

PRODUCT CATALOG

WELDING CONSUMABLES



blume®



Introduction

- About the Company 01
- Certifications 02 - 04
- Awards and Recognitions 05 - 07

Product List

- **Flux Cored Wire**
 - Carbon Steel Flux Cored Wire
 - blume® E71T-1C - AWS A5.20 E71T-1 08
 - Stainless Steel Flux Cored Wire
 - blume® E308LT-1 - AWS A5.22 E308LT1-1/4 09
 - blume® E309LT-1 - AWS A5.22 E309LT1-1/4 10
 - blume® E316LT-1 - AWS A5.22 E316LT1-1/4 11
 - blume® E309LMo - AWS A5.22 E309LMoT1-1 12
 - blume® E410NiMo - AWS A5.22 E410NiMoT1-1 13
 - Hardfacing Flux Cored Wire
 - blume® HF44CrMnNi 14
 - blume® HF44CrMnNi-OA 15
 - blume® HF50MnCr 16
 - blume® HF62Cr 17
 - blume® HF65CrNb 18
 - blume® HFCr13 19
 - blume® HFCrMoW 20
 - blume® HFMn16 21
- **MIG Wire (GMAW)**
 - Carbon Steel MIG Wire
 - blume® ER70S-6 - AWS A5.18 ER70S-6 22
 - Hardfacing MIG Wire
 - blume® HFH13 - A.I.S.I H13 23
 - blume® HFM2 - A.I.S.I M2 24
 - blume® HFM7 - A.I.S.I M7 25
 - blume® HFP20 - A.I.S.I P-20 Mold Steel 26
- **Stick Electrodes (SMAW)**
 - Mild Steel Stick Electrodes
 - blume® E6013 - AWS A5.1 E6013 27
 - blume® E7018 - AWS A5.1 E7018-1 28
 - Stainless Steel Stick Electrodes
 - blume® E308L-16 - AWS A5.4 E308L-16 29
 - blume® E316L-16 - AWS A5.4 E316L-16 30
 - Cast Iron, Non Ferrous & Others
 - blume® ENiCu-7 - AWS A5.15 E NiCu-7 31
 - blume® ENiCu-B - AWS A5.15 E NiCu-B 32
 - blume® ENiFe-CI - AWS A5.15 E NiFe-CI 33
- **TIG Rods (GTAW)**
 - Hardfacing TIG Rods
 - blume® HFH13 (TIG) - A.I.S.I H13 34
 - blume® HFM2 (TIG) - A.I.S.I M2 35
 - blume® HFM7 (TIG) - A.I.S.I M7 36
 - blume® HFP20 (TIG) - A.I.S.I P-20 37

Appendix

- AWS Classification 38
- Abbreviations 39

Introduction



About the Company

The highest quality, consistency, and on time delivery are the values of Blumenotics Pvt. Limited. We specialises in various aspects of welding consumables; be it electrodes, flux cored wires and machinery. We have the capabilities to support welding requirements, with results par excellence. We have the expertise in welding consumables, thus not only limited to manufactured goods but also in providing streamlined solutions to our customers requirements. We supply high-quality products worldwide to our customers, who are leaders in fabrication, earth moving equipments and various other fields. With the most stringent quality control standards in the industry, we assure you that you will be more than satisfied.

The Blumenotics group is comprised of well-educated, goal-oriented individuals. The commitment to our customers is unparalleled in regards to service, quality and innovation. Each department is dedicated to one another so that projects are carried out efficiently and to the highest level of quality.

Ultimate physical and mechanical properties, viable welding procedures and finished products of the highest quality is what our research & development team strives to achieve. To ensure the quality of our products, we use high-quality raw materials in our manufacturing process so that our products become a testament to the excellence we believe in. Our experience, over the years, has brought us to this point where anything but the best is not an option.

Our worldwide distribution network system ensures that each and every industry around the globe receives the technical support it requires. Each Blumenotics distributor is offered complete product training, technical support, and market information.

With a range of experiences and a mix of youth and industry expertise, the Blumenotics Team strives to bring you the best in class welding consumables . We have the practical knowledge and the prowess in welding consumables , thus not only providing manufactured goods but knowhow and solutions to our customers requirements.

We look forward to having a fruitful business relationship with you.



Certificate of Registration

This is to certify that

BLUMENOTICS PVT. LIMITED

**3RD FLOOR, NO. 23, 5TH CROSS, KORAMANGALA 5TH BLOCK,
BANGALORE 560 095, KARNATAKA, INDIA**

has been independently assessed by QRO
and is compliant with the requirement of:

ISO 9001:2015

Quality Management System

For the following scope of activities:

**MANUFACTURING OF WELDING ELECTRODES, FLUX CORED WIRES,
TIG WIRE (SS & MS), MIG WIRES**

Date of Certification: 30th September 2023

2nd Surveillance Audit Due: 29th September 2025

1st Surveillance Audit Due: 29th September 2024

Certificate Expiry: 29th September 2026

Certificate Number: 305023093014Q



Shantanu . .

Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.
(In case surveillance audit is not allowed to be conducted; this certificate shall be suspended / withdrawn).

The Validity of this certificate can be verified at www.qrocert.org

This certificate of registration remains the property of QRO Certification LLP, and shall be returned immediately upon request.

India Office : QRO Certification LLP

142, IInd Floor, Avtar Enclave, Near Paschim Vihar West Metro Station, Delhi-110063, (INDIA)

Website : www.qrocert.org, E-mail : info@qrocert.org



Company Number-13917497

Certificate of Compliance

CE

We hereby declare that the technical of the product compiled with the requirement of the Directive 2009/125/EC.

Manufacturer Name : **BLUMENOTICS PVT. LIMITED**

Address: **3RD FLOOR, NO 23, 5TH CROSS ROAD KORAMANGALA, 5TH BLOCK, BANGALORE 560 095 KARNATAKA, INDIA**

Product: **Welding Electrodes, Flux Cored Wires, TIG wire (SS & MS), MIG Wires**

The certification body has performed an audit of the above product quality system covering the design, manufacture and the final inspection of the certified product. The quality system has been assessed, approved and is subject to continuous surveillance according to the Directive 2009/125/EC.

This certification is issued under following conditions

1. It applies only to the quality system maintained in the manufacture of above referenced models and it does not substitute the design of type examination procedures, if requested.
2. The certificate remains valid until the manufacturing conditions or the quality systems are changed.
3. The certificate validity is conditioned by positive results or surveillance audits.
4. After fulfilling the relevant EU legislation, the manufacturer shall affix to each device, of the above referenced models.
5. The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC declaration of conformity and compliance with all relevant EC Directives. The statement is based on single evaluation of one sample of above mentioned product. It does not imply an assessment of the whole production

Certificate Number: CE-5033

Validity of this certificate can be verified at www.uscertifications.co.uk/verify.

