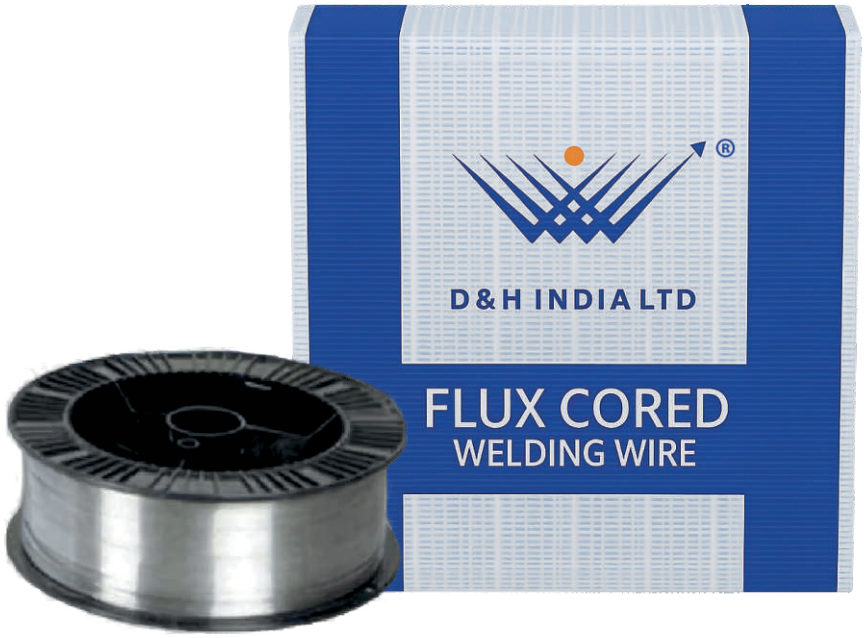
D & H INDIA LTD

FLUX CORED WIRES

PRODUCT BOOK



MAKE IN INDIA

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38 YEARS OF 38 EXCELLENCE EXCELLENCE

D & H INDIA LTD

D & H INDIA LIMITED is an established, publicly listed company that has been engaged in the manufacturing of an exhaustive range of welding consumables for more than three decades, We currently operate three manufacturing facilities located in Indore (M.P.), Dhar (M.P.), and Durg (C.G.) in India. D & H India Limited is dedicated to delivering the best quality products, supported by the fastest possible technical services through our qualified and experienced team, We are committed to being a trustworthy, solution-oriented partner to core industries,

Our in-house, Government of India-Recognized R&D facility is equipped with advanced quality systems and technical expertise, allowing us to develop customized products for various Applications,

D & H India Limited has established a modern and sophisticated unit for the production of FCAW wires (A "Made in India" product), boasting the highest manufacturing capacity in India to date, Our Flux Cored Wire – E71T1 is approved by BIS, DNV, IRS, ABS, BV, CE, BHEL, JSW, JSPL, IBR, Thermax, RDSO etc,

Our flux-cored wires are widely used in applications involving mild steel, low alloy steel, stainless steel, and hard-facing. More than 200 reputed PEB companies along with prestigious fabricators trust and are associated with us for their flux-cored wire needs. Our commonly selling FCAW products conform to standards such as AWS E71T-1C / E71T-1M / E71T-5C / E81T1-B2C, & E110T5-K4 etc, as well as various grades of stainless steel flux-cored wires and application-specific hard-facing flux-cored wires,

Our comprehensive range of welding consumables, including **Electrodes, MIG wires, TIG wires, FCAW wires, and SAW wires & fluxes**, are well-accepted by various industries. D & H India is an approved vendor for companies such as L&T, JSW, SAIL, BHEL, NTPC, HPCL, IOCL, BPCL, RDSO etc, as well as many steel, cement, and heavy engineering companies,

Head Off. & Correspondence Address : Plot 'A', Sector 'A', Industrial Area, Sanwer Road, **INDORE** - 452 015 (M.P.) INDIA **Ph.:** +91 2973101 & 2974501 **Email:** ho@dnhindia.com

Regd. Off.: A-204, Kailash Esplanade, Opp. Shreyas Cinema, L.B.S. Marg, Ghatkopar (W) **MUMBAI** - 400 086 (MH) INDIA **Ph.:** +91 22 25006441, **Website:** www.dnhindia.com

CIN : L28900MH1985PLC035822

CERTIFICATE OF COMPLIANCE

INTERNATIONAL CERTIFICATION SERVICES PVT. LTD.

This is to certify that the
QUALITY MANAGEMENT SYSTEM of

D & H INDIA LTD

Regd. Office & Unit - I : Sector-A, Plot - A, Sanwer Road, Industrial Area, Indore - 452015, Madhya Pradesh, India.

Unit II : Village Sejvaya, Ghatabillod, Dist. Dhar, Madhya Pradesh, India.

Unit III : Plot No. 115 and 116, Zone-B, Industrial Growth Centre, Village Borai, Post - Rasmada, Dist. Durg – 491001, Chhatisgarh, India.

has been assessed and registered as complying with the requirements of the following International Standard:

ISO 9001:2015

The Quality Management System applicable to:

Scope: **Manufacture and Supply of Welding Electrodes, Submerged Arc Fluxes and Wires,CO2 Welding Wires, Filler Wires (Like : Nickel and Nickel Base, Stainless Steel, Low Alloy and Non-Ferrous TIG (Tungsten Inert Gas) / MIG (Metal Inert Gas) Wires), Flux Cored Wires and Metallurgical Cored Wires**

Registration No.	**: RQ91/1287**
Registered Date	**: 05th December, 2002**
Reassessment Date	**: 06th December, 2023**
Issue Date	**: 11th December, 2023**
Expiry Date	**: 04th December, 2026**

JAS-ANZ

www.jas-anz.org/register

GREEN
Invalid After
01/12/2025
Unless
Hologram
Pasted

Director (Technical)
International Certification Services Pvt. Ltd.

