Environmental product declaration

ECO PLATFORM EPD VERIFIED

EPD®
THE INTERNATIONAL EPD® SYSTEM

EPD in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019

Registration number	Publication date	Valid until	Program	Program operator
S-P-05093	16/02/2022	16/02/2027	The International EPD® System www.environdec.com	EPD International AB

3.700
EMPLOYEES

9
PRODUCTION FACILITIES

20%
OF SALES COMING FROM NEW PRODUCTS

5
R&D LABORATORIES

7
LOGISTIC

50
COUNTRIES WHERE OUR PRODUCTS ARE SOLD

8
COUNTRIES WITH DIRECT PRESENCE

100
RESEARCHERS

600
MLN/€ GLOBAL ANNUAL REVENUE

cromology group

Cromology was founded in 2015, after a decades-long process of transformation started in the late 90's, when Lafarge Peintures created the Specialty Materials which then became Materis Paints. It quickly became a global player in the emerging markets.
Nowadays Cromology keeps that pioneering spirit of its Dutch origin from the 1700, proving to be a solid worldwide group, leader in the south basin of Europe, **present in 50 countries with a global annual revenue of more than 600 mln/€.** The strength of the group lies in its 3700 employees – of which 100 between researchers and highly dedicated technicals – 9 production facilities and 5 R&D laboratories.
Cromology brands are marketed in more than 50 countries all over the world, with direct presence in 8 countries. In each market, Cromology commercial brands are an expression of the history, professionalism and capacity for innovation. 20% of the revenue comes from new products.
Cromology Italy believes in a multi-channel strategy diversified by brand, range of services and type of customer: from designer to professional applicator and private customer. With an offer of 7 specialized brands, Cromology holds 7% of the Italian market having so an absolute leading position.

Headquarters are in Porcari, in the province of Lucca. The company has two cutting-edge production facilities of 80.000 mq, a logistic hub of 45.000 mq and can rely on 300 employees between in-house staff and sales network. With its brands and wide range of products, **Cromology wants to be a trusted partner for his customers and professionals, aiming to reach together professional excellence.**

1 PRODUCT SAFETY AND LIABILITY

Innovate to offer colours and paints more and more respectful of environment and users' health

- Indoor air quality
- HACCP - Hazard Analysis and Critical Control Points
- ISO 9001:2015 quality management system
- UNI EN 15457 mould resistant
- UNI EN 15458 algae resistance
- ISO 22196 antibacterial test certificate

2 ENVIRONMENTAL LIABILITY

Minimize the impact of the activities on the environment

- ISO 14001:2015 Tutela dell'ambiente nei processi di produzione industriale
- Dichiarazione ambientale di prodotto
- Ecolabel
- Certificazione energetica 100% Green

3 SOCIAL RESPONSIBILITY

Guarantee health and safety to its employees; give anyone the opportunity to evolve; promote high standards of integrity and compliance to current regulations

- Social responsibility ISO 45001:2018 occupational health and safety management system
- Legislative Decree no. 231/2001 administrative liability of companies
- CSR

Sustainability

Cromology Cromology Groups' approach to sustainability raises from our Mission: **protecting and colouring responsibly every home to improve everyone's life.**

