

## Abbreviations and symbols

*Below you will find an explanation of the abbreviations and symbols mentioned in this product catalogue.*

A	Elongation
A 5.65 $\sqrt{S_0}$	Elongation on proportional basis
A <sub>80</sub>	Elongation on 80 mm basis
AC	Alternative Current
Ac <sub>1</sub>	Austenitic start transformation temperature during heating
Ac <sub>3</sub>	Austenitic end transformation temperature during heating
Al	Aluminium
AM FCE	This abbreviation is added to the name of a steel grade for which ArcelorMittal offers more than what is required by the standard.
API	American Petroleum Institute
AR	As Rolled
AS	Aluminium-silicon
AZ	Aluminium-zinc
B	Boron
BH	Bake-hardening
C	Carbon
CAD	Computer Aided Design
CCT	Continuous-cooling transformation
Cd	Cadmium
C <sub>eq</sub>	Carbon equivalent
CE	Conformité Européenne
CEV	Carbon equivalent
CGHAZ	Coarse-grained heat-affected zone
CLAS	Steel coils for laser cutting applications
CMT	Cold Metal Transfer
CPR	Construction Products Regulation
Cr	Chrome
CSTB	Centre Scientifique et Technique du Bâtiment
CTS	Client Technical Support
Cu	Copper
DC	Direct Current
DIBt	Deutsches Institut für Bautechnik
DoP	Declaration of Performance
DWTT	Drop Weight Tear Tests
$\Delta E$	Colour differences
ECCA	European Coil Coating Association
ERW	Electric Resistance Welding
ETA	European Technical Approval
ETE	Elektro-Tauch-Emaillierung, electrostatic dip enamelling, or electrophoresis
FCAW	Flux Core Arc Welding
FLC	Forming Limit Curve
GMAW	Gas Metal Arc Welding



## Abbreviations and symbols

GTAW	Gas Tungsten Arc Welding
GU	Gloss Unit
HAZ	Heat-Affected Zone
HB	Brinell hardness
HBS	Brinell hardness steel ball indenter
HBW	Brinell hardness tungsten carbide ball indenter
HFI	High Frequency Induction welding
HIC	Hydrogen-induced cracking
HR	Rockwell hardness
HRB	Rockwell hardness Scale B
HRC	Rockwell hardness Scale C
HSLA	High Strength Low Alloy steels
HV	Vickers hardness
HVAC	Heating, Ventilating and Air Conditioning
ICHAZ	Intercritical heat-affected zone
IFS	Interstitial Free Steel
KV	Notch toughness
L	Longitudinal
LDR	Limiting Drawing Ratio
M	Martensite
M	Thermomechanically rolled
MAG	Metal Active Gas welding
MASC	Micro-Adhesive Scale
MIG	Metal Inactive Gas welding
MMA	Manual Metal Arc welding
Mn	Manganese
Mo	Molybdenum
MP	Mechanical properties
$M_s$	Martensitic start transformation temperature
n	Strain hardening exponent
N	Nitrogen
Nb	Niobium
Ni	Nickel
N(R)	Normalising rolled
P	Phosphorus
Pb	Plumbum (lead)
PCM	Parameter crack measurement
PS	Proof Stress
PSL	Product Specification Level
PVDF	Polyvinylidene Fluoride
PWHT	Post-Weld Heat Treatment
r	Plastic strain ratio
$\bar{r}$	Normal strain ratio
$\Delta r$	Planar strain ratio
Ra	Roughness
RB	Batch annealing
RC	Continuous annealing
$R_e$	Yield strength
$R_e/R_m$	Yield to strength ratio
REACH	European Regulation EC 1907/2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals
$R_m$	Tensile strength
R.o.H.S.	Restriction of the use of Hazardous Substances



R <sub>p0.2</sub>	Proportional elastic limit with an elongation of 0.2% (0.2% PS)
Rs	Stress ratio
S	Sulphur
SAW	Submerged Arc Welding
Si	Silicon
SMAW	Shielded Metal Arc Welding
SST	Single Sheet Tester
T	Transversal
th	Thickness
TH	$15 T_0/d^2$ ( $T_0$ = the hydrogen permeation time (minutes) and $d$ = thickness (mm))
Ti	Titanium
TIG	Tungsten Inert Gas
TK	Transition temperature
TM	Thermomechanically rolled
TOC	Thin Organic Coating
TRC	Transformation en Refroidissement Continu
UOE	Uing and Oing forming
UVA	Ultraviolet A radiation
V	Vanadium
VOCs	Volatile Organic Compounds
w	Width
W.E.E.E.	Waste Electrical and Electronic Equipment
WH	Work-hardening
Z	Zinc
ZA	Zinc-aluminium
ZE	Electrogalvanised
ZM	Zinc-magnesium
Zr	Zirconium

#### Copyright

All rights reserved for all countries. This publication shall not be reproduced, in whole or in part, in any form or by any means whatsoever, without prior express written consent from ArcelorMittal. Care has been taken to ensure that the information in this publication is accurate, but this information is not contractually binding. ArcelorMittal and any other ArcelorMittal Group company do not therefore accept any liability for errors or omissions or any information that is found to be misleading.

As this document may be subject to change at any time, please consult the latest information on [industry.arcelormittal.com/catalogue](http://industry.arcelormittal.com/catalogue)