Accredited by Joint Accreditation System of Australia and New Zealand

Validity of this certificate is based on periodic audits of the management system defined by the above scope and is contingent upon prompt, written notification of significant changes to the management system and/or its components thereof shall be immediately communicated to ICS.
Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained at www.icsasian.com/www.icspl.org

22/23, Goodwill Premises, Swastik Estate, 178 CST Road, Kalina, Santacruz (E) Mumbai – 400 098, Maharashtra, India Tel.: 022-42200900

BUREAU OF INDIAN STANDARDS

Attachment to Licence No. CM/L- 8200150198

CM/L-No	Name of the Licensee with the Factory Address	Name of the Product	Indian Standard No.
8200150198	D&H INDIA LIMITED - VILLAGE SEJVAYA , GHATABILLOD, DIST. DHAR (M.P.) , , GHATABILLOD : 454773	Flux cored (tubular) electrodes for gas shielded and self-shielded metal welding of carbon or carbon-manganese steel	IS 15769 : 2008

Endorsement No. 1 Dated 09-Sep-2023

Whereas, the licence was valid upto Third October Two Thousand Twenty Three.

Now, consequent upon renewal, the validity of the licence given in schedule of has been extended from Third October Two Thousand Twenty Three to Second October Two Thousand Twenty Six

Other terms and conditions of licence remain same.

Branch Head (Bhopal Branch Office)

Dedal Attestation & Certification

Notified body No. 1922
Bulgaria, 8000 Burgas
54 Macedonia Str.

CERTIFICATE

of Conformity of the Factory Production Control

1922 - CPR - 2239

In compliance with Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

Welding consumables - General product standard for filler metals and fluxes for fusion welding of metallic materials.

(For list of products see Annex I to 1922-CPR-2239 that is an inseparable part of this certificate)

placed on the market under the name or trade mark of

D & H INDIA LTD
Plot-A, Sector-A, Industrial Area, Sanwer Road, Indore-452015(M.P.) INDIA

and produced in the manufacturing plants

D & H INDIA LTD
UNIT I: Plot-A, Sector-A, Industrial Area, Sanwer Road, Indore-452015 (M.P.) INDIA
UNIT II: Village Sejvaya, Ghatabillod, Dist Dhar-454773 (M.P) INDIA

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard

EN 13479:2017

under system 2+ are applied and that the factory production control is assessed to be in conformity with the applicable requirements.

This certificate was first issued on 07.08.2024 and will remain valid until 07.08.2025 as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified factory production control certification body. The certificate is supported through annual surveillance audit and is reissued after each surveillance audit. The validity of the certificate may be confirmed in the CE register at the web address www.dedal-bg.net.

CE

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

EA BAS reg. № 12 ОСП
PRODUCT CERTIFICATION BODY
EA BAS is an EA MLA signatory

Embossed stamp of "Dedal - A&C" Ltd.

Dedal Attestation & Certification

Manager: Данаева

Dedal dipl. eng. Anna Vasileva

Issued:
Burgas, 20 May 2025
Ref. No. 02-00

WELDING CONSUMABLE CERTIFICATE

Certificate No.: 487698-6899213-001

Report No.: 6899213

Port of: Mumbai, India

Date: 21-APRIL-2025

THIS IS TO CERTIFY

THAT THE UNDERSIGNED SURVEYOR TO THIS BUREAU DID, AT THE REQUEST OF D&H INDIA LIMITED, ATTEND THEIR PLANT AT VILLAGE SEJVAYA, DHAR ROAD, GHATABILLOD, DISTRICT DHAR, M.P - 454773, INDIA, ON THE 13 DAY OF MARCH, 2025 AND ON SUBSEQUENT DATES, IN ORDER TO CARRY OUT A PLANT SURVEY OF FACILITIES AND ASSOCIATED QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND TO WITNESS AND REPORT ON THE ANNUAL APPROVAL TESTING OF WELDING CONSUMABLES; AND,

THAT THE FACILITY IS CONSIDERED CAPABLE OF PROVIDING AN ACCEPTABLE UNIFORM PRODUCT, AND THAT EACH WELDING CONSUMABLE LISTED BELOW WAS FOUND IN COMPLIANCE WITH THE SPECIFICATION INDICATED AND IS ELIGIBLE TO BE PLACED ON THIS BUREAU'S APPROVED WELDING CONSUMABLES LIST IN THE FLUX CORED ARC WELDING SECTION:

TRADE NAME	SPECIFICATION	GRADE OR CLASS	SHIELDING GAS	POSITION	CURRENT/ POLARITY	SIZE
SUPERCORE 71 T-1	ABS	3Y SA C1 H5	CO2	ALL	DCEP	1.20-1.60 MM

RAHUL VIDYADHAR BHAT SURVEYOR

Note: This Certificate evidences compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, item of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a fuller description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

Certificate number : WM 142001/02/B.0

File number : 142001 N 2023

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Marine & Offshore Classification Rules

This certificate is issued to

D & H INDIA Limited

Indore - INDIA

for the product

Flux-Cored Wire for Semi-Automatic or Automatic Welding with Shielding Gas

Designation	:	SUPERCORE 71T-1
Grade	:	SA3YM HH
Description	:	Gas Shield CO2 100%
Diameter	:	1.2-1.6 mm
Welding current	:	DC+
Welding position	:	All positions for butt and fillet welding including vertical downwards (PA, PF, PG, PB, PC, PE, PD)
Remark	:	NIL

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of Bureau Veritas Marine & Offshore Rules on Materials and Welding for the Classification of Marine Units.

This certificate will expire on: 17 Jan 2026

For Bureau Veritas Marine & Offshore,

Local office: BV MUMBAI (BOMBAY)

Issued on 18 Jan 2025

Surveyor: T. Khandelwal

This certificate was created electronically and is valid without signature

Certificate no.:
TAW00005S8

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Flux Cored Wire/Gas combination

with trade name
SUPERCORE-71-T1 / C1

Manufacturer
D & H India Limited
Ghatabillod, Madhya Pradesh, India

is found to comply with
DNV rules for classification – Ships
DNV class programme DNV-CP-0069 – Type approval – Welding consumables

with this approval

Grade	**III YMS H5**
Current	**DC(+)**
Approved diameter	**1.2 mm - 1.6 mm**
Positions	**All, including vertical downwards**
Remarks	

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Hamburg** on **2024-06-05**

This Certificate is valid until **2029-06-04.**
DNV local unit: **India CMC MES**

Approval Engineer: **Dietmar Liebich**

for **DNV**

Digitally Signed By:
Martin Wenning
Location: DNV Hamburg, Germany

Any significant change in design or construction may render this Certificate invalid.