Date of Certification:	14 th July 2023
1 st Surveillance Audit Due:	13 th July 2024
2 nd Surveillance Audit Due:	13 th July 2025
Certificate expiry: (Subject to the Company Maintaining its system as per the required standard)	13 th July 2026

Authorised Signatory



This certificate is property of US Certification & Inspection Limited and shall be returned immediately on request,
Address: 2nd Floor, College House, 17 King Edwards Road, Ruislip, London, United Kingdom, HA4 7AE (U K)

E mail ID: info@uscertifications.co.uk , web site: www.uscertifications.co.uk



UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER

UDYAM-KR-03-0008508

NAME OF ENTERPRISE

BLUMENOTICS PRIVATE LIMITED

TYPE OF ENTERPRISE *

SNo.	Classification Year	Enterprise Type	Classification Date
1	2023-24	Small	09/05/2023
2	2022-23	Micro	26/06/2022
3	2021-22	Micro	16/05/2021

MAJOR ACTIVITY

MANUFACTURING

SOCIAL CATEGORY OF
ENTREPRENEUR

GENERAL

NAME OF UNIT(S)

S.No.	Name of Unit(s)
1	BLUMENOTICS PRIVATE LIMITED - BENGALURU
2	BLUMENOTICS PRIVATE LIMITED - FACTORY

OFFICAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	3rd Floor	Name of Premises/ Building	No 23
Village/Town	Koramangala	Block	5th Block
Road/Street/Lane	5th Cross Road	City	BANGALORE
State	KARNATAKA	District	BENGALURU (URBAN) , Pin 560095
Mobile	9886088818	Email:	info@blumenotics.com

DATE OF INCORPORATION /
REGISTRATION OF ENTERPRISE

11/08/1995

DATE OF COMMENCEMENT OF
PRODUCTION/BUSINESS

08/06/2020

NATIONAL INDUSTRY
CLASSIFICATION CODE(S)

SNo.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	25 - Manufacture of fabricated metal products, except machinery and equipment	2520 - Manufacture of weapons and ammunition	25200 - Manufacture of weapons and ammunition	Manufacturing
2	25 - Manufacture of fabricated metal products, except machinery and equipment	2591 - Forging, pressing, stamping and roll-forming of metal; powder metallurgy	25910 - Forging, pressing, stamping and roll-forming of metal; powder metallurgy	Manufacturing

DATE OF UDYAM REGISTRATION

26/08/2020

* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing:- 24/05/2023

For any assistance, you may contact:

1. District Industries Centre: BANGALORE (URBAN) (KARNATAKA)

2. MSME-DFO: BANGALORE (KARNATAKA)

Visit : www.msme.gov.in ; www.dcmsme.gov.in ; www.champion

Follow us @minmsme & @msmechampi



B
CHAI
with
Mini
MS

WELDING CONSUMABLES MANUFACTURERS
THEINDUSTRYOUTLOOK.COM

Industry Outlook

BLUMENOTICS



*in acknowledgement of its unwavering focus and dedication
to achieve excellence in quality and delivery in this field.*

Sudhakar Singh
Sudhakar Singh
Editor



Blumenotics

OFFERING WORLD CLASS WELDING CONSUMABLES



With the rapid industrialization and urbanization in India in the last decade, coupled with the growing demand for better infrastructure across the country, the welding consumable manufacturing segment is anticipated to witness a positive growth. This means that manufacturers in the welding consumables industry are expected to deliver quality, consistency, service and competitive pricing. Moreover, new consumables are developed and used for inconel alloys, and copper bearing stainless steels which is the future going forward.

Bringing vast experience, and R&D background, Blumenotics Private Limited has been a force to reckon with when it comes to Indian welding consumables manufacturing industry. Blumenotics has the needed capabilities to develop advanced welding consumables which are highly cost effective, and quality-driven. The company has in place a core team of professionals specializing in quality, supply chain management, R&D, marketing and customer experience with experience in manufacturing for some of the Fortune 500 companies.

"We work very closely with the end users to understand their requirements and ever changing landscape as the world moves ahead. This gives us insights into industry requirements and steer our course backed by our world class manufacturing and R&D infrastructure to develop and improve our products to our customers not only in India but also in our export markets," says Rajesh Khater, Managing Director at Blumenotics.

End-to-end Welding Solutions

"Blumenotics is the newest entrant in the welding consumables arena in India, and is determined to stand out by its value system. Despite being new, the company has the expertise and know-how more than many of its rivals. And in its short span of time, the company's brand BLUME® is being recognized for its quality and competitive edge." says

Aman Khater, Director Marketing of the company. This edge is derived by employing production equipment with state-of-the-art manufacturing facilities for flux cored wire, SMAW electrodes, filler wires and world class analytical equipment. This is coupled with highly experienced engineers trained well for research & development activities and a service team having a deep understanding of end user needs.

"Delivering quality at a fair price has been the approach to our success. Internally we have a motto, 'European Quality, Far Eastern Efficiencies & Indian Prices'. Through the passion for what we do, we surpass the nominal standards and exceed our users expectations, thus outperforming our competitors and taking the lead. We are able to achieve this by stringent processes and systems in place starting from procuring raw materials, to checking every batch of raw materials that arrive at our premises, to on-line monitoring of our manufacturing process, to quality check of finished material, to delivering to our customers. We monitor every stage of the process with our in-house tracking systems. This enables us to offer quality and services consistently time and again," highlights Thomas Sebastian, Chief Technical Officer of the company.



Blumenotics is the newest entrant in the welding consumables arena in India, and is determined to stand out by its value system

The Road Ahead

Going forward, Blumenotics has a clear roadmap for the next five years and aims to be a player to be reckoned in the Indian welding industry. The company has developed several grades of welding wires and stick electrodes for the repair and maintenance industry, and joining industry, fabrication, ship building, heavy engineering etc. "We are readying ourselves to grow with the country as it moves ahead while simultaneously refining our strategy and perfecting our delivery system to meet this uptick in growth and demand. To this effect, the company is investing heavily in new premises and increasing capex to meet the rising demand," concludes Rahul Khater, Chief Operations Officer of the company. ||

M/s. Blumenotics Pvt. Ltd.

has contributed to the **National Innovation & Entrepreneurship Ecosystem** as a

NATION BUILDER



India's Largest Not for Profit Organisation for Small and Medium Enterprises



Director General

15-10-2021

Date

National Manufacturing Innovation Survey 2021





Flux Cored Wire



Code & Specification

ASME SFA/AWS A5.20 E71T-1C

Description

BLUME® E71T-1C is an all position flux cored wire designed for optimum performance when using 100% CO₂, shielding. The smooth metal transfer facilitates easy deposition of vertical-up stringer beads. Fillet contour is flat too slightly convex with equal leg lengths and uniform sidewall wetting. The slag coverage is complete and designed for easy removal. Weld metal is consistently free of inclusions and porosity for X-ray soundness. This wire is formulated to produce 20% less fume, minimal spatter and improved impact properties over conventional E71T-1 wires.

Shielding Gas

Carbon Dioxide (CO₂)

Applications

BLUME® E71T-1C is designed for all position single and multi-pass welding of low and medium carbon steels.

Mechanical Properties

	As-welded
Yield Point, MPa	490 - 590
Tensile Strength, MPa	540 - 620
Elongation, %(L=4d)	24 - 33

Charpy V-Notch Impact Properties

Testing Temp.	As-welded (J)
0°C (32°F)	70 - 100
-18°C (0.4°F)	50 - 75
-29°C (-20°F)	30 - 50

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	P~
0.03 - 0.08	0.90 - 1.40	0.30 - 0.80	≤ 0.03	≤ 0.03

Suggested Welding Parameters (DC+)

Diameter	Flat		Vertical-up		Overhead	
	Volts	Amps	Volts	Amps	Volts	Amps
1.2mm (.045")	23 - 30	150 - 290	22 - 26	150 - 210	23 - 26	150 - 250
1.6mm (1/16")	25 - 34	180 - 400	21 - 27	180 - 250	22 - 27	180 - 310

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Stainless Steel Flux Cored Wire



Code & Specification

ASME SFA/AWS A5.22 E308LT1-1 (CO₂) E308LT1-4 (Argon +20-25% CO₂)

Description

BLUME[®] E308LT1-1/4 is a stainless steel flux cored wire with all positional capabilities. Vacuum sealed in aluminised plastic packs. Formulated for CO₂ or Argon +20-25% CO₂ shielding gases. High deposition rate welding of stainless steel. Welds well in all positions. Excellent welder appeal. Provides a low spatter hence requiring less clean-up. Good weld soundness and extended shelf-life. Fast freezing and self detaching slag. Provides spray-like arc transfer and high moisture resistance.