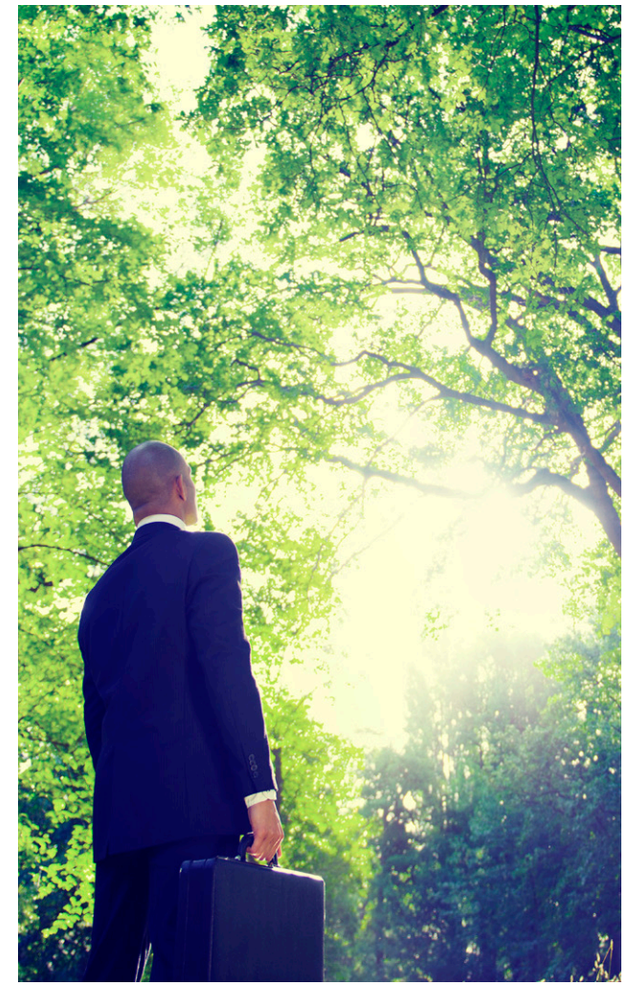
Cromology puts RSI at the core of its strategy, at the same level of profitable growth and operational excellence. In a perspective of continuous improvement, Cromology includes its RSI targets in the development of its business as well as in the launch of new products.

Cromology's approach to RSI relates to United Nations' GDS. Cromology has identified 5 most relevant GDS for its business and relies on these to create a sustainable and responsible development in order to maximize value for clients, employees,

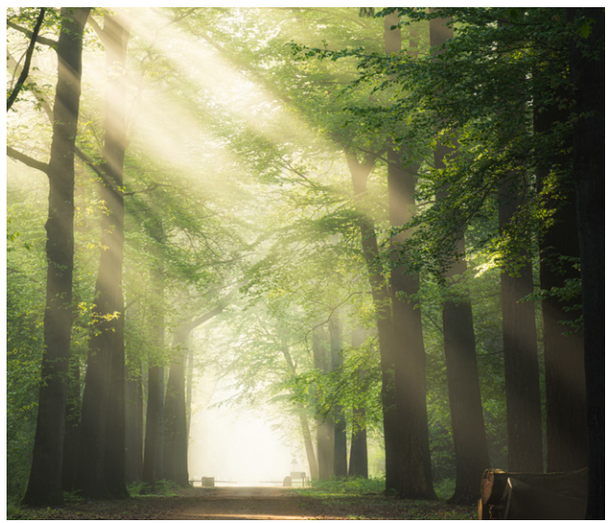
5 MOST RELEVANT GDS FOR CROMOLOGY BUSINESS

epd programme general information

Programma EPD	The International EPD® System - www.environdec.com
EPD Programm operator	EPD International AB Box 210 60, SE-100 31 Stockholm, Sweden
Product Category Rules (PCR)	International EPD System - PCR 2019:14 - “Construction products” - Version 1.11 EN 15804:2012+A2:2019 - “Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.”
EPD developed from	Leyton Italia s.r.l.
Owner of the declaration	Dr. Marco Demi Cromology Italia S.p.A.
Verified from	Guido Croce
Geographical reference	International
EPD Reg. No.	S-P-05093
Publication date	16/02/2022
Expiration date	16/02/2027
Product description	Ducotone Casapiù
Scope	LCA analysis has been carried out according to ISO 14025, ISO 14040, ISO 14044 and EN1584 standards. Both specific data of the manufacturing process and Ecoinvent 3.6 database have been used. As calculation and evaluation methods of the impacts have been used those in the EN 15804 2012+A2:2019 standard. LCA analysis covers the phases of extraction and transport of raw material and energy; manufacturing; end of life of the material.



Environmental product



EPD® THE INTERNATIONAL EPD® SYSTEM

EPD abbreviation comes from the English term Environmental **Product Declaration and it is a verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of products.** It analyses and quantifies how much energy and natural resources are used in production and transportation, how much CO2 is emitted, what materials are used for packaging and the quantity of waste generated.

In the construction field, EPD is a must for professional architects and designers when they need to plan and evaluate what actions need to be taken.