Indian Register of Shipping

Certificate No.: BHP24WC004

CERTIFICATE OF APPROVAL OF WELDING CONSUMABLES FOR USE IN SHIP CONSTRUCTION

This is to certify that the electrode described below has been tested in accordance with the Society's rule requirements and is being included in the approved list of consumables for Welding in Ship Construction.

NAME & ADDRESS OF MANUFACTURER	:	**D & H INDIA LIMITED** **VILLAGE SEJVAYA, GHATABILLOD** **DHAR ROAD** **DISTRICT DHAR 454773** **MADHYA PRADESH** **INDIA**
TYPE OF ELECTRODE	:	**FLUX CORED WIRE**
TRADE NAME	:	**SUPERCORE 71-T1**
WELDING POSITIONS	:	**All Positions**
GRADE	:	**3Y S H5**
SIZE (dia.) mm	:	**1.20 MM,1.60 MM**
CURRENT TYPE	:	**DC (+ ve)**

Tapesh Ghosh

Head of Department
Ships and Technical Services
Indian Register of Shipping

Place : **Mumbai**

Date : **13/02/2024**

The validity of this certificate is subject to Annual Approval being carried out in **October** every year and the attachment to this certificate being endorsed by the society's Surveyors.

See overleaf for conditions of issue of this certificate

Certificate No: LR2529286WC
Issue Date: 13/03/2025
Expiry Date: 12/03/2026

CERTIFICATE OF APPROVAL OF WELDING CONSUMABLE FOR SHIP CONSTRUCTION

This certificate is issued to the company named below. The welding consumable or combination described has been tested in accordance with the requirements of Lloyd's Register for use in ship construction. This approval is subject to annual tests being carried out in accordance with the requirements of Lloyd's Register. The continued validity of this approval will be confirmed by appropriately dated Annual Reapproval Certificates issued to the company.

Company	**D&H India Limited**
Address	Sector A Plot A, Sanwer Road Industrial Area, Indore, 452012, India
Type of welding consumable	Section 5 - Flux-Cored Wire/Gas Shield
Trade name	Supercore 71-T1/CO2
Welding Process	Flux Cored Arc Welding
Grade & Technique	3YS
Welding Positions	Downhand, horizontal-vertical, vertical upward and downward, and overhead.
Weld Type	Butt and Fillet Welding.
Diameter (mm)	1.2 -1.6
Current	DC(+)
Remarks	Approved also for automatic multirun welding in the downhand position only. Approved low hydrogen consumable, conforming to standard H5.

Jaspal Nirankari

Welding Team Leader to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

D & H INDIA LTD

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Note: *This product book covers only common and frequently asked products in every industry. Since, our manufacturing range is vast, Therefore, Your enquiry for other products not covered in this product book is also solicited,*

H.O. & Works : Plot 'A', Sector 'A', Industrial Area, Sanwer Road, **INDORE -** 452 015 (M.P.) INDIA.
Phone : +91 731 2973501, Mobile : +91 90095 85333, E-mail : ho@dnhindia.com

www.dnhindia.com

D & H INDIA LTD

Flux Cored Wire

Carbon Steel

H.O. & Works : Plot 'A', Sector 'A', Industrial Area, Sanwer Road, **INDORE -** 452 015 (M.P.) INDIA.
Phone : +91 731 2973501, Mobile : +91 90095 85333, E-mail : ho@dnhindia.com

www.dnhindia.com

SUPERCORE 71 T-1

Flux Cored Wire

Classification

AWS A5.20- E 71T-1C

AWS A5.20M – E491T-1C

IS:15769 CM/L-8200150198

Description

SUPERCORE-71 T1 is a superior quality flux cored wire suitable for welding in all position on wide range of welding current under CO2 shielding. The wire if further characterized by smooth arc, easy slag detachability and produce X-ray quality weld with exceptional impact strength at sub-zero temperature down to - 20^{0}C,

Application

SUPERCORE-71 T1 is recommended for single and multi pass welding of mild steel and carbon steel, and suitable for joining steel confirming to ASTM SA-36/SA-36M and SA-283/SA 283M (A,B,C,D Grades) and SA-414/SA 414M,like storage vessels, ship building, earth moving equipments, piping, heavy machinery, bridges tower, structural fabrication, vehicles and chemical plants machinery structures etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %
Specification Required	0.12 Max	1.75 Max	0.90 Max	0.03 Max	0.03 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 20^{0}C (J)
Specification Required	490 – 670	390 Min	22 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15^{0}C
Polarity	DC +

Approvals : **BIS, BHEL, RDSO, CE, ABS, DNV, IRS, BV, IBR**

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 71 T-1M

Flux Cored Wire

Classification

AWS A5.20- E 71T-1M

AWS A5.20M – E491T-1M

Description

SUPERCORE-71 T 1M is a superior quality flux cored wire suitable for welding in all position on wide range of welding current under 75% Argon-25% Co2 shielding. The wire is further characterized by smooth arc, easy slag detachability and produce X-ray quality weld with exceptional impact strength at sub-zero temperature down to -20^{0}C

Application

SUPERCORE-71 T 1M is recommended for single and multi pass welding of mild steel and carbon steel, and suitable for joining steel confirming to ASTM SA-36/SA-36M and SA-283/SA 283M (A,B,C,D Grades) and SA-414/SA 414M,like storage vessels, ship building, earth moving equipments, piping, heavy machinery, bridges tower, structural fabrication, vehicles and chemical plants machinery structures etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %
Specification Required	0.12 Max	1.75 Max	0.90 Max	0.03 Max	0.03 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 20^{0}C (J)
Specification Required	490 - 670	390 Min	22 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	75% Argon 25% Co_2
Interpass Temp	150 ± 15^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 71 T-1M-JH8

Flux Cored Wire

Classification

AWS A5.20- E 71T-1M-JH8

Description

SUPERCORE71-T 1M-JH8 is a superior quality flux cored wire suitable for welding in all position on wide range of welding current under 75% Argon-25% Co2 shielding. The wire if further characterized by smooth arc, easy slag detachability and produce X-ray quality weld with exceptional impact strength at low temperature,

