

National Institute of Metrology, Quality and Technology – Inmetro
General Coordination for Accreditation



*Signatory to the Mutual Recognition Arrangements of the International Laboratory Accreditation Cooperation (ILAC),
Interamerican Accreditation Cooperation (IAAC) and International Accreditation Forum (IAF).*

Accreditation Certificate

Accreditation N° CRL 0340

Initial Accreditation: February 27th, 2009

EQUILAM
EQUILAM INDÚSTRIA E COMÉRCIO EIRELI EPP
Rua Botocudos, 315 – Serraria – Diadema - SP - Brasil

The General Coordination for Accreditation of Inmetro grants accreditation to the Conformity Assessment Body identified above, at the mentioned address, in compliance with the requirements established in the ABNT NBR ISO/IEC 17025:2017. This accreditation is the formal expression of the recognition of its competence to carry out the activities of testing, as described in the Accreditation Scope.

Aldoney Freire Costa
General Coordinator for Accreditation

The recognition status and scope shall be checked at the address www.Inmetro.gov.br/credenciamento/laboratoriosAcreditados.asp



SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 – ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 1

Total Sheets: 7

COMPANY NAME/NAME OF THE LABORATORY

Equilam Industry and Commerce Eireli

ACCREDITATION N

INSTALLATION TYPE

CRL 0340

PERMANENT INSTALLATION

**ACTIVITY AREA /
PRODUCT**

ASSAY CLASS / ASSAY DESCRIPTION

STANDARD AND/OR PROCEDURE

METALLURGY

MECHANICAL TESTS

METALLIC MATERIALS
WITH ORGANIC OR
INORGANIC COATINGS
OR WITHOUT COATING

Determination of adhesion of paints and coatings
(grid cut; crosscut; X-cut; adhesion)

ABNT NBR 11003:2010
ABNT NBR 14622:2006
ASTM D3359:2022
ISO 2409:2020
GMW14829:2022
Volvo STD 423-0012:2011
Volvo STD 1029,5472:2005
Volvo VCS 1029,54729:2017

Evaluation of the adhesion of paints and coatings
(grid cut; crosscut; X-cut; adhesion)

ABNT NBR 14125:2016 –
Item 4.8

Determination of dry coating thickness by magnetic
induction method (magnetic field; Hall effect; layer
thickness)

ABNT NBR 10443:2008 –
Method B
ASTM B499:2021e1
ASTM D7091:2022 – Type 2
ASTM E376:2019
ISO 2178:2016
ISO 2808:2019 –
methods 7B.2 and
13A ISO
19840:2012

Determination of dry coating thickness by eddy current
method (eddy current; eddy current; layer thickness)

ABNT NBR 10443:2008 –
Method B
ABNT NBR 12610:2010
ASTM B244:2021
ASTM D7091:2022 – Type 2
ASTM E376:2019
ISO 2360:2017
ISO 2808:2019 –
methods 7C and
13B ISO
19840:2012
ISO 21968:2019

"This Scope cancels and replaces the previously issued revision."

On, 11-7-2023

SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 - ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 2