As EPD must be validated by International Standards, it represents a fundamental act of transparency and liability

Where the EPD is the final report, created on a voluntary basis, **its foundation is a lifecycle assessment (LCA) - the factual and standardized analysis methodology of a product's or service's entire life cycle in terms of sustainability.** LCA is a technical basis for a wide range of possible actions oriented to improve products sustainability, as it helps to understand the impact generated by a product on the environment. PCR – Product Category Rules provides the instructions for how the life-cycle assessment (LCA) should be conducted, which must also comply with EN 15084 construction products international standard. **This EPD regards Ducotone Casapiù.**

Duco brand

90 years of hystory make of Duco a reference brand for all paint professionals.

Experience, quality, innovation and excellence: these are the secrets of a 100% made in Italy brand

As never before we are experiencing the importance of staying in a healthy and clean environment. Words like hygiene and cleaning are no more simple recommendations, instead they are life-saving rules, converted in laws and mandatory behaviours in many places: ambulatories, nursing homes, schools, gyms, restaurants and in every high attended public or private place that has the need to guarantee high hygienic standards. **Duco offers a full range of highly technological products for protection and decoration of walls able to meet all hygienic requirements: result of research e and developed for critical contexts, with certified performances capable to satisfy particularly strict regulations.**

Ducotone casapiù product

This EPD refers to Ducotone Casapiù wall paint in sale formats 0,75l, 4l and 14l. Paint is partly contained in steel, recyclable metal, and partly in virgin plastic.

Ducotone Casapiù is the professional paint you need. It can be used both as exterior or interior paint, it is perfect for patios or porches. High covering power, low dirt pick-up and excellent washability. It is a professional product with 30% dilution rate and optimal yield.

PRODUCT CHEMICAL COMPOSITION

Emulsions	< 25%
Additives	< 5%
Extenders	< 55%
Water	< 40%

	COMPOSIZIONE IMBALLO				
FORMATI	PP [kg/kg]	Ferro [kg/kg]	Carta [kg/kg]	LDPE [kg/kg]	Legno [kg/kg]
Ducotone casapiù 0,75L	0,0000	0,1310	0,0120	0,0101	0,0692
Ducotone casapiù 14L	0,0000	0,0731	0,0001	0,0005	0,0562
Ducotone casapiù 4L	0,0263	0,0000	0,0005	0,0019	0,0865

		DUCOTONE SANI-TECH
TECHNICAL INFORMATION	METODO	MAIN DATA AT 20° AND U.R. 60%
Contrast ratio	M.U. 1631	97 high
Washability	ISO 11998	Class 2
Dirt pick-up	UNI 10792	< 3 very low
Theoretical cover range m2/L	ISO 7254	12

	Production stage			Construction and installation stage		Use and maintenance stage							End of life and waste stage				Reuse and Recycle
	Construction and installation stage	Transport	Manufacturing	Transport	Construction installation processing	Use	Maintenance	Repair	Replecement	Refurbishment	Operational energy use	Operational water use	De-costruction demolition	Transport	Waste processing	Disposal	Reuse - Recovery Recycling - Potentia
Moduli	Use and	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Moduli dichiaranti	End of life and waste stage	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geografia		I	I	-	-	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Dati specifici	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variabili	Meno del +10% per ogni gruppo di prodotti					-	-	-	-	-	-	-	-	-	-	-	-

Environmental Product Declaration

DECLARED UNIT

This EPD uses the concept of «declared unit» instead of «functional unit» according to current regulations.

REFERENCE YEAR

Data come from calendar years 2019-2020. Study was conducted in 2021.

SYSTEM BOUNDARIES

This «Cradle to gate with options» EPD, includes modules A1 (raw materials), A2 (transport), A3 (production), C1 (de-construction/demolition), C2 (transport to waste processing), C3 (waste processing/ reuse), C4 (disposal) and D (reuse- recovery-recycling- potential).