Application

SUPERCORE71-T 1M-JH8 is recommended for single and multi pass welding of mild steel and carbon steel, and suitable for joining steel confirming to ASTM SA-36/SA-36M and SA-283/SA 283M (A,B,C,D Grades) and SA-414/SA 414M,like storage vessels, ship building, earth moving equipments, piping, heavy machinery, bridges tower, structural fabrication, vehicles and chemical plants machinery structures etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %
Specification Required	0.12 Max	1.75 Max	0.90 Max	0.03 Max	0.03 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 40°C (J)
Specification Required	490 – 670	390 Min	22 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	22-28	180-300
Vertical-Up	22-26	150-260
Over Head	23-26	150-250

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	75% Argon 25% Co_2
Interpass Temp	150 ± 15°C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 71 T-5

Basic Type Flux Cored Wire

Classification

AWS A5.20- E71T-5C

AWS A5.20M – E491T-5C

Description

SUPERCORE-71 T5 is highly basic type flux cored wire having excellent mechanical properties and producing radiographic quality crack resistant weld having very low level of diffusible hydrogen, arc is smooth and stable, easy to remove slag and weld bead is sound and uniform,

Application

SUPERCORE-71 T5 is recommended for welding of boilers quality plates, structural steels, pressure vessels etc, highly suitable for multipass welding of thicker section, for joining steels confirming to ASTM Sa-525-70, and C grades of SA-285, IS:2002-2A & 2B, IS2062, IS 226, DIN 17115 HIV etc and on other application where high impact values at low temperature are required,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni%
Specification Required	0.12 Max	1.75 Max	0.90 Max	0.03 Max	0.03 Max	0.5 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 40^0C (J)
Specification Required	490 – 670	390 Min	22 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	22-28	180-300
Vertical-Up	22-26	150-260
Over Head	23-26	150-250

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 71 T-9

Flux Cored Wire

Classification

AWS A5.20-E 71T-9C

AWS A5.20M – E491T-9C-J

Description

SUPERCORE-71 T 9 is a superior quality flux cored wire suitable for welding in all position on wide range of welding current and produce higher deposition rate under 100% Co_2 shielding. The wire if further characterized by smooth arc, easy slag detachability and produce X-ray quality weld with exceptional impact strength at sub-zero temperature down to -30^{0}C,

Application

SUPERCORE-71 T 9 is recommended for single and multi pass welding of low and medium carbon steelwith improved impact properties, suitable for storage vessels, ship building, earth moving equipments, piping, heavy machinery, heavy bridges, tower, structural fabrication and chemical plants machinery structures etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni%
Specification Required	0.12 Max	1.75 Max	0.90 Max	0.03 Max	0.03 Max	0.5 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 30^{0}C (J)
Specification Required	490 – 670	390 Min	22 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	22-28	180-300
Vertical-Up	22-26	150-260
Over Head	23-26	150-250

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

D & H INDIA LTD

Flux Cored Wire

Low Alloy Steels

H.O. & Works : Plot 'A', Sector 'A', Industrial Area, Sanwer Road, **INDORE -** 452 015 (M.P.) INDIA.
Phone : +91 731 2973501, Mobile : +91 90095 85333, E-mail : ho@dnhindia.com

www.dnhindia.com

SUPERCORE 81 T1 –W 2

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E81T1-W 2 C

Description

SUPERCORE-81 T1-W 2 is a low alloy steel flux cored wire designed for all position, single and multiple pass welding of corten / weather resistant grade steels, The wire gives optimum performance under 100% CO2 shielding with radiographic quality weld deposits.

Application

SUPERCORE-81 T1-W 2 is suitable for welding ASTM A 242 and A 588. These steels are typically used in bridge construction and other structural components used in highway construction, also used for single and multi-pass welding of weather resistant steels -Corten steels grade A/B, Class 1 steels of type A of SA-533, etc.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %	Cr %	Cu %
Specification Required	0.12 Max	0.50-1.30	0.35-0.80	0.030 Max	0.030 Max	0.40-0.80	0.45-0.70	0.30-0.75

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 30°C (J)
Specification Required	550-690	470 Min	19 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2 or Argon+ Co_2
Interpass Temp	150 ± 15°C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 91 T1-D1

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E91T1-D1 C

Description

SUPERCORE-91T1-D1 is a low alloy flux cored wire designed to produce weld with high tensile strength and moderate impact for welding of C-Mo steel, the wire have Smooth bead with stable arc transfer and low spatter emission, slag is easy removal and good penetration, This wire is designed for single and multiple pass welding in all positions , weld metal is of radiographic quality,

Application

SUPERCORE-91T1-D1 suitable for welding of SAILMA 450/450HI steel used in CONCOR wagons, welding of High Tensile Steels like IS 8500 Gr.540B, 570B and 590B, IS 2002 Gr.III, IS 1875 CL IIIA,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Mo %
Specification Required	0.12 Max	1.25-2.00	0.80 Max	0.030 Max	0.030 Max	0.25-0.55

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 40^0C (J)
Specification Required	620-760	570 Min	17 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1-A1

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E 81T1-A1C

Description

SUPERCORE-81 T1-A1 is a low alloy steel flux cored wire with an external shielding gas, this wire is intended for single and multiple pass welding in all positions, this wire designed for welding of C-Mo steel base metal. The wire gives optimum performance under 100% CO2 shielding with radiographic quality weld deposits. The quick freezing slag facilitates welding in all positions. This wire provides deep penetrating welds, Weld deposits are sound, with minimal subsurface porosity, due to excellent fluxing action of the slag,

Application

SUPERCORE-81 T1-A1 is recommended for welding certain C-Mo steels used in the fabrication of boilers and pressure vessels ,recommended for single and multi pass welding of similar composition steels and equivalent grade,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Mo %
Specification Required	0.12 Max	1.25 Max	0.80 Max	0.030 Max	0.030 Max	0.45-0.65

Mechanical Properties of All Weld Metal (PWHT at 620^{0}C±15^{0}C for 1 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	550 – 690	470 Min	19 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1-B2

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E 81T1-B2C

Description

SUPERCORE-81 T1-B2 is a low alloy steel flux cored wire with an external shielding gas, this wire is intended for single and multiple pass welding in all positions, this wire designed for welding of 1.25% Cr 0.5% Mo steels base metal and suitable for high temperature and pressure service conditions. The wire gives optimum performance under 100% CO2 shielding with radiographic quality weld deposits.