ACCREDITATION N	INSTALLATION TYPE	
CRL 0340	PERMANENT INSTALLATION	
ACTIVITY AREA / PRODUCT	ASSAY CLASS / ASSAY DESCRIPTION	STANDARD AND/OR PROCEDURE
<u>METALLURGY</u>	<u>CHEMICAL TESTS</u>	
METALLIC MATERIALS WITH ORGANIC OR INORGANIC COATINGS OR WITHOUT COATING	Corrosion and accelerated aging test by exposure to neutral salt spray (NSS; SS; salt spray)	ABNT NBR 8094:1983 ABNT NBR 14696:2015 ABNT NBR 17088:2023 ASTM B117:2019 ISO 9227:2022 JIS H 8502:1999 – item 7.1 JIS Z 2371:2015 Fiat 50180:2007 – methods A1 and B1 Nissan NES M0140:2015 PSA D17 1058:2008 Renault D17 1058/--K:2015 RNES-G-00001:2015 Volvo STD 423-0010:2004 Volvo STD 5711,102:2005 Volvo VCS 5711,1029:2018
	Corrosion and accelerated aging test by exposure to acetic spray (AASS; acetic salt spray)	ABNT NBR 14905:2020 ABNT NBR 17088:2023 ASTM G85:2019 ISO 9227:2022 JIS H 8502:1999 – item 7.2 JIS Z 2371:2015 Fiat 50180:2007 – A2 method Volvo STD 423-0010:2004 Volvo STD 5711,102:2005 Volvo VCS 5711,1029:2018
	Corrosion and accelerated aging test by exposure to cuproacetic salt spray (CASS; cuproacetic salt spray)	ABNT NBR 8824:1985 ABNT NBR 14696:2015 ABNT NBR 17088:2023 ASTM B368:2021 ISO 9227:2022 JIS H8502:1999 – item 7.3 JIS Z 2371:2015 Fiat 50180:2007 – A3 method Nissan NES M0138:2015 PSA D23 1001:2015 Renault D23 1001/--B:2015 RNES-G-00002:2015 Volvo STD 423-0010:2004 Volvo STD 5711,102:2005 Volvo VCS 5711,1029:2018

SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 - ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 3

ACCREDITATION N	INSTALLATION TYPE	
CRL 0340	PERMANENT INSTALLATION	
ACTIVITY AREA / PRODUCT	ASSAY CLASS / ASSAY DESCRIPTION	STANDARD AND/OR PROCEDURE
<u>METALLURGY</u>	<u>CHEMICAL TESTS</u>	
METALLIC MATERIALS WITH ORGANIC OR INORGANIC COATINGS OR WITHOUT COATING (CONTINUATION)	Corrosion and accelerated aging test by exposure to saturated moisture (condensed moisture)	ABNT NBR 8095:2015 ABNT NBR 14696:2015 ASTM D2247:2020 ISO 6270-2:2017 Volvo STD 423-0018:2004
	Corrosion test and accelerated aging by exposure to sulphur dioxide (Kesternich)	ABNT NBR 8096:1983 ASTM G87:2018 DIN 50018:2013 DIN EN ISO 6988:1997 ISO 3231:1993 ISO 6988:1985 ISO 22479:2019
	Cyclic corrosion test (CCT; SWAAT)	ABNT NBR 10821-3:2017 – Appendix L ABNT NBR 16872:2020 – Appendix B ASTM G85:2019 ISO 11997-1:2017 JIS H 8502:1999 – items 8.1 and 8.2 MIL STD 810H:2019 – method 509.7 SAE J2334:2016 Volkswagen PV 1208:2016
	Evaluation of the degradation of a coating: - Determination of the degree of corrosion (corrosion; rust; rusting) - determination of the degree of blistering (blistering; blister) - determination of the degree of cracking (cracks; cracking) - determination of the degree of peeling (detachment; deplating; flaking) - Determination of the degree of pitting (pitting) - Determination of general appearance changes	ABNT NBR 5770:1984 ABNT NBR 5841:2015 ABNT NBR 14905:2020 ABNT NBR 8754:1985 ABNT NBR ISO 4628-3:2022 ASTM B537:2022 ASTM D610:2019 ASTM D714:2017 ISO 4628-1:2016 ISO 4628-2:2016 ISO 4628-3:2016 ISO 4628-4:2016 ISO 4628-5:2022 ISO 8993:2018 ISO 10289:1999 JIS H 8502:1999 – item 11 JIS Z 2371:2015 Embraer NE 40-006:2016 – Item 5.7 Embraer NE 40-030:2017 – Item 9.5

SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 - ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 4