Environmental performance

SIMULATION OF ENVIRONMENTAL IMPACT INDICATORS

EN15804+A2					
Impact category	**Unit**	**A1 - A3**	**C1**	**C2 - C4**	**D**
GWP TOTAL:	kg CO_2 eq	6,50E+00	0,00E+00	1,15E+00	0,00E+00
GWP - Fossil	kg CO_2 eq	6,43E+00	0,00E+00	1,36E-01	0,00E+00
GWP - Biogenic	kg CO_2 eq	3,57E-02	0,00E+00	1,01E+00	0,00E+00
GWP - Land use and LU change	kg CFC11 eq	2,76E-02	0,00E+00	5,70E-06	0,00E+00
ODP	kBq U-235 eq	6,65E-07	0,00E+00	4,32E-09	0,00E+00
IRP	kg NMVOC eq	6,21E-01	0,00E+00	1,44E-03	0,00E+00
POCP	disease inc.	3,24E-02	0,00E+00	2,43E-03	0,00E+00
PM	CTUh	4,21E-07	0,00E+00	2,63E-08	0,00E+00
HTP, non-cancer	CTUh	1,27E-07	0,00E+00	3,86E-08	0,00E+00
HTP, cancer	mol H+ eq	3,67E-08	0,00E+00	6,99E-09	0,00E+00
AP	kg P eq	4,28E-02	0,00E+00	9,65E-04	0,00E+00
EP, freshwater	kg N eq	2,41E-03	0,00E+00	9,49E-06	0,00E+00
EP, marine	mol N eq	7,80E-03	0,00E+00	5,24E-04	0,00E+00
EP, terrestrial	CTUe	7,52E-02	0,00E+00	5,12E-03	0,00E+00
ETP, freshwater TOTAL:	CTUe	1,29E+02	0,00E+00	3,25E+00	0,00E+00
ETP, freshwater - organics	CTUe	4,23E+00	0,00E+00	3,82E-01	0,00E+00
ETP, freshwater - inorganics	CTUe	1,51E+01	0,00E+00	3,34E-01	0,00E+00
ETP, freshwater - metals	Pt	1,10E+02	0,00E+00	2,54E+00	0,00E+00
LUP	m^3 depriv.	2,14E+03	0,00E+00	3,19E-01	0,00E+00
WDP	MJ	2,96E+00	0,00E+00	1,00E-02	0,00E+00
RUP, fossils	kg Sb eq	1,04E+02	0,00E+00	2,96E-01	0,00E+00
RUP, minerals and metals	CTUh	4,00E-05	0,00E+00	6,00E-08	0,00E+00
HTP, non-cancer - organics	CTUh	7,06E-09	0,00E+00	1,03E-09	0,00E+00
HTP, non-cancer - inorganics	CTUh	5,64E-08	0,00E+00	2,29E-08	0,00E+00
HTP, non-cancer - metals	CTUh	6,44E-08	0,00E+00	1,47E-08	0,00E+00
HTP, cancer - organics	CTUh	9,11E-09	0,00E+00	6,82E-09	0,00E+00
HTP, cancer - inorganics	CTUh	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP, cancer - metals	CTUh	2,76E-08	0,00E+00	1,60E-10	0,00E+00

Environmental performance

SIMULATION OF ENVIRONMENTAL IMPACT INDICATORS

Use Of Resources					
Impact category	**Unità**	**A1 - A3**	**C1**	**C2 - C4**	**D**
Unit	MJ	1,11E+02	0,00E+00	3,16E-01	0,00E+00
PENRM	MJ	9,59E+00	0,00E+00	9,58E+00	0,00E+00
PENRE	MJ	3,45E-02	0,00E+00	4,36E-06	0,00E+00
PERT	MJ	3,97E+02	0,00E+00	4,44E-03	0,00E+00
PERM	MJ	3,93E+02	0,00E+00	1,25E-03	0,00E+00
PERE	MJ	3,66E+00	0,00E+00	3,20E-03	0,00E+00
Ozone depletion	Kg CFC11 EQ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m^3	2,96E+00	0,00E+00	2,99E+00	0,00E+00

Waste				
Impact category	**Unità**	**A1 - A3**	**C1**	**C2 - C4**
Hazardous waste disposed	Kg	2,42E-04	0,00E+00	5,50E-03
Non- hazardous waste disposed	Kg	2,46E+00	0,00E+00	4,48E-01
Radioactive waste disposed	Kg	3,12E-04	0,00E+00	1,85E-06
Components for re-use	Kg	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	Kg	0,00E+00	0,00E+00	6,00E-01
Materials for energy recovery	Kg	0,00E+00	0,00E+00	7,99E-01
Exported energy	MJ per energy carrier	0,00E+00	0,00E+00	0,00E+00