Application

SUPERCORE-81 T1-B2 is recommended for welding for high pressure steam pipes of boilers, oil refining processing equipment, pressure vessels and castings of the same alloy content, this wire is designed for welding of similar and equivalent steel grades like P4 materials ASTM SA 182/182M Gr.F2/F11/F12, SA 213/213M Gr.T11/T12, SA 335/335M Gr.P11/P12, SA 387/387M Gr.2/11/12

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Mo %
Specification Required	0.05-0.12	1.25 Max	0.80 Max	0.030 Max	0.030 Max	1.00-1.50	0.40-0.65

Mechanical Properties of All Weld Metal (PWHT at 690^{0}C±15^{0}C for 1 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	550 – 690	470 Min	19 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	175 ± 15^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 91 T1-B3

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E91T1-B3C

Description

SUPERCORE-91 T1-B3 is a low alloy steel flux cored wire with an external shielding gas, this wire is intended for single and multiple pass welding in all positions, this wire designed for welding of of 2.25% chromium, 1% molybdenum low alloy steels, The wire gives optimum performance under 100% CO2 shielding with radiographic quality weld deposits.

Application

SUPERCORE-91 T1-B3 is recommended for welding of similar composition creep resistant steel, this wire is designed for welding of similar and equivalent steel grades like ASTM A 387 Gr 21 & 22, A 182 F22, and A 335 P22 etc. These creep resistant steels are typically used in Petro-Chemical, Power Plants, Piping, heat exchangers, boilers, pressure vessels etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Mo %
Specification Required	0.05-0.12	1.25 Max	0.80 Max	0.030 Max	0.030 Max	2.00-2.50	0.90-1.20

Mechanical Properties of All Weld Metal (PWHT at 690^{0}C±15^{0}C for 1 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	620 – 760	540 Min	17 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	175 ± 15^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1 –B 6

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E81T1-B6 C

Description

SUPERCORE-81T1-B6 is a low alloy steel flux cored wire intended for single and multiple pass, all position welding of certain chromium-molybdenum steels where a weld deposit of 5% chromium and ½% molybdenum is required, the wire have Smooth, stable arc transfer with low spatter emission, fast freezing slag facilitates easy removal, increased deposition rates over covered and stick electrodes and greater tolerance of mill scale and rust ,the weld metal is radiographic quality and has creep resistance up to 650^{0}C,

Application

SUPERCORE-81T1-B6 is suitable for welding tube, pipe, and plate subjected to high temperature service, such as A213 T5 and A335 P5, SA387 Gr. 5 plates and pipes, steam Generating Power Plant, chemical plant, fertilizer industries, pressure Vessels, Oil Refineries etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %	Cr %	Mo %	Cu %
Specification Required	0.05-0.12	1.25 Max	1.00 Max	0.030 Max	0.040 Max	0.40 Max	4.0-6.0	0.40-0.65	0.50 Max

Mechanical Properties of All Weld Metal (PWHT at 745^{0}C±15^{0}C for 2 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	550-690	470 Min	19 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	200 ± 50^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1 –B 8

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E81T1-B8 C

Description

SUPERCORE-81T1-B8 is a low alloy steel flux cored wire intended for single and multiple pass, all position welding of 9% Cr+ Mo air hardening steel for elevated temperature service up to 600°C,the wire have Smooth, stable arc transfer with low spatter emission, fast freezing slag facilitates easy removal, ,the weld metal is radiographic quality weld,

Application

SUPERCORE-81T1-B8 is suitable for welding tube, pipe, and plate subjected to high temperature service, such as A335 Grade P9, A336 Grade F9, A217 C12 (Cast), and A199, A200, and A213 Grade T9, used primarily in the petrochemical and refinery industries, heat exchanger, piping and pressure vessels in oil refineries and power plants.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %	Cr %	Mo %	Cu %
Specification Required	0.05-0.12	1.25 Max	1.00 Max	0.030 Max	0.040 Max	0.40 Max	8.0-10.5	0.85-1.20	0.50 Max

Mechanical Properties of All Weld Metal (PWHT at 745^{0}C±15^{0}C for 2 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	550-690	470 Min	19 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	200 ± 50^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 91 T1-B91

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E91T1-B91 C

Description

SUPERCORE-91T1-B91 is a low alloy steel electrode for flux cored arc welding with external gas shielding. It is designed for single and multiple pass welding of 9Cr-1Mo steels, in all positions. This electrode contains small additions of niobium, vanadium and nitrogen to improve long term creep properties.

Application

SUPERCORE-91T1-B91 is used to weld 9Cr-1Mo creep resistant steels, such as A387 Gr 91 plate, A335 P91 and A369-FP91 piping, A199-T91, A200-T91 and A213-T91 tubing, A182-F91 forgings, as well as fittings and castings of similar composition. Typical applications include power plant turbine casings, valves, headers and piping.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %	Cr %	Mo %	V %	Al %	Cu %
Specification Required	0.08-0.13	1.20 Max	0.50 Max	0.015 Max	0.020 Max	0.80 Max	8.0-10.5	0.85-1.20	0.15-0.30	0.04 Max	0.25 Max

Mechanical Properties of All Weld Metal (PWHT at 760^{0}C±15^{0}C for 2 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	620-830	540 Min	16 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	260 ± 50^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 91 T1-B92

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E91T1-B92 C

Description

SUPERCORE-91T1-B92 is a low alloy steel electrode for flux cored arc welding with external gas shielding. It is designed for single and multiple pass welding of 9Cr-0.50Mo steels, in all positions. This electrode contains small additions of niobium, vanadium and nitrogen to improve long term creep properties.