ACCREDITATION N	INSTALLATION TYPE	
CRL 0340	PERMANENT INSTALLATION	
ACTIVITY AREA / PRODUCT	ASSAY CLASS / ASSAY DESCRIPTION	STANDARD AND/OR PROCEDURE
<u>METALLURGY</u>	<u>CHEMICAL TESTS</u>	
METALLIC MATERIALS WITH ORGANIC OR INORGANIC COATINGS OR WITHOUT COATING (CONTINUATION)	Evaluation of the degradation of a coating – Determination of defects observed from an incision/scratch (corrosion advancement or migration; subcutaneous corrosion; undercutting; scribe creepback; detachment or delamination of coating; infiltration; blistering).	ABNT NBR 8754:1985 ABNT NBR 14125:2016 – item 4.14 ABNT NBR 14905:2020 ASTM D1654:2016e1 ASTM D7087:2010 ISO 4628-8:2012 ISO 17872:2019 ISO 12944-6:2018 – Appendix A ISO 21227-3:2007 JIS H 8502:1999 – item 5.4 JIS Z 2371:2015
<u>NON-METALLIC MINERAL PRODUCTS</u>	<u>MECHANICAL TESTS</u>	
NON-METALLIC MATERIALS WITH ORGANIC OR INORGANIC COATINGS OR WITHOUT COATING	Determination of adhesion of paints and coatings (grid cut; crosscut; X-cut; adhesion)	ABNT NBR 11003:2010 ABNT NBR 14622:2006 ASTM D3359:2022 ISO 2409:2020 GMW14829:2022 Volvo STD 423-0012:2011 Volvo STD 1029,5472:2005 Volvo VCS 1029,54729:2017
	Determination of dry coating thickness by eddy current method (eddy current; eddy current; layer thickness)	ABNT NBR 10443:2008 – Method B ABNT NBR 12610:2010 ASTM B244:2021 ASTM D7091:2022 – Type 2 ASTM E376:2019 ISO 2360:2017 ISO 2808:2019 – 7C and 7C methods 13B ISO 19840:2012 ISO 21968:2019

SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 - ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 5

ACCREDITATION N	INSTALLATION TYPE	
CRL 0340	PERMANENT INSTALLATION	
ACTIVITY AREA / PRODUCT	ASSAY CLASS / ASSAY DESCRIPTION	STANDARD AND/OR PROCEDURE
<u>NON-METALLIC MINERAL PRODUCTS</u>	<u>CHEMICAL TESTS</u>	
NON-METALLIC MATERIALS WITH COATINGS ORGANIC OR INORGANIC OR UNCOATED	Corrosion and accelerated aging test by exposure to neutral salt spray (NSS; SS; salt spray)	ABNT NBR 8094:1983 ABNT NBR 14696:2015 ABNT NBR 17088:2023 ASTM B117:2019 ISO 9227:2022 JIS H 8502:1999 – item 7.1 JIS Z 2371:2015 Fiat 50180:2007 – methods A1 and B1 Nissan NES M0140:2015 PSA D17 1058:2008 Renault D17 1058/--K:2015 RNES-G-00001:2015 Volvo STD 423-0010:2004 Volvo STD 5711,102:2005 Volvo VCS 5711,1029:2018
	Corrosion and accelerated aging test by exposure to acetic mist (AASS; acetic salt spray)	ABNT NBR 14905:2020 ABNT NBR 17088:2023 ASTM G85:2019 ISO 9227:2022 JIS H 8502:1999 – item 7.2 JIS Z 2371:2015 Fiat 50180:2007 – A2 method Volvo STD 423-0010:2004 Volvo STD 5711,102:2005 Volvo VCS 5711,1029:2018
	Corrosion and accelerated aging test by exposure to cuproacetic salt spray (CASS; cuproacetic salt spray)	ABNT NBR 8824:1985 ABNT NBR 14696:2015 ABNT NBR 17088:2023 ASTM B368:2021 ISO 9227:2022 JIS H8502:1999 – item 7.3 JIS Z 2371:2015 Fiat 50180:2007 – A3 method Nissan NES M0138:2015 PSA D23 1001:2015 Renault D23 1001/--B:2015 RNES-G-00002:2015

SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 - ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 6