IPCC				
Impact category	**Unità**	**A1 - A3**	**C1**	**C2 - C4**
GWP-GHG	Kg CO^2 EQ	6,28E+00	0,00E+00	2,18E-01

Additional Information

GREEN PUBLIC PROCUREMENT (GPP) – BUILDING MINIMUM ENVIRONMENTAL CRITERIA

REQUIREMENTS FOR PAINT AND VARNISH PRODUCERS

MEC are issued by the Ministry of the Environment and are established for multiple product categories. They provide «environmental considerations» linked to the different stages of the bidding (subject of the contract, technical specifications, rewarding technical features linked to the most convenient offer, execution of tasks) aimed to qualify, from the environmental point of view, both supplies and awarding through the entire product/service lifecycle.

PAINT PRODUCTS MUST MEET THESE TECHNICAL SPECIFICATIONS TO COMPLY WITH BUILDING MEC

1. EMISSION LIMITS

Paints and varnishes producer must prove compliance with emission limits in table below providing documentary evidence by verifying through measurements their products' emissions.

2.3 Technical specifications of the building*
2.3.5.5 Materials' emission*

EMISSION LIMIT (µm2)

Benzene Trichloroethylene 2-ethylhexyl phthalate(DEHP) Dibutyl phthalate (DBP)	1 (for each substance)
Total VOC (22)	1500
Formaldehyde	<60
Acetaldehyde	<300
Toluene	<450
tetrachloroethylene	<350
xylene	<300
1,2,4-trimethylbenzene	<1500
1,4-dichlorobenzene	<90
Ethylbenzene	<1000
2-dibutoxyethanol	<1500
Styrene	<350

2. HAZARDOUS SUBSTANCES

Paints and varnishes producer must show statement of compliance of the legal representative, accompanied by the Material Safety Data Sheet (MSDS) of the product. Whether there are no hazardous substances in MSDS, the Sheet itself is the documentation that proves compliance.

2.4.1.3 Hazardous substances

In components, parts or material used must not be added intentionally:

- additives based on cadmium, lead, chrome VI, mercury, arsenic and selenium in concentrations above 0.010% by weight.
- Substances identified as "substance of very high concern" (SVHCs) pursuant to Article 59 of the EC Regulation No 1907/2006 in concentrations above 0.10% by weight.
- Substances or mixtures classified or classifiable under the following hazard statements
  - carcinogenic, mutagenic or toxic for reproduction of category 1A, 1B or 2 (H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df, H341, H351, H361f, H361d, H361fd, H362);
  - High oral, dermal, oxygen toxicity of category 1, 2 or 3 (H300, H301, H310, H311, H330, H331);
  - Marine hazard of category 1,2 (H400, H410, H411);
  - Having organ specific toxic effect of category 1 and 2 (H370, H371, H372, H373).

3. OWNING OF AN ECOLABEL TRADEMARK OR EQUIVALENT

Paints and varnishes producer must show documentation about the owning of an Ecolabel or equivalent trademark. The producer can alternatively show an EPD type III.

2.4 Technical specifications of building components*
2.4.2 Specific criteria for building components*
2.4.2.11 Paints and varnishes*

Paint products must comply with ecological and performance criteria pursuant to 2014/312/UE2 decision as subsequently amended for the award of the EU Ecolabel for indoor and outdoor paints and varnishes.
Verification: the designer must require the contractor to make sure, during the equipment procurement phase, about the compliance with this criteria using products that alternatively have:

- EU Ecolabel or an equivalent trademark
- EPD type III, conforming with UNI EN 15804 and ISO 14025 which shows compliance to this criteria. This can verified in the EPD: specific information about criteria contained in the above-mentioned decisions must be present.

Documentation must be submitted to the contracting authority during implantation of Works, as indicated in the contract documents.

*for further information please see CAM dated 20 May 2017. Current referente text is Decree of October 11, 2017 "Adoption of minimum environmental criteria for the assignment of design and construction services for the new construction, renovation and maintenance of buildings and for the management of public administration sites" ("CAM Edilizia") amending previous CAM, issued in January 2017.