Application

SUPERCORE-91T1-B92 is used to weld 9Cr-0.50Mo creep resistant steels, such as A387 Gr 92 plate, A335 P92 and A213-T92 tubing, A182-F92 forgings, as well as fittings and castings of similar composition. Typical applications include power plant turbine casings, valves, headers and piping.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %	Cr %	Mo %	V %	Al %	Cu %
Specification Required	0.08-0.15	1.20 Max	0.50 Max	0.015 Max	0.020 Max	0.80 Max	8.0-10.5	0.30-0.70	0.15-0.30	0.04 Max	0.25 Max

Mechanical Properties of All Weld Metal (PWHT at 760^{0}C±15^{0}C for 2 Hr)

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %
Specification Required	620-830	540 Min	16 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	260 ± 50^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1 –Ni 1

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E81T1-Ni 1 C

Description

SUPERCORE-81 T1-Ni 1 is a low alloy steel flux cored wire designed for the all position, single and multiple pass welding of carbon and low alloy steels which require moderate tensile strength and good CVN toughness at subzero temperatures, This wire gives optimum performance under 100% CO2 shielding and deposit radiographic quality welds with excellent bead appearance and easy slag detachability,

Application

SUPERCORE-81 T1-Ni 1 is designed for single and multi-pass welding of similar composition steels and equivalent grade steels like; such as ASTM A203 Gr A, A352 Cr LC1 and LC2, A572, and A734. These steels are used in offshore platform fabrication, mining machinery, earthmoving equipment, and structural applications.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %	Mo	Cr
Specification Required	0.12 Max	1.75 Max	0.80 Max	0.030 Max	0.030 Max	0.80-1.10	0.35 Max	0.15 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 30°C (J)
Specification Required	550-690	470 Min	19 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15°C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1 –Ni 2

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E81T1-Ni 2 C

Description

SUPERCORE-81 T1-Ni 2 is a low alloy steel flux cored wire designed for the all position, single and multiple pass welding of carbon and low alloy steels which require moderate tensile strength and good CVN toughness at subzero temperatures, this wire have a spray like transfer with very low spatter, the fast freezing slag facilitates welding in all positions and is easily removed, this wire produces a weld deposit with 2.2-2.5% nickel.

Application

SUPERCORE-81 T1-Ni 2 is suitable for welding ASTM A572, A 302, A588 and A734 which are used in fabrication of transmission and light poles, earth moving and mining construction machinery, offshore platforms, ship building, structural bridges, storage tanks etc

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Ni %
Specification Required	0.12 Max	1.50 Max	0.80 Max	0.030 Max	0.030 Max	1.75-2.75

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 40°C (J)
Specification Required	550-690	470 Min	19 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2 or Argon+ Co_2
Interpass Temp	150 ± 15°C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 81 T1 –K 2

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E81T1-K2 C

Description

SUPERCORE-81T1-K2 is titania type low alloy steel flux cored wire designed for all position, single and multiple pass welding for welding of low-temperature service steel used LPG, LNG tanks. the wire have Smooth, stable arc transfer with low spatter emission, fast freezing slag facilitates easy removal, ,the weld metal is radiographic quality weld,

Application

SUPERCORE-81T1-K2 suitable for welding of low-temperature service stee lused in used LPG, LNG tanks, ASTM A710, ASTM A 514 and similar high strength steel, high tensile steel used in machinery, bridges structure etc.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %
Specification Required	0.15 Max	0.50-1.75	0.80 Max	0.030 Max	0.030 Max	0.15 Max	1.00-2.00	0.35 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 30°C (J)
Specification Required	550-690	470 Min	19 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Vertical-Up	22-26	150-230
Over Head	22-26	150-230

Welding Conditions	
Welding Position	F, H, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15°C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 110 T5 –K4

Low Alloy Flux Cored Wire

Classification

AWS A5.29- E110T5-K4 C

Description

SUPERCORE-110T5-K4 Basic type gas shielded flux cored low alloy steel wire. This wire is suitable for high strength fine grained steels in flat and horizontal positions, Weld metal contains 2.5 wt% Ni elements and make a good low temperature toughness at -50°C the wire have Smooth and bright bead, stable arc transfer with low spatter emission, slag is easy removal, This wire is designed for single and multiple pass welding of horizontal fillets and flat position welds,

Application

SUPERCORE-110T5-K4 suitable for welding of T-1, A514, A517, HY-100, and similar quenched and tempered high strength and low alloy steels. also suitable for SA533/533M Gr. B/C/D Class 2 & 3, SA543/543M Gr.B/C Class 1 & 2, SA225/225M Gr.C/D, SA738/738M Gr.A/B/C The basic slag system produces a low hydrogen weld deposit reducing the chance of cracking.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %
Specification Required	0.15 Max	1.20-2.25	0.80 Max	0.030 Max	0.030 Max	0.20-0.60	1.75-2.60	0.20-0.65

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Y.S (N/mm^2)	Elongation (L=4d) %	CVN Impact At – 50°C (J)
Specification Required	760-900	680 Min	15 Min	27 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-320
Horizontal	22-26	150-230

Welding Conditions	
Welding Position	F, H
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	150 ± 15°C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

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SUPERCORE 307-T1

Stainless Steel Flux Cored Wire

Flux Cored Wire – Stainless Steel

Classification

AWS A5.22- E 307 T1-1

Description

SUPERCORE-307-T1 is an all position; flux-cored wire designed for optimum performance with 100% CO2 gas shielding. This wire is designed with fast freezing slag characteristics and good slag detachability. The weld metal is of radiographic quality, resistant to cracking, and very good oxidation & scaling resistant at elevated temperature,

Application

SUPERCORE-307-T1 is recommended and designed for crack-resistant joining and surfacing of heat treatable steels, armour plates, corrosion resisting steels and high manganese steels. It is also suitable for joining austenitic stainless steels to unalloyed steels.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
Specification Required	0.13 Max	3.30-4.75	1.0 Max	0.03 Max	0.04 Max	18.0-20.5	9.0-10.5	0.5-1.5	0.75 Max
Typical Values	0.080	4.05	0.42	0.010	0.020	19.1	10.0	1.0	0.32

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	590 Min	30 Min
Typical Values	620	40