ACCREDITATION N	INSTALLATION TYPE	
CRL 0340	PERMANENT INSTALLATION	
ACTIVITY AREA / PRODUCT	ASSAY CLASS / ASSAY DESCRIPTION	STANDARD AND/OR PROCEDURE
<u>NON-METALLIC MINERAL PRODUCTS</u>	<u>CHEMICAL TESTS</u>	
NON-METALLIC MATERIALS WITH COATINGS ORGANIC OR INORGANIC OR UNCOATED (CONTINUED)		Volvo STD 423-0010:2004 Volvo STD 5711,102:2005 Volvo VCS 5711,1029:2018
	Corrosion and accelerated aging test by exposure to saturated moisture (condensed moisture)	ABNT NBR 8095:2015 ABNT NBR 14696:2015 ASTM D2247:2020 ISO 6270-2:2017 Volvo STD 423-0018:2004
	Corrosion test and accelerated aging by exposure to sulphur dioxide (Kesternich)	ABNT NBR 8096:1983 ASTM G87:2018 DIN 50018:2013 DIN EN ISO 6988:1997 ISO 3231:1993 ISO 6988:1985 ISO 22479:2019
	Cyclic corrosion test (CCT; SWAAT)	ABNT NBR 10821-3:2017 – Appendix L ABNT NBR 16872:2020 – appendix B ASTM G85:2019 ISO 11997-1:2017 JIS H 8502:1999 – items 8.1 and 8.2 MIL STD 810H:2019 – method 509.7 SAE J2334:2016 Volkswagen PV 1208:2016 volkswagen PV 1210:2016
	Evaluation of the degradation of a coating: - Determination of the degree of corrosion (corrosion; rust; rusting) - determination of the degree of blistering (blistering; blister) - determination of the degree of cracking (Cracks; cracking) - determination of the degree of peeling (detachment; deplating; flaking) - Determination of the degree of pitting (pitting) - Determination of general appearance changes	ABNT NBR 5770:1984 ABNT NBR 5841:2015 ABNT NBR 14905:2020 ABNT NBR 8754:1985 ABNT NBR ISO 4628-3:2022 ASTM B537:2022 ASTM D610:2019 ASTM D714:2017 ISO 4628-1:2016 ISO 4628-2:2016 ISO 4628-3:2016 ISO 4628-4:2016

SCOPE OF ACCREDITATION – ABNT NBR ISO/IEC 17025 - ESSAY

Origin Standard: NIT-DICLA-016

Sheet: 7

ACCREDITATION N	INSTALLATION TYPE	
CRL 0340	PERMANENT INSTALLATION	
ACTIVITY AREA / PRODUCT	ASSAY CLASS / ASSAY DESCRIPTION	STANDARD AND/OR PROCEDURE
<u>NON-METALLIC MINERAL PRODUCTS</u>	<u>CHEMICAL TESTS</u>	
NON-METALLIC MATERIALS WITH COATINGS ORGANIC OR INORGANIC OR UNCOATED (CONTINUED)	Evaluation of the degradation of a coating: - Determination of the degree of corrosion (corrosion; rust; rusting) - determination of the degree of blistering (blistering; blister) - determination of the degree of cracking (Cracks; cracking) - determination of the degree of peeling (detachment; deplating; flaking) - Determination of the degree of pitting (pitting) - Determination of general appearance changes	ISO 4628-5:2022 ISO 8993:2018 ISO 10289:1999 JIS H 8502:1999 – item 11 JIS Z 2371:2015 Embraer NE 40-006:2016 – Item 5.7 Embraer NE 40-030:2017 – Item 9.5
	Evaluation of the degradation of a coating – Determination of defects observed from an incision/scratch (corrosion advancement or migration; subcutaneous corrosion; undercutting; scribe creepback; detachment or delamination of coating; infiltration; blistering).	ABNT NBR 8754:1985 ABNT NBR 14125:2016 – item 4.14 ABNT NBR 14905:2020 ASTM D1654:2016e1 ASTM D7087:2010 ISO 4628-8:2012 ISO 17872:2019 ISO 12944-6:2018 – Appendix A ISO 21227-3:2007 JIS H 8502:1999 – item 5.4 HE Z 2371:2015 Fiat 50180:2007 – method B1
X-X-X-X-X	X-X-X-X-X	X-X-X-X-X