

MANFISA WIRE GROUP

## **COMPANY OVERVIEW**







## **OUR GROUP**



Saprem

Trefinasa





Dalian Manfisa



# **OUR MANUFACTURING SITES**





# **OUR HISTORY**





## **OUR VALUES**

Throughout these years Manfisa has worked to improve its processes, as a result **high quality products** have been achieved and **optimal solutions**. Always looking forward to satisfying our **customers**' **needs**.

We are proud of having diversified our markets and nowadays we are selling our products worldwide by offering a reliable product and service.

Our commitment focused on the **continuous improvement** of the processes with the aim of **satisfying** and even **exceeding** our customers' **expectations**.



# **OUR NUMBERS**

19.890

MT in 2018

we export to
+70 countries



6 million € investment since 2018

**45 years** of experience

69 people at your service







#### QUALITY ASSURANCE

# WELDING

MANFISA WIRE has gained since its creation in 1973 a well deserved reputation for excellent Quality wordwide in various industry sectors thanks to a profound experience and knowhow in the welding wire manufacturing process and a poignant Customer Oriented view of the business.

The company has built in 2018 a new welding wire manufacturing site fitted with the most advaced technologies to face the challenging future of the Aluminum industries.

**INDUSTRIES** 

**PRODUCTS** 











# **OUR FILLERS**

Absence of porosity
Clean wire surface
Smooth feeding
Consistent and uniform welding seams
High productivity | no downtimes
Precise wire mechanicals & chemistries
Expert technical advice

**UNPARALELLED CUSTOMER SATISFACTION** 

AW1070

AW4043

AW5754

AW5183

AW5356























# FORMS OF SUPPLY

#### Plastic spool S 300



External Ø d1	300 ± 5 mm		
I.D. Arbor Hole Ø d3	52 mm		
Outside Width b	103 +0/-3 mm		
Capacity (Kg)	7		

#### BS 300 Basket spool



External Ø d1	300 ± 5 mm		
Internal Ø d2	189 ± 0,5 mm		
I.D. Arbor Hole Ø d3	52 mm		
Outside Width b	103 +0/-3 mm		
Capacity (kg)	7		

#### Plastic spool S 200



External Ø d1	200 ± 3 mm
I.D. Arbor Hole Ø d3	52 mm
Outside Width b	55 +0/-3 mm
Capacity (Kg)	2

#### Octavin



Width	580 mm
Height h	210 mm/420 mm
Capacity (Kg)	25/50



#### Drums





External Ø d1	520 mm / 550 mm / 650 mm
height h	745 mm/ 920 mm / 905 mm
Capacity (Kg)	80/150

#### Plastic spool K 355



External Ø d1	350 ± 1,5 mm
I.D. Arbor Hole Ø d3	35 ± 1,5 mm
Outside Width b	200 mm
Capacity (Kg)	18

#### Gran cubo



I.D. Arbor Hole Ø	580 mm
Height h	900 mm
Capacity (Kg)	140

#### K400 Basket spool



Outside diameter	400mm
Diameter of the sticks that support the wire	188 mm
Outside Width	212 mm
Capacity (Kg)	40





ER4043

#### Product description

Aluminium-Silicon basis solid wire for GMAW and GTAW aluminium alloys welding.

#### Applications

Excellent surface finish. High resistance to cracks on the weld metal when combined with base materials of the 6000 series. Iron/metalwork, bicycles, motorbikes, automotive industry, air extraction facilities.

#### Classification

EN ISO 18273	S AI 4043 (AISi5)	
AWS/SFA-5.10/5.10M	ER 4043	
UNS	A94043	
ISO TR 17671-4 / EN 1011-4	Type 4	
ASME IX	F-N°23 (QW-432)	

#### Approvals

Vd TÜV 1153	DB N. 61.254.01	CE N. 0035-CPR-C616
-------------	-----------------	---------------------

#### Chemical composition (weight %)

Chemistry according to EN ISO 18273. Individual values indicated in the table are maximum values.

Si	Fe	Cu	Mn	Mg	Zn	Ti	Be	Al
4,5-6,0	0,60	0,30	0,15	0,20	0,10	0,15	0,0003	Rest./Bal.

#### Mechanical properties, typical as weld

Mechanical properties of the deposited metal are determined by the dilution with the base material.

	Gas	Temp.	Condition	Yield Strength 0,2%	Tensile Strength	Elongation
Values acc. to DIN 1732-3	11	20°C	As welded	≥ 120 N/mm <sup>2</sup>	≥ 250 N/mm <sup>2</sup>	≥ 18%

#### Usual base materials to be welded

Suitable for cast aluminium welding and cast aluminium welding when joining products of the series 3000, 5000, 6000, 7000. Products of series 3000, 5000, 6000.

ER5356

#### Product description

Aluminium-Magnesium basis solid wire for GMAW and GTAW aluminium alloys welding.

#### **Applications**

Weldings where a high tensile strength is needed. More common welding alloy within Al-Mg family.

#### Classification

EN ISO 18273	Al 5356 (Al Mg5Cr(A))
AWS/SFA-5.10/5.10M	ER 5356
UNS	A95356
ISO TR 17671-4 / EN 1011-4	Type 5
ASME IX	F-N°22 (QW-432)

#### Approvals

Vd TÜV 1153	DB N. 61.254.01	CE N. 0035-CPR-C616
-------------	-----------------	---------------------

#### Chemical composition (weight %)

Chemistry according to EN ISO 18273. Individual values indicated in the table are maximum values.

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Be	Al