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 308L-T1

Stainless Steel Flux Cored Wire

Classification

AWS A5.22- E 308 T1-1

Description

SUPERCORE-308L-T1 is an all position; flux-cored designed for welding stainless steel, this wire produce excellent arc stability, high ductility, low fuming characteristics, and good weld ability. It can weld various joint types, and its deposits are easily cleaned off after welding. The wire is capable of low-temperature impact toughness,

Application

SUPERCORE-308L-T1 is recommended and designed for single and multi-pass welding wire for 18%Cr - 8%Ni stainless steel like 301, 302, 304, 304L, 308 and 308L May be used for welding types 321 or 347 if service temperature does not exceed 260° C. Low carbon content minimizes carbide precipitation.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
Specification Required	0.04 Max	0.5-2.5	1.0 Max	0.03 Max	0.04 Max	18.0-21.0	9.0-11.0	0.75 Max	0.75 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	520 Min	30 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 309L-T1

Stainless Steel Flux Cored Wire

Classification

AWS A5.22- E 309L T1-1

Description

SUPERCORE-309L-T1 is a gas shielded flux-cored wire designed for "all position" welding with soft and stable arc, lower spatter, good appearance, easy to slag removal, it has good welding performance and all position welding. The deposited metal has excellent crack resistance.

Application

SUPERCORE-309L-T1 is all-position flux-cored wire designed welding of low carbon 22%Cr-12%Ni stainless steels. It is also used for dissimilar weld joints between high strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr and austenitic Cr-Ni steels, manganese steels.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
Specification Required	0.04 Max	0.5-2.5	1.0 Max	0.03 Max	0.04 Max	22.0-25.0	12-14.0	0.75 Max	0.75 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	520 Min	30 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 316L-T1

Stainless Steel Flux Cored Wire

Flux Cored Wire – Stainless Steel

Classification

AWS A5.22- E 316L T1-1

Description

SUPERCORE-316L T1 is a gas shielded flux-cored wire designed for "all position" welding and provides the excellent usability with stable arc, less spattering, good bead appearance, better slag removal,

Application

SUPERCORE-316L-T1 is all-position flux-cored wire designed welding of austenitic stainless steel type 17Cr 12Ni 2.5Mo steels, AISI 316, 316L, 317, 317L, 318 type stainless steel and similar steel, used in textile processing, Naval and Chemical environments, Paper and pulp, Paint and dye industries, Food processing industries etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
Specification Required	0.04 Max	0.5-2.5	1.0 Max	0.03 Max	0.04 Max	17.0-20.0	11.0-14.0	2.0-3.0	0.75 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	485 Min	30 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 347-T1

Stainless Steel Flux Cored Wire

Flux Cored Wire – Stainless Steel

Classification

AWS A5.22- E 347 T1-1

Description

SUPERCORE-347-T1 is an all position flux-cored wire Resistance to cracking and embrittlement, also resistance to intergranular corrosion due to carbon precipitation without the use of stabilizers. This wire has Stable arc, low spatter and easy slag removal, excellent bead appearance and gives radiographic quality welds,

Application

SUPERCORE-347-T1 is recommended and designed for single and multi-pass welding wire for stabilized Cr-Ni steels such as AISI 321, 321H, 347, 347H, welding of stainless steel tanks, valves, pipes in food, chemical and petrochemical industries, Fabrication of boiler and gas turbine, f equipments in refineries, power plants, centrifugal pump impellers and shafts, valve faces, seats etc

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	Nb+Ta %
Specification Required	0.08 Max	0.5-2.5	1.0 Max	0.03 Max	0.04 Max	18.0-21.0	9.0-11.0	0.75 Max	0.75 Max	1.0 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	520 Min	30 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 309 LMo-T1

Stainless Steel Flux Cored Wire

Classification

AWS A5.22- E 309LMo T1-1

Description

SUPERCORE-309 LMo-T1 is a gas shielded flux-cored wire designed for "all position" welding and provides the excellent usability with stable arc, less spattering, good bead appearance, better slag removal, the low carbon minimizes carbide precipitation and makes the weld metal more resistance to intergranular corrosion without the use of stabilizers such as Nb and Ti. The addition of Mo provides pitting resistance and helps provide high temperature ductility in dissimilar joints.

Application

SUPERCORE-309LMo-T1 is all-position flux-cored wire designed welding of dissimilar welding between high strength mild steel and low alloy quenched and tempered steel, ferrite Cr and austenitic Cr/Ni steel etc,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
Specification Required	0.04 Max	0.5-2.5	1.0 Max	0.03 Max	0.04 Max	21.0-25.0	12.0-16.0	2.0-3.0	0.75 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	520 Min	25 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 410 NiMo-T1

Stainless Steel Flux Cored Wire

Classification

AWS A5.22- E 410 NiMo T1-1

Description

SUPERCORE-410NiMo-T1 is a gas shielded flux-cored wire designed for all position welding and provides the excellent usability with stable arc, less spattering, good bead appearance, fast freezing, better slag removal, it deposit 11.5 Cr, 4.5 Ni and 0.55 Mo, Its spray-like transfer enhances the arc characteristics while minimizing post-weld clean up and rework.

Application

SUPERCORE-410NiMo-T1 is used in welding of CA6NM casting used in hydroelectric turbines runners or similar applications,

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %
Specification Required	0.06 Max	1.00 Max	1.0 Max	0.03 Max	0.04 Max	11.0-12.5	4.0-5.0	0.40-0.70	0.75 Max

Mechanical Properties of All Weld Metal (PWHT at 620^{0}C for 1 Hr)

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	590 Min	30 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	205^{0}C-315^{0}C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 2209-T1

Stainless Steel Flux Cored Wire

Classification

AWS A5.22- E 2209 T1-1

Description

SUPERCORE-2209-T1 is a gas shielded duplex flux-cored wire designed for all position welding gives Austenitic-ferritic type weld, Stable arc, low spatter and easy slag removal,uniform and fine ripples, Excellent combination of high strength and resistance to chloride induced SCC and pitting and gives radiographic quality welds,

Application

SUPERCORE-2209-T1 is used in welding of for the welding of 2205 type duplex stainless steels and similar composition such as pipelines transporting chloride bearing products and sour gases, Cast pumps, Valve bodies and seawater handling equipment, chemical equipments, heat exchangers, off-shore platforms, cladding on carbon and low alloy steels

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	N %	Cu %
Specification Required	0.04 Max	0.5-2.0	1.0 Max	0.03 Max	0.04 Max	21.0-24.0	7.5-10.0	2.5-4.0	0.08-0.20	0.75 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	690 Min	20 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE 2594-T1

Stainless Steel Flux Cored Wire

Classification

AWS A5.22- E 2294 T1-1

Description

SUPERCORE-2594-T1 is all-position super duplex stainless steel flux cored wire designed for all position welding gives Austenitic-ferritic type weld, Stable arc, low spatter and easy slag removal,uniform and fine ripples and used to weld 25%Cr, 9%Ni, 4% Mo, Cu duplex stainless steels.

