of 25-26°C and a humidity between 37-49%.
- \*4) = Saltspraytest according to DIN EN ISO 9227

Valuation Grade:

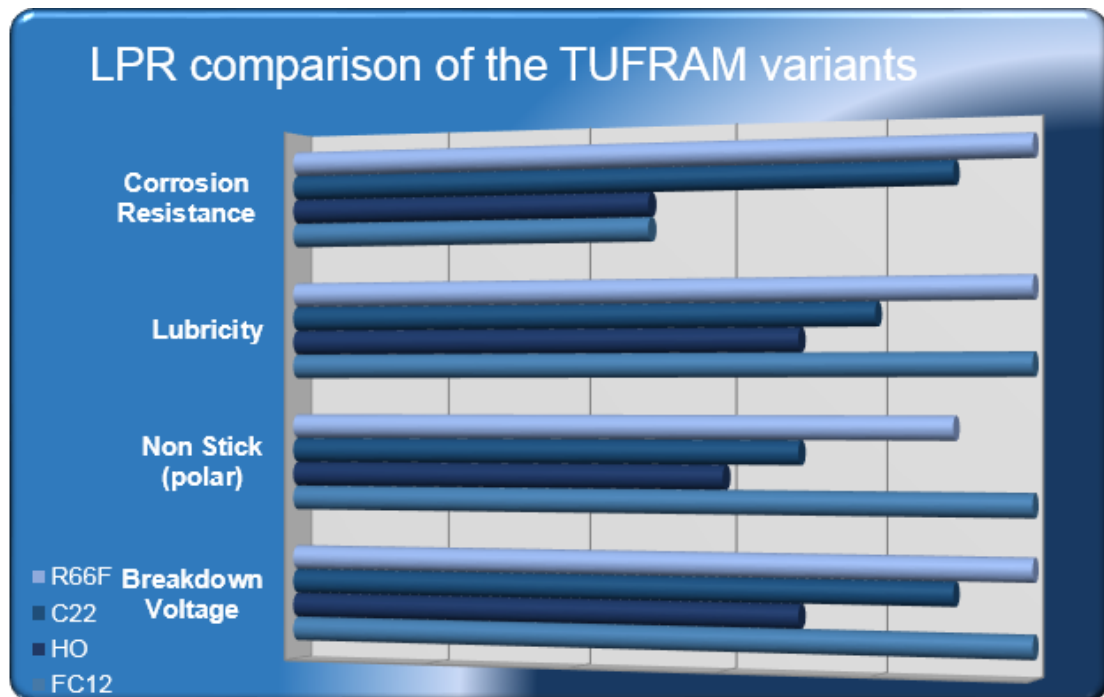
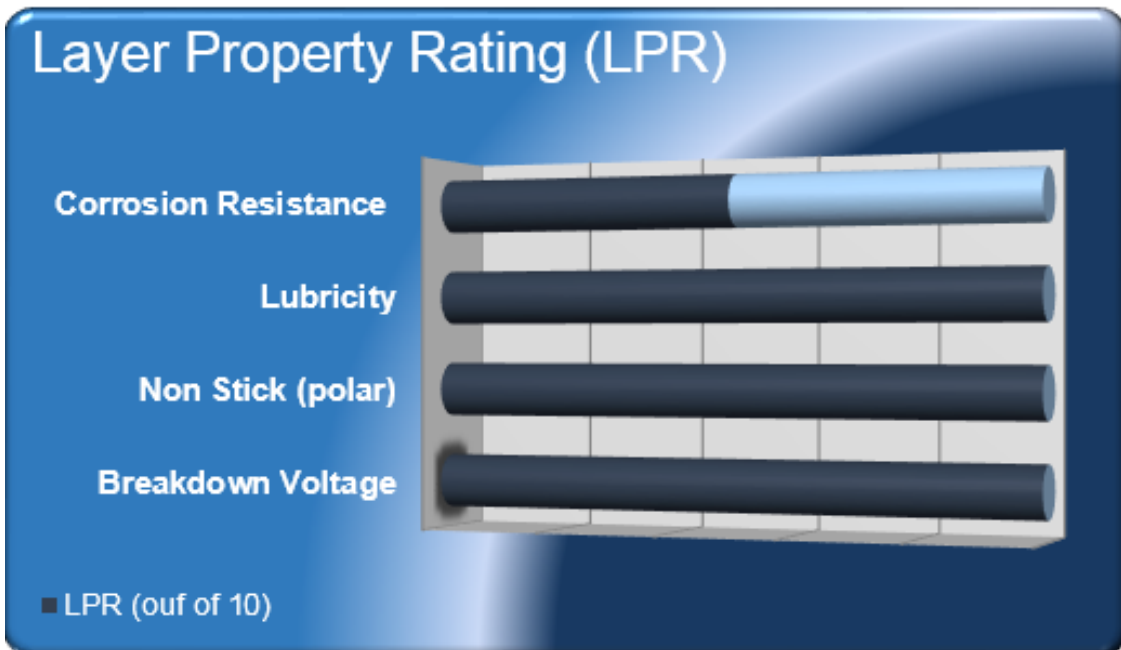
Corrosion Surface in %	Valuation Grade (Rp)
No corrosions	10
$0 < A \leq 0,1$	9
$0,1 < A \leq 0,25$	8
$0,25 < A \leq 0,5$	7
$0,5 < A \leq 1$	6
$1 < A \leq 2,5$	5
$2,5 < A \leq 5$	4
$5 < A \leq 10$	3
$10 < A \leq 25$	2
$25 < A \leq 50$	1
$50 < A$	0

- \*5) = Temperature resistance of the Topcoat, the tensile strength of the Aluminum will decrease
- \*6) = Pencil Hardness



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### Compliances:

#### FDA/USDA

Not applicable

#### EC Regulations

Not applicable

### AHC Benelux B.V.

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