Additional information

ACRONYMS

ENVIRONMENTAL IMPACTS
ADP = abiotic depletion potential
AP = acidification potential
EP = eutrophierung potential
GWP = global warming potential
ODP = ozone depletion potential
POCP = Photochemical Ozone Creation Potential
WDP = water deprivation potential

MATERIAL CONSUMPTION
PERT = Primary energy renewable – total
PERM = Primary energy renewable – material
PERE = Primary energy renewable - energy resources
PENRT = Total use of non renewable primary energy resources
PENRM = non renewable primary energy resources used as raw materials
PENRE = Use of non-renewable primary energy resources excluding non-renewable energy resources used as raw materials
SM = secondary material
RSF = renewable secondary fuels
NRSF = non-renewable secondary fuels
FWT = Total water consumption

GENERATION OF WASTE
HWD = hazardous waste disposed
NHWD = non-hazardous waste disposed
RWD = radioactive waste disposed
CRU = customer reusable units
MFR = materials for recycling
EE = exported energy

VERIFICA E REGISTRAZIONE

ISO standard ISO 21930 and CEN standard EN 15804 serves as the core Product Category Rules (PCR)

Product Category Rules (PCR):
PCR 2019:14 Construction products, version 1.11

(PCR) review was conducted by: The Technical Commitee of the International EPD® System.
See www.environdec.com/TC for a list of members.Review chair: Claudia A. Peña, University of Concepción, Chile.
The review panel may be contacted via the Secretarian www.environdec.com/contact

Indipendent third-party verification of th declaration and data, according to ISO 14025:2006:
☒ External ☐ Internal
covering
☐ EPD process certification ☒ EPD verification

Third-party verifer:
Guido Croce

Procedure for follow-up during EPD validity involves third party verifier.
☐ Yes ☒ No

EPD owner has the property and the responsibility of the declaration.

CPC CODES: 3511 Paints and varnishes and related products

BIBLIOGRAFIA

AIB - Association of Issuing Bodies (2020). European Residual Mixes - Results of the calculation of Residual Mixes for the calendar year 2019 (Version 1.1, 2020-09-08).
CEWEP 2012, Confederation of European Waste-to-Energy Plants. Energy Report III (December 2012).
De Ceuster, G., et al. (2009) TREMOVE: Final Report.+ Model code v2.7b, 2009.
European Commission, Brussels.
Ecoinvent Centre (2007) Ecoinvent data v2.0. Swiss Centre for Life Cycle Inventories, Dübendorf, Switzerland.
EMEP/EEA air pollutant emission inventory guidebook 2016; '1.A.4 non-road mobile machinery'.
IPCC, 2006. Guidelines for National Greenhouse Gas Inventories.
ISPRA 2017, Istituto Superiore per la Protezione e la Ricerca Ambientale: Rapporto Rifiuti Urbani, Edizione 2017; Rapporti 272/2017. ISBN 978-88-448-0852-5.
Keller, M. et al. (2010) Handbook emission factors for road transport v3.1, HBEFA.
INFRAS, Berne, CH.
Knörr, W. et al. (2011) Ecological Transport Information Tool for Worldwide Transports (EcoTransIT): Methodology and data update. Berlin, Hannover, Heidelberg, DE.
Ntziachristos, L., et al. (2013) EMEP/EEA air pollutant emissions inventory guidebook 2009:
Exhaust emissions from road transport. European Environment Agency, Copenhagen, DK.
Spielmann, M., et al. (2007) Transport Services. ecoinvent report No. 14., Swiss Centre for Life Cycle Inventories, Dübendorf, CH. From combustion of fuel in the engine. The dataset takes as input the infrastructure of the lorry and road network, the materials and efforts needed for maintenance of these and the fuel consumed in the vehicle for the journey. The activity ends with the transport service of 1tkm and the emissions of exhaust and non-exhaust emissions into air, water and soil.

Toll-free number
800.825.161
Mon.-Fri. 8:30 a.m. – 5:30 p.m.
numero.verde@cromology.it
www.maxmeyer.it

Cromology italia Spa
Via IV Novembre, 4 - 55016 Porcari (LU)
Tel. 199 119955 / Fax 199 119977
www.duco.it **/duco.it**