Application

SUPERCORE-2594-T1 is used in Paper & Pulp, chemical plant/shipbuilding as well as seawater & nuclear plant industries and base metals such as S32900, 2507 (UNS S32750), S32550, S31260(DP-3), S32750, J93380 or other proprietary duplex stainless steels.it has special type of flux with a smooth running arc low spatter generation, easy slag removal and good weld soundness that deposits very high tensile strength, with resistance to stress, corrosion, cracking and pitting. It may also be used to weld carbon and low alloy steels to duplex as well as root runs on UNS S32205 & J92250. Weld metal should have very good resistance to stress corrosion cracking and pitting with an austenite & 40-55 % ferrite matrix.

Chemical Composition of All Weld Metal (%)

Element	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	N %	Cu %
Specification Required	0.04 Max	0.5-2.5	1.0 Max	0.03 Max	0.04 Max	24.0-27.0	8.0-10.0	2.4-4.5	0.20-0.30	1.5 Max

Mechanical Properties of All Weld Metal

Properties	U.T.S. (N/mm^2)	Elongation (L=4d) %
Specification Required	760 Min	15 Min

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-30	180-300
Vertical-Up	22-28	150-260
Overhead	24-30	150-260

Welding Conditions	
Welding Position	F, V-UP, OH
Diameter	1.2 mm
Shielding Gas	100% Co_2
Interpass Temp	15^0C-150^0C
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

D & H INDIA LTD

Flux Cored Wire

Hard Facing

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SUPERCORE OA-HF 250

Hardfacing Flux Cored Wire

Description

SUPERCORE-OA-HF 250 is a self shielded hard facing flux cored wire, the weld deposit is an air hardening type carbon chromium alloy which has a high degree of toughness and excellent resistance to rolling and sliding friction and heavy impact load, weld metal is machinable,

Application

SUPERCORE-OA-HF 250 is used for rebuilding of worn machinery parts, deposit surfaces are suitable for metal to metal rolling and sliding contact of low and high speed gear teeth shaft rail link rollers, wheel etc ,

Mechanical Properties of Weld Metal

Properties	Hardness (BHN)	Hardness (RC)
Hardness	250-300	25-30

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-300

Welding Conditions	
Welding Position	F
Diameter	1.2 mm
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE OA-HF 350

Hardfacing Flux Cored Wire

Description

SUPERCORE-OA-HF 350 is a self shielded hard facing flux cored wire depositing an air hardening type carbon – chromium alloy weld metal for hard surfacing of carbon and low alloy steels, the weld metal is machinable and resistant to moderate abrasion and heavy impact,

Application

SUPERCORE-OA-HF 350 is suitable for building up of worn-out surfaces of tractor track link, drive sprockets, tractor idler wheels, steel mill rolls, crane wheels, shear blades, pulleys etc,

Mechanical Properties of Weld Metal

Properties	Hardness (BHN)	Hardness (RC)
Hardness	350-400	38-43

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-300

Welding Conditions	
Welding Position	F
Diameter	1.2 mm
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE OA-HF 550

Hardfacing Flux Cored Wire

Flux Cored Wire – Hardfacing

Description

SUPERCORE-OA-HF 550 is a self shielded hard facing flux cored wire with high carbon and chrome depositing a weld metal having excellent resistant of abrasion friction and moderate impact,

Application

SUPERCORE-OA-HF 550 is suitable for surfacing of minerals craine wheels, crush hammer and catter piller trades, hot and cold punching dies metal cutting and forming tools, conveyer buckets, self tempering deposit for hardfacing application in mining etc,

Mechanical Properties of Weld Metal

Properties	Hardness (BHN)	Hardness (RC)
Hardness	550-600	52-58

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-300

Welding Conditions	
Welding Position	F
Diameter	1.2 mm
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE OA-HF 600

Hardfacing Flux Cored Wire

Description

SUPERCORE-OA-HF 600 is a self shielded hard facing flux cored wire with high chrome depositing a weld metal having excellent resistant to corrosion and high wear resistant weld metal is resistant to softening upto 550 ^{0}C,

Application

SUPERCORE-OA-HF 600 is suitable for hardfacing of mixing rollers ,digging tools, loading machines, road machines, shovel teeth, tools and wear parts etc,

Mechanical Properties of Weld Metal

Properties	Hardness (BHN)	Hardness (RC)
Hardness	600-680	57-62

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-300

Welding Conditions	
Welding Position	F
Diameter	1.2 mm
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools

SUPERCORE OA HF 700-H

Hardfacing Flux Cored Wire

Description

SUPERCORE OA HF 700-H is a self shielded hard facing flux cored wire with high carbon and chrome depositing, weld metal having excellent resistant of abrasion friction and moderate impact,

Application

SUPERCORE OA HF 700-H is suitable for surfacing of minerals crane wheels, crush hammer and catter piller trades, hot and cold punching dies metal cutting and forming tools, conveyer buckets, self tempering deposit for hardfacing application in mining etc,

Mechanical Properties of Weld Metal

Properties	Hardness (RC)	Hardness (BHN)
Hardness	62-65	680-740

Welding Parameter (DC Positive +)

Welding Parameter (DC Positive +)		
Welding Position Diameter 1.20 (mm)	Voltage (V)	Current (A)
Flat	24-32	180-300

Welding Conditions	
Welding Position	F
Diameter	1.2 mm
Polarity	DC +

Packing: 15 Kgs. Vacuum packing in plastic spools