Applications

Used for joining common austenitic stainless steel such as Types 301, 302, 304, 304L, 321, CF-3 and CF-8.

Mechanical Properties

	As-welded (Argon +20-25% CO ₂)	As-welded (CO ₂)
Yield Strength, MPa	420	390
Tensile Strength, MPa	550	580
Elongation, %(L=4d)	35	43

Undiluted Weld Metal Analysis (wt%)

		Using CO ₂		
C	Mn	Si	Cr	Ni
≤ 0.02	1.40 - 2.00	0.60 - 0.70	19.0 - 20.0	10.0 - 11.0
P	S			
≤ 0.03	≤ 0.03			

Suggested Welding Parameters (DC+)

Diameter	Flat		Vertical-up		Overhead	
	Volts	Amps	Volts	Amps	Volts	Amps
1.2mm (.045")	23 - 28	150 - 250	22 - 27	120 - 180	22 - 27	140 - 180

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Stainless Steel Flux Cored Wire



Code & Specification

ASME SFA/AWS A5.22 E309LT1-1 (CO₂) E309LT-4 (Argon +20-25% CO₂)

Description

BLUME[®] E309LT1-1/4 is a stainless steel flux cored wire with all positional capabilities. Vacuum sealed in aluminised plastic packs. Formulated for CO₂ or Argon +20-25% CO₂ shielding gases. High deposition rate welding of stainless steel. Welds well in all positions. Excellent welder appeal. Provides a low spatter hence requiring less clean-up. Good weld soundness and extended shelf-life. Fast freezing and self detaching slag. Provides spray-like arc transfer and high moisture resistance.

Applications

Used for joining common austenitic stainless steel such as Type 304, 304L, 309, 309L. It is often used in dissimilar welding, such as stainless steel to carbon steel, low alloy steel, heat resistant steel and clad steel.

Mechanical Properties

	As-welded (Argon +20-25% CO ₂)	As-welded (CO ₂)
Yield Strength, MPa	415	410
Tensile Strength, MPa	556	540
Elongation, %(L=4d)	36	38

Undiluted Weld Metal Analysis (wt%)

		Using CO ₂		
C	Mn	Si	Cr	Ni
≥ 0.03	1.00 - 2.00	0.60 - 0.80	23.0 - 24.0	12.5 - 13.5
P	S			
≤ 0.04	≤ 0.03			

Suggested Welding Parameters (DC+)

Diameter	Flat		Vertical-up		Overhead	
	Volts	Amps	Volts	Amps	Volts	Amps
1.2mm (.045")	23 - 28	150 - 250	22 - 27	120 - 180	22 - 27	140 - 180
1.6mm (1/16")	28 - 34	280 - 400	23 - 27	200 - 250	23 - 27	190 - 250

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Stainless Steel Flux Cored Wire



Code & Specification

ASME SFA/AWS A5.22 E316LT1-1 (CO₂) E316LT-4 (Argon +20-25% CO₂)

Description

BLUME[®] E316LT1-1/4 is a stainless steel flux cored wire with all positional capabilities. Vacuum sealed in aluminised plastic packs. Formulated for CO₂ or Argon +20-25% CO₂ shielding gases. High deposition rate welding of stainless steel. Welds well in all positions. Excellent welder appeal. Provides a low spatter hence requiring less clean-up. Good weld soundness and extended shelf-life. Fast freezing and self detaching slag. Provides spray-like arc transfer and high moisture resistance.

Applications

Used for joining and cladding of Type 316, 316L, CF-3M and CF-8M stainless steel.

Mechanical Properties

	As-welded (Argon +20-25% CO ₂)	As-welded (CO ₂)
Yield Strength, MPa	405	415
Tensile Strength, MPa	580	555
Elongation, %(L=4d)	35	39

Undiluted Weld Metal Analysis (wt%)

		Using CO ₂		
C	Mn	Si	Cr	Ni
≥ 0.03	1.00 - 2.00	0.60 - 0.80	18.0 - 19.0	12.0 - 13.0
P	S	Mo		
≤ 0.03	≤ 0.03	2.50 - 2.80		

Suggested Welding Parameters (DC+)

Diameter	Flat		Vertical-up		Overhead	
	Volts	Amps	Volts	Amps	Volts	Amps
1.2mm (.045")	23 - 28	150 - 250	22 - 27	120 - 180	22 - 27	140 - 180

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



S.S. Flux Cored Wire - Gas Shield Type



Code & Specification

ASME SFA/AWS A5.22 E309LMoT1-1

Description

BLUME® E309LMo is a rutile type gas shield flux cored arc welding wire, austenite structure weld metal. This weld metal contains Mo element to get good high temperature strength, good crack and inter-granular corrosion resistance. It has a low spatter loss and easy slag removal.

Shielding Gas

Carbon Dioxide (CO₂) / Mixed Gas

Applications

BLUME® E309LMo dissimilar metal welding of SUS316L to carbon steels or low alloy steels. Cladding of SUS316L, 316L to carbon steels and low alloy steels.

Mechanical Properties

Tensile Strength MPa	559
Elongation %	38

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Ni	Cr
≤ 0.03	0.50 - 2.50	≤ 1.00	12.0 - 16.0	22.0 - 25.0
Mo				
2.00 - 3.00				

Suggested Welding Parameters (DC+)

Diameter	Flat		Vertical		Overhead	
	Volts	Amps	Volts	Amps	Volts	Amps
1.2mm (.045")		150 - 250		100 - 140		100 - 140
1.6mm (1/16")		200 - 300				

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hard-Facing FCW - High Temp. Fatigue and corrosion resistant



Code & Specification

ASME SFA/AWS A5.22 E410NiMoT1-1

Description

BLUME[®] E410NiMo is a gas shield type hard-facing flux cored arc welding wire. This hard-facing flux cored wire obtains a martensite structure weld metal. **BLUME[®] E410NiMo** has a good crack resistance, high compressive abrasion resistance and good thermal fatigue resistance.

Shielding Gas

Carbon Dioxide (CO₂) / Mixed Gas

Applications

BLUME[®] E410NiMo is designed for hard-facing repair welding of hydro turbines and caster guide roller along with build up repair for various guide rollers.

Mechanical Properties

Hardness HRC (As Welded)	42
Tensile Strength, MPa	923
Elongation % (L=4d)	18
Abrasion Resistance	Excellent
Thermal Fatigue Resistance	Excellent
Crack Resistance	Excellent

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Ni	Cr
≤ 0.06	≤ 1.00	≤ 1.00	4.00 - 5.00	11.0 - 12.5
Mo				
0.40 - 0.70				

Suggested Welding Parameters (DC+)

Diameter	Wire Extension		
	Volts	Amps	mm
1.2mm (.045")	20 - 32	150 - 250	15 - 25
1.6mm (1/16")	22 - 34	200 - 300	15 - 25

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Note: All values are based on CO₂ welding gas for weld test.





Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME[®] HF44CrMnNi is a 13% Chromium Nitrogen containing martensitic stainless steel submerged arc flux cored wire. The complete martensitic microstructure provides excellent tempering stability, wear resistance, excellent heat resistant fatigue and stress corrosion cracking ability.

Applications

BLUME[®] HF44CrMnNi is often the first choice for surfacing continuous casting roller, as well as for surfacing valve seat, gate valve, wedge valve, forming roller, pinch roller, etc.

Mechanical Properties

Hard-Surfacing Hardness (HRC) 40 - 48

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Cr	Ni
≤ 0.10	≤ 2.0	≤ 1.0	11.5 - 15.0	3.0 - 5.0
Mo	N	Fe		
0.5 - 1.2	0.05 - 0.12	Bal		

Suggested Welding Parameters (DC+)

Diameter

	Volts	Amps	Extension Length
3.2mm (1/8")	28 - 32	400 - 500	30mm - 35mm (1.2" - 1.4")

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing

Notes



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME® HF44CrMnNi-OA is a 13% Chromium Nitrogen containing martensitic stainless steel self shielded flux cored wire. The complete martensitic microstructure provides excellent tempering stability, wear resistance, excellent heat resistant fatigue and stress corrosion cracking ability.

Applications

BLUME® HF44CrMnNi-OA is suitable for surfacing continuous casting roller, as well as for surfacing valve seat, gate valve, wedge valve, safety valve, forming roller, pinch roller, etc.

Mechanical Properties

Hard-Surfacing Hardness (HRC) 40 - 48

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Cr	Ni
≤ 0.10	≤ 2.0	≤ 1.0	11.5 - 15.0	3.0 - 5.0
Mo	N	Fe		
0.5 - 1.2	0.05 - 0.12	Bal		

Suggested Welding Parameters (DC+)

Diameter	Volts	Amps	Extension Length
2.4mm (3/32")	26 - 35	250 - 400	25mm - 40mm (1" - 1.5")
2.8mm (7/64")	28 - 35	250 - 450	25mm - 45mm (1" - 1.8")
3.2mm (1/8")	30 - 35	300 - 500	30mm - 50mm (1.2" - 2")

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing

Notes





Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME® HF50MnCr is a common chromium molybdenum type flux cored wire with CO₂ gas protection. The welding arc is stable, the splatter is small, the deslagging is easy and the forming is aesthetic. It is suitable for the workpiece with impact resistance and high wear and tear.

Applications

BLUME® HF50MnCr is suitable for repairing the surface of all kinds of wear parts, such as gears, dredgers, mining machinery, etc.

Mechanical Properties

Hard-Surfacing Hardness (HRC) ≥ 50

Undiluted Weld Metal Analysis (wt%)

C	Mn	Cr
0.30 - 0.60	≤ 4.00	≤ 5.00

Suggested Welding Parameters (DC+)

Diameter

	Amps
1.6mm (1/16")	220-260
2.4mm (3/32")	250-400

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing.

Notes

1. Reverse connection of DC power supply is adopted.
2. During welding, the flow rate of CO₂ gas should be (20-25) l/min.
3. The extension length of welding wire should be controlled with 15mm - 25mm (0.6" - 1").
4. Preheating and interpose temperature are recommended to be around 300°C (572°F).
5. Rust, oil, water and other impurities must be removed before welding.



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME® HF62Cr is a high Chromium Cast Iron, which is suitable for low impact and high stress abrasive wear conditions.

Applications

BLUME® HF62Cr is suitable for wear-resistant steel plate, coal mill, cement vertical mill, etc.

Mechanical Properties

Hard-Surfacing Hardness (HRC)	58 - 62
Metallographic Structure	Austenite + Complex Carbide
Machinability	Only Grinding Wheel
Gas Cutting	No
Permission Hard-Surfacing Thickness	As per requirement
Shielding Gas or Soldering Flux	None

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Cr	Fe
5.2	1.2	≤ 1.0	28.5	Allowance

Suggested Welding Parameters (DC+)

Diameter	Volts	Amps	Extension Length
2.4mm (3/32")	26 - 30	300 - 370	35mm - 40mm (1.4" - 1.6")
2.8mm (7/64")	26 - 30	300 - 400	35mm - 40mm (1.4" - 1.6")

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing.

Notes



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME® HF65CrNb is a self shielded flux cored wire, and the deposited metal is Cr-Nb alloy. When the working temperature is less than 450°C, it has good resistance to low impact and high stress solid abrasive wear, and the surfacing metal is easy to release stress cracks.

Applications

BLUME® HF65CrNb is suitable for peanut oil press screw, wear-resistant steel plate, sieve plate in coal and steel industry, bucket teeth and pulley of excavator, bucket teeth and blade of mechanical excavator, feed hopper, nozzle, etc.

Mechanical Properties

Hard-Surfacing Hardness (HRC) 62 - 67

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Cr	Nb
5.50	0.30	-	20.00	7.00

Suggested Welding Parameters (DC+)

Diameter	Volts	Amps	Extension Length
2.8mm (7/64")	26 - 30	300 - 400	35mm - 40mm (1.4" - 1.6")

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing.

Notes





Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME® HFCr13 is a Hardfacing wire with subarc flux.

Applications

BLUME® HFCr13 is suitable for continuous casting roll, valve seat, mixer impeller, centrifugal pump impeller and other parts in iron and steel industry, suitable for metal key corrosion and wear occasions.

Mechanical Properties

Hard-Surfacing Hardness (HRC)	45 - 50
Metallographic Structure	Martensite
Machinability	Carbide Tools
Gas Cutting	No
Permission Hard-Surfacing Thickness	As per requirement

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Cr
0.3	1.5	0.5	13.5

Suggested Welding Parameters (DC+)

Diameter	Volts	Amps	Extension Length
3.2mm (1/8")	28 - 30	450 - 500	30mm - 35mm (1.2" - 1.4")

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing.

Notes



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME[®] HFCrMoW is a submerged arc flux cored wire. Suitable for wear between metals and low pressure and high temperature.

Applications

BLUME[®] HFCrMoW is used in steel industry, such as billet roll, pinch roll, cable winch, rock drill, blast furnace bell, etc.

Mechanical Properties

Hard-Surfacing Hardness (HRC)	55 - 60
Metallographic Structure	Martensite
Machinability	BN Tools
Gas Cutting	Hard
Permission Hard-Surfacing Thickness	As per requirement

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Cr	Mo
0.5	2.0	≤ 1.0	6.5	2.0
W				
2.0				

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11”) or 250 kgs (550 lbs) Drum Packing.

Diameter Available

Diameter	2.4mm (3/32”)	2.8mm (7/64”)
-----------------	---------------	---------------





Hardfacing Flux Cored Wire



Code & Specification

Description

BLUME[®] HFMn16 is a CO₂ gas shielded high manganese type flux cored welding wire. The welding wire has the characteristics of working hardening, toughness and wear resistance. The welding arc is stable and easy to deslag.

Applications

BLUME[®] HFMn16 is suitable for single or multi-layer hard surfacing of various crushers, high manganese rails, turnouts, bulldozers and other parts which are subject to impact along with wear and tear.

Mechanical Properties

Hard-Surfacing Hardness (HB) ≥ 170

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si
≤ 1.10	11.00 - 16.00	≤ 1.30

Suggested Welding Parameters (DC+)

Diameter

	Amps
1.2mm (.045")	180 - 220
1.6mm (1/16")	220 - 260

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11") or 250 kgs (550 lbs) Drum Packing.

Notes

1. Reverse connection of DC power supply is adopted.
2. During welding, the flow rate of CO₂ gas should be (20-25) l/min.
3. The extension length of welding wire should be controlled with 15mm - 25mm (0.6" - 1").
4. Preheating and interpose temperature are recommended to be around 300°C (572°F).
5. Rust, oil, water and other impurities must be removed before welding.



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



MIG Wire



Code & Specification

ASME SFA/AWS A5.18 ER70S-6

Description

BLUME[®] ER70S-6 is a general purpose welding wire for fabrication of mild steel . It is well suited for general purpose, manual and semiautomatic applications in most industries. Contains deoxidizers that provide better wetting, yielding a flatter bead shape and the capability of faster travel speeds . Usually used with 100% CO₂ or with Argon + CO₂.

Applications

BLUME[®] ER70S-6 is a wire with higher levels of Deoxidizers (Mn & Si) compared to other carbon steel wires. This wire is suitable for welding of steels with moderate amounts of scale or rust.

Shielding Gas

100% CO₂ , 75% Argon and 25% CO₂ or 98% Argon and 2 % CO₂

Mechanical Properties

	As-welded
Yield Point, MPa	≥ 420
Tensile Strength, MPa	≥ 500
Elongation, %(L=4d)	≥ 29

Charpy V-Notch Impact Properties

Testing Temp.	As-welded (J)
-30°C (-22°F)	47 (min)

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	P~
0.06 - 0.15	1.40 - 1.85	0.80 - 1.15	≤ 0.025	≤ 0.025
Cu	Ni	Cr	Mo	V
≤ 0.05	≤ 0.15	≤ 0.15	≤ 0.15	≤ 0.03

Suggested Welding Parameters (DC+)

Diameter	Flat		Vertical-up		Overhead	
	Volts	Amps	Volts	Amps	Volts	Amps
1.2mm (.045")	20 - 32	80 - 350	18 - 20	120 - 160	18 - 20	120 - 160
1.6mm (1/16")	32 - 38	350 - 500	18 - 22	120 - 220	18 - 22	110 - 210

Packaging

15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11")

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing MIG Wire



Code & Specification

A.I.S.I H13

Description

BLUME® HFH13 is for hot work tool steels with excellent hot tensile properties, high hot wear resistance. Heat checking resistance.

Applications

BLUME® HFH13 is used in particular to repair mandrels, punches, dies, cylinder crushers, screws, hammers, pneumatic hammers, etc.

Mechanical Properties

Hardness HRC (As Welded)	54 - 60
Pre Heating Temperature	340 - 370°C (644°F - 698°F)
Current and Polarity	DC+

Shielding Gas

Argon + CO₂

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	P	Cr
0.40	0.40	1.00	< 0.020	5.20
Mo	Cu	S	Mo	V
1.40	< 0.25	< 0.020	1.40	1.00

Base Materials to be Welded

X40CrMoV5-1 ; H13, BH 13; SCPH 62, STD 62

Packaging

1.0mm (.040") Diameter, 1.2mm (.045") Diameter & 1.6mm (1/16") Diameter Wire in 15 kgs (33 lbs) (net) Plastic spools with OD = 270mm (11")





Hardfacing MIG Wire



Code & Specification

A.I.S.I M2

Description

BLUME[®] HFM2 is a Tungsten - Molybdenum alloyed welding wire suitable for repairing high speed steels. Excellent toughness and cutting properties for a wide variety of uses.

Applications

BLUME[®] HFM2 is used for twist drills, reamers, broaching tools, metal saws, milling tools of all types, wood working tools, cold working tools, gears, punches, shears etc.

Mechanical Properties

Hardness HRC (As Welded)	60 - 64
Pre Heating Temperature	350°C (662°F)
Current and Polarity	DC+

Shielding Gas

Argon + CO₂

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	P	Cr
0.90	0.30	0.25	< 0.030	4.2
Mo	Cu	S	Ni	V
5.00	< 0.50	< 0.020	< 0.25	1.80

Base Materials to be Welded

X85WDCV06-04-02 ; V6M05Cr4V2 ; HS 6-5-2 ; M2, J438B ; X85WDCV06-04-02 ; BM2 ; SKH 51 ; R 6 M 5

Packaging

1.2mm (.045”) Diameter Wire in 15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11”)





Hardfacing MIG Wire



Code & Specification

A.I.S.I M7

Description

BLUME® HFM7 is a molybdenum high speed tool steel solid wire similar to AISI M7 grade. This product characterised by a high hardness (57 to 64 HRC) and excellent wear resistance. It is suitable for use at elevated temperatures.

Applications

BLUME® HFM7 is for depositing welding of Mo-alloyed high-speed steel. Maintenance and new manufacture of high-speed steel tools. Weld deposit without soft-annealing can only be processed by grinding. To be used for cutting tools, gouges, turning chisel, broaches, taps, twist drills, reamers, milling tools, cold extrusion dies.

Mechanical Properties

Hardness HRC (As Welded)	57 - 64
Current and Polarity	DC+

Shielding Gas

Argon + CO₂

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	P	Cr
1.00	0.30	0.40	< 0.025	3.80
Mo	Cu	S	W	V
8.60	< 0.50	< 0.025	1.80	1.90

Base Materials to be Welded

AISI M7 and similar.

Packaging

1.2mm (.045”) Diameter & 1.6mm (1/16”) Diameter Wire in 15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11”)





Hard-Facing MIG Wire



Code & Specification

A.I.S.I P-20 Mold Steel

Description

BLUME[®] HFP20 is a medium carbon low alloy steel which contains chromium and molybdenum. The Deposits are that of an AISI P-20 mold steel. The hardness is highly dependent on preheat temperature, length of time welding, and cooling rate. The deposits have similar etching, graining and colour match characteristics as P-20 when tempered to the low 30 HRC range.

Applications

BLUME[®] HFP20 is used to repair many types of P-20 tools and dies, whether they are die casting dies or plastic injection molds. It is often used for high strength joining of low alloy steels and Chrome Moly Steels.

Shielding Gas

Argon + CO₂

Mechanical Properties

Hardness HRC (As Welded)	34 - 38
Current and Polarity	DC+
Pre Heating Temperature	300°C (572°F)

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Mo	Cr
0.35	0.8	0.50	0.40	1.70
P	S	Cu		
< 0.025	< 0.025	0.25		

Packaging

1.2mm (.045”) Diameter & 1.6mm (1/16”) Diameter Wire in 15 kgs (33 lbs) [Net Weight] Plastic spools with OD = 270mm (11”)



Mild Steel Stick Electrodes



Code & Specification

ASME SFA/AWS A5.1 E6013

Description

BLUME® E6013 is a mild steel stick electrode. Operable with low amperages on sheet metal. Excellent bead appearance.

Applications

BLUME® E6013 is used for welding of sheet metal and for irregular short welds that change position. Typically used for maintenance or repair welding. Can be used on small AC Welders with low open circuit voltage.

Mechanical Properties

	As-welded
Yield Point, MPa	400 - 440
Tensile Strength, MPa	460 - 515
Elongation, %(L=4d)	20 - 23

Charpy V-Notch Impact Properties

Testing Temp.	As-welded (J)
-29 °C (-20°F)	37 - 76

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	P
0.04 - 0.07	0.30 - 0.45	0.15 - 0.25	≤ 0.015	≤ 0.015
Ni	Cr	Mo		
≤ 0.07	0.02 - 0.04	≤ 0.02		

Packaging

∅ x L	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 300mm (3/32" x 12")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
3.2mm x 350mm (1/8" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
4.0mm x 400mm (5/32" x 16")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)

Suggested Welding Parameters

∅ x L	AC	DC±
2.5mm x 300mm (3/32" x 12")	75 - 115	70 - 105
3.2mm x 350mm (1/8" x 14")	110 - 140	100 - 135
4.0mm x 400mm (5/32" x 16")	160 - 200	145 - 180

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited

Mild Steel Stick Electrodes



Code & Specification

ASME SFA/AWS A5.1 E7018-1

Description

BLUME[®] E7018 is a mild steel stick electrode. Clear weld puddle without slag interference. Flat bead profile.

Applications

BLUME[®] E7018 is used in several industries such as power generation, petrochemical, pressure vessels and pressure piping. Typically used for mild steel welding.

Mechanical Properties

	As-welded
Yield Point, MPa	440 - 550
Tensile Strength, MPa	540 - 600
Elongation, %(L=4d)	> 27

Charpy V-Notch Impact Properties

Testing Temp. (°C)	As-welded (J)
-29°C (-20°F)	27 min

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	P
0.06 - 0.08	1.20 - 1.50	0.40 - 0.60	0.01 - 0.02	0.01 - 0.02
Ni	Cr	Mo		
≤ 0.1	≤ 0.1	≤ 0.1		

Packaging

∅ x L	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 300mm (3/32" x 12")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
3.2mm x 350mm (1/8" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
4.0mm x 400mm (5/32" x 16")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)

Suggested Welding Parameters

∅ x L	AC	DC±
2.5mm x 300mm (3/32" x 12")	80 - 120	70 - 110
3.2mm x 350mm (1/8" x 14")	100 - 160	90 - 160
4.0mm x 400mm (5/32" x 16")	130 - 220	120 - 220

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Stainless Steel Stick Electrodes



Code & Specification

ASME SFA/AWS A5.4 E308L-16

Description

BLUME® E308L-16 is a stainless steel stick electrode. Flux coating provides a smooth arc transfer for all welding positions. Used to weld austenitic steels. Designed with low carbon levels to help eliminate carbide precipitation in high temperature service.

Applications

BLUME® E308L-16 is used to weld type 302, 304 and 308 stainless steels and A743 and A744 type CF-8 cast materials.

Mechanical Properties

	As-welded
Yield Point, MPa	370 - 420
Tensile Strength, MPa	540 - 595
Elongation, %(L=4d)	50 - 55

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	P
0.02 - 0.04	0.7 - 2.0	0.30 - 0.60	≤ 0.02	≤ 0.03
Ni	Cr	Mo		
9.5 - 10.5	19.0 - 20.0	0.15 - 0.25		

Packaging

∅ x L	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 350mm (3/32" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
3.2mm x 350mm (1/8" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
4.0mm x 350mm (5/32" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)

Suggested Welding Parameters

∅ x L	AC	DC±
2.5mm x 350mm (3/32" x 14")	40 - 70	40 - 70
3.2mm x 350mm (1/8" x 14")	60 - 100	60 - 100
4.0mm x 350mm (5/32" x 14")	90 - 140	90 - 140

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Stainless Steel Stick Electrodes



Code & Specification

ASME SFA/AWS A5.4 E316L-16

Description

BLUME® E316L-16 is a stainless steel stick electrode. Flux coating provides a smooth arc transfer for all welding positions. Molybdenum grade for increased corrosion resistance. Delivers exceptional puddle control, a smooth arc, and excellent slag release.

Applications

BLUME® E316L-16 is used to weld type 316 and 316L. Used for molybdenum bearing austenitic stainless steels.

Mechanical Properties

	As-welded
Yield Point, MPa	425 - 450
Tensile Strength, MPa	560 - 585
Elongation, %(L=4d)	40 - 54

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	P
0.03 - 0.04	0.7 - 0.9	0.3 - 0.4	≤ 0.02	≤ 0.02
Ni	Cr	Mo		
11.5 - 13.0	18.0 - 19.0	2.2 - 2.4		

Packaging

∅ x L	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 350mm (3/32" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
3.2mm x 350mm (1/8" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)
4.0mm x 350mm (5/32" x 14")	2.5 kgs (5.5 lbs)	8	20 kgs (44 lbs)

Suggested Welding Parameters

∅ x L	AC	DC±
2.5mm x 350mm (3/32" x 14")	40 - 70	40 - 70
3.2mm x 350mm (1/8" x 14")	60 - 100	60 - 100
4.0mm x 350mm (5/32" x 14")	90 - 140	90 - 140

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Cast Iron, Non Ferrous & Others



Code & Specification

ASME SFA/AWS A5.15 E NiCu-7

Description

BLUME[®] E NiCu-7 is a Monel electrode for joining and surfacing of nickel copper alloys. Low iron deposit exhibit maximum corrosion resistance. Medium penetration weld. Easily machinable deposit in as welded and stress relieved condition. Passes 180° bend test on monel alloy 400 plate.

Applications

BLUME[®] E NiCu-7 welding Monel to itself, to stainless steels or carbon steels. Overlaying on steel to obtain a corrosion resistant surface. Used for refineries, off shore, foundries, chemical and fertiliser plants, heat exchanger, pressure vessel and column manufacturing units, food, pumps & valves manufacturing units.

Mechanical Properties

	Condition	UTS, Mpa	EL%
Specification	As Welded	490-590	30-40

Redrying Condition : 150°C (300°F) for 1 Hour

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	Cu
≤ 0.08	1.0-3.0	0.20-0.80	≤ 0.015	≤2.5
Ni	Fe			
62.0-68.0	1.0-2.5			

Packaging

Ø x L	Amperage, A	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 350mm (3/32" x 14")	40-80	1 kg (2.2 lbs)	10	10 kgs (22 lbs)
3.2mm x 350mm (1/8" x 14")	80-110	1 kg (2.2 lbs)	10	10 kgs (22 lbs)
4.0mm x 350mm (5/32" x 14")	110-140	1 kg (2.2 lbs)	10	10 kgs (22 lbs)

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Cast Iron, Non Ferrous & Others



Code & Specification

ASME SFA/AWS A5.15 E NiCu-B

Description

BLUME[®] E NiCu-B is a monel alloy electrode with graphite based coating. Machinable weld is achieved with this electrode. Minimum dilution ensures shallow but sufficient depth of fusion. No preheating required for use.

Applications

BLUME[®] E NiCu-B is used for repair of cast iron castings. It is well suited for Gears, Machine Parts and Pump Bodies, also used for rebuilding worn surfaces. Main use is to join cast iron to steel and correcting machining errors on castings.

Mechanical Properties

	Condition	Hardness (3 Layer), BHN
Specification	As Welded	200 max

Redrying Condition : 150°C (300°F) for 1 Hour

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	Cu
0.35-0.55	≤ 2.30	≤ 0.75	≤ 0.025	≤ 0.03
Ni	Fe			
60.0-70.0	3.0-6.0			

Packaging

ø x L	Amperage, A	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 350mm (3/32" x 14")	45-60	1 kg (2.2 lbs)	10	10 kgs (22 lbs)
3.2mm x 350mm (1/8" x 14")	90-110	1 kg (2.2 lbs)	10	10 kgs (22 lbs)
4.0mm x 350mm (5/32" x 14")	120-150	1 kg (2.2 lbs)	10	10 kgs (22 lbs)

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Cast Iron, Non Ferrous & Others



Code & Specification

ASME SFA/AWS A5.15 E NiFe-CI

Description

BLUME® E NiFe-CI is a Ni-Fe type machinable electrode for Repair and Welding of Cast Iron. Produces dense, soft and ductile weld with adequate strength. Provides porosity are welding. Controlled dilution and penetration. Does not require preheating for large heavy casting.

Applications

BLUME® E NiFe-CI is used for repair of broken heavy casting along with welding and repairing of all cast iron components. Main items used to repair are pump casting and gears, cast iron dies, gear boxes and gear teeth.

Mechanical Properties

Specification	Condition	Hardness (3 Layer), BHN
	As Welded	150-190

Redrying Condition : 150°C (300°F) for 1 Hour

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	S	Cu
≤ 2.0	≤ 2.50	≤ 4.0	≤ 0.03	≤ 2.5
Ni	Fe			
45.0-60.0	3.0-6.0			

Packaging

Ø x L	Amperage, A	Wt./Carton	Carton/Box	Net wt./Box
2.5mm x 350mm (3/32" x 14")	40-70	1 kg (2.2 lbs)	10	10 kgs (22 lbs)
3.2mm x 350mm (1/8" x 14")	70-110	1 kg (2.2 lbs)	10	10 kgs (22 lbs)
4.0mm x 350mm (5/32" x 14")	90-120	1 kg (2.2 lbs)	10	10 kgs (22 lbs)

Approvals



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor, No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing TIG Filler Wire

Code & Specification

A.I.S.I H13

Description

BLUME® HFH13 is for hot work tool steels with excellent hot tensile properties, high hot wear resistance. Heat checking resistance.

Applications

BLUME® HFH13 is used in particular to repair mandrels, punches, dies, cylinder crushers, screws, hammers, pneumatic hammers, etc.

Mechanical Properties

Hardness HRC (As Welded)	54 - 60
Pre Heating Temperature	340 - 370°C (644°F - 698°F)
Current and Polarity	DC-

Shielding Gas

100% Argon

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	P	Cr
0.40	0.40	1.00	< 0.020	5.20
Mo	Cu	S	V	
1.40	< 0.25	< 0.020	1.00	

Base Materials to be Welded

X40CrMoV5-1 ; H13, BH 13; SCPH 62, STD 62

Packaging

1.2mm (.045") Diameter & 1.6mm (1/16") Diameter of 1000mm (40") length in 5 kgs (11 lbs) pack.



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing TIG Filler Wire



Code & Specification

A.I.S.I M2

Description

BLUME[®] HFM2 is a Tungsten - Molybdenum alloyed welding wire suitable for repairing high speed steels. Excellent toughness and cutting properties for a wide variety of uses.

Applications

BLUME[®] HFM2 is used for twist drills, reamers, broaching tools, metal saws, milling tools of all types, wood working tools, cold working tools, gears, punches, shears etc.

Mechanical Properties

Hardness HRC (As Welded)	60 - 64
Pre Heating Temperature	350°C (662°F)
Current and Polarity	DC-

Shielding Gas

100% Argon

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	P	Cr
0.90	0.30	0.25	< 0.030	4.2
Mo	Cu	S	Ni	V
5.00	< 0.50	< 0.020	< 0.25	1.80

Base Materials to be Welded

X85WDCV06-04-02 ; V6M05Cr4V2 ; HS 6-5-2 ; M2, J438B ; X85WDCV06-04-02 ; BM2 ; SKH 51 ; R 6 M 5

Packaging

1.2mm (.045") Diameter & 1.6mm (1/16") Diameter of 1000mm (40") length in 5 kgs (11 lbs) pack.



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing TIG Filler Wire



Code & Specification

A.I.S.I M7

Description

BLUME® HFM7 is a molybdenum high speed tool steel solid wire similar to AISI M7 grade. This product characterised by a high hardness (57 to 64 HRC) and excellent wear resistance. It is suitable for use at elevated temperatures.

Applications

BLUME® HFM7 is for depositing welding of Mo-alloyed high-speed steel. Maintenance and new manufacture of high-speed steel tools. Weld deposit without soft-annealing can only be processed by grinding. To be used for cutting tools, gouges, turning chisel, broaches, taps, twist drills, reamers, milling tools, cold extrusion dies.

Mechanical Properties

Hardness HRC (As Welded) 57 - 64

Current and Polarity DC-

Shielding Gas

100% Argon

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	P	Cr
1.00	0.30	0.40	< 0.025	3.80
Mo	Cu	S	W	V
8.60	< 0.50	< 0.025	1.80	1.90

Base Materials to be Welded

AISI M7 and similar.

Packaging

1.2mm (.045") Diameter & 1.6mm (1/16") Diameter of 1000mm (40") length in 5 kgs (11 lbs) pack.



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited



Hardfacing TIG Filler Wire



Code & Specification

A.I.S.I P-20 Mould Steel

Description

BLUME[®] HFP20 is a medium carbon low alloy steel which contains chromium and molybdenum. The Deposits are that of an AISI P-20 mold steel. The hardness is highly dependent on preheat temperature, length of time welding, and cooling rate. The deposits have similar etching, graining and colour match characteristics as P-20 when tempered to the low 30 HRC range.

Applications

BLUME[®] HFP20 is used to repair many types of P-20 tools and dies, whether they are die casting dies or plastic injection molds. It is often used for high strength joining of low alloy steels and Chrome Moly Steels.

Shielding Gas

100% Argon

Mechanical Properties

Hardness HRC (As Welded)	34 - 38
Current and Polarity	DC-
Pre Heating Temperature	300°C (572°F)

Undiluted Weld Metal Analysis (wt%)

C	Mn	Si	Mo	Cr
0.35	0.8	0.50	0.40	1.70
P	S	Cu		
< 0.025	< 0.025	0.25		

Packaging

1.2mm (.045") Diameter & 1.6mm (1/16") Diameter of 1000mm (40") length in 5 kgs (11 lbs) pack.



Blumenotics Pvt. Limited

An ISO 9001:2015 Company

3rd Floor No. 23, 5th Cross, Koramangala 5th Block, Bangalore 560 095, India
Tel: +91 80 2528 3432 Email: info@blumenotics.com Web: www.blumenotics.com

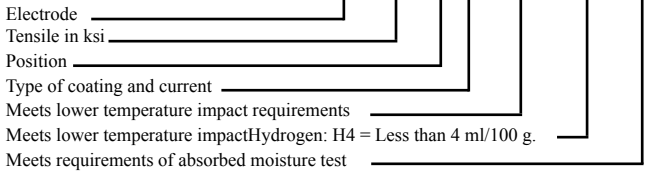
BLUME & BLUME Logo are registered trademark of Blumenotics Pvt. Limited

AWS Classification



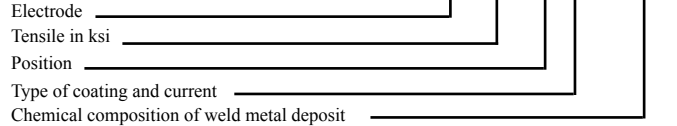
Mild Steel Covered Electrodes, SMAW Process

E7018-1 H4R



Low Allow Covered Electrodes

E8018-B2



Position

- 1) Flat, Horizontal, Vertical, Overhead
- 2) Flat and Horizontal only

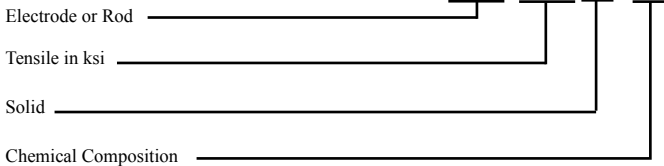
Types of Coating & Current

AWS	DIGIT	TYPE OF COATING	WELDING CURRENT
6010	0	Cellulose Sodium	DCEP
6011	1	Cellulose Potassium	AC or DCEP
6022	2	Titania Sodium	AC or DCEP
6013	3	Titania Potassium	AC or DCEP or DCEN
7014	4	Iron Powder Titania	AC or DCEP or DCEN
7018	8	Iron Powder Low Hydrogen	AC or DCEP

DCEP - Direct Current Electrode Positive
 DCEN - Direct Current Electrode Negative
 AC - Alternating Current

Mild Steel Solid Electrodes, GMAW and GTAW

ER70S-6



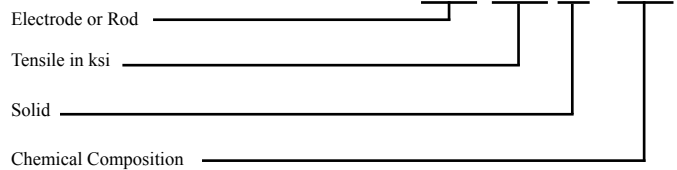
Chemical Composition of Weld Metal Deposit

AWS	Suffix	C	Mn	Si	Ni	Cr	Mo	V	P	S	Cr	Al	Nb	N
E7018	A1	0.12	0.90*	.80	—	—	.40-.65	—	.03	.03				
E8018	B2L	.05	.90	0.80	—	1.00-1.50	.40-.65	—	.03	.03				
E8018	B2	.05-.12	.90	0.80	—	1.00-1.50	.40-.65	—	.03	.03				
E9018	B3L	.05	.90	0.80*	—	2.00-2.50	.90-1.20	—	.03	.03				
E9018	B3	.05-.12	.90	0.80*	—	2.00-2.50	.90-1.20	—	.03	.03				
E8018	B6	.05-.10	1.0	.90	.40	4.0-6.0	.45-.65	—	.03	.03				
E8018	B8	.05-.10	1.0	.90	.40	8.0-10.5	.85-1.20	—	.03	.03				
E9015	B9	.08-.13	1.20	.30	8.0	8.0-10.5	.85-1.20	.15-.30	.01	.01	.25	.04	.02-.10	.02-.07
E8018	C1	.12	1.25	0.80*	2.00-2.75	—	—	—	.03	.03				
E8018	C2	.12	1.25	0.80*	3.00-3.75	—	—	—	.03	.03				
E8018	C3	.12	.40-1.25	.80	.80-1.10	.15	.35	.05	.03	.03				
E10018	D2	.15	1.65-2.00	0.80*	.90	—	.25-.45	—	.03	.03				
EXXX	G**	—	1.00 Min	.80 Min	.50 Min	.20 Min	.20 Min	.10 Min	.03	.03	.2			
E9018	M	.10	.60-1.25	.80	1.40-1.80	.15	.35	.05	.030	.030				
E10018M	M	.10	.60-1.25	.80	1.40-1.80	.15	.35	.05	.030	.030				
E11018M	M	.10	1.30-1.80	.60	1.25-2.50	.40	.25-.50	.05	.030	.030				
E12018	M	.10	1.30-2.25	.60	1.75-2.50	.30-1.50	.30-.55	.05	.030	.030				
E7010	P1	.20	1.20	.60	1.00	.30	.50	.10	.030	.030				
E8010	P1	.20	1.20	.60	1.00	.30	.50	.10	.030	.030				

* Amount depends on electric classification. Single values indicate maximum.
 ** All G Classifications have the same chemical minimum requirements.

Low Alloy Solid Electrodes, GMAW and GTAW

ER90S-D2



Chemical Composition of Solid Wires Using CO₂ Shielding Gas

AWS classification	Shielding gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	% Elongation min. in 2" (50 mm)	Impact strength Min. ft-lbs at °F (J at °C)	CHEMICAL COMPOSITION									
						C	Mn	Si	P	S	Ni	Cr	Mo	Cu	Other
ER70S-2	CO ₂	70 (500)	60 (420)	22	20 at -20 (27 at -29)	.07	.90-1.40	.40-.70	.025	.035	—	—	—	.50	Ti, Zr, Al
ER70S-3	CO ₂	70 (500)	60 (420)	22	20 at 0 (27 at -18)	.06-.15	.90-1.40	.45-.70	.025	.035	—	—	—	.50	—
ER70S-4	CO ₂	70 (500)	60 (420)	22	—	.07-.15	1.00-1.50	.65-.85	.025	.035	—	—	—	.50	—
ER70S-5	CO ₂	70 (500)	60 (420)	22	—	.07-.19	.90-1.40	.30-.60	.025	.035	—	—	—	.50	Al
ER70S-6	CO ₂	70 (500)	60 (420)	22	20 at -20 (27 at -29)	.07-.15	1.40-1.85	.80-1.15	.025	.035	—	—	—	.50	—
ER70S-7	CO ₂	70 (500)	60 (420)	22	20 at -20 (27 at -29)	.07-.15	1.50-2.00	.50-.80	.025	.035	—	—	—	.50	—
ER80S-D2	CO ₂	80 (550)	68 (470)	17	20 at -20 (27 at -29)	.07-.12	1.60-2.10	.50-.80	.025	.025	.15	—	.40-.60	.50	—

Abbreviations



Abbreviation of Standards

AWS	American Welding Society
BS	British Standard
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
DIN	Deutsches Institut für Normung
EN	European Normen
GB	Chinese National Standards
ISO	International Standard Organisation
JIS	Japanese Industrial Standards

Abbreviation of Welding

AAW	Argon Arc Welding
CO ₂ W	Carbon-dioxide Gas Shield Arc Welding
ESW	Electro-slag Welding
FCW	Flux-cored Welding
MCW	Metal Cored Welding
GMAW	Metal Gas Arc Welding
MAG	Metal Active Gas Arc Welding
MGAW	Mixed Gas Arc Welding
MIG	Metal Inert Gas Arc Welding
SAW	Submerged Arc Welding
SMAW	Shielded Metal Arc Welding (Manual Metal Arc Welding)
TIG	Tungsten Inert Gas Arc Welding

Notion of Welding Position

F	Flat Welding or Downhand Welding
H	Horizontal Welding
H F	Horizontal Fillet Welding
OH	Overhead Welding
V	Vertical Up Welding
VD	Vertical Down Welding

Post Weld Condition

AW	As-welded
PWHT	Post Weld Heat Treated



Blumenotics Private Limited

Publisher:

Blumenotics Private Limited

Contacts:

Group Communications & Client Relations
info@blumenotics.com

Web Site:

www.blumenotics.com

To Order Publications:

Use The Blumenotics Private Limited Website Or Write To:

Group Communications & Client Relations
Blumenotics Private Limited
3rd Floor, No. 23
5th Cross Road
Koramangala 5th Block
Bangalore 560095
India



All content/information present here is the exclusive property of Blumenotics Private Limited. The content /information contained here is correct at the time of publishing. No material from here may be copied, modified, reproduced, republished, uploaded, transmitted, posted or distributed in any form without prior written permission from Blumenotics Private Limited. Unauthorized use of the content/information appearing here may violate copyright, trademark and other applicable laws, and could result in criminal or civil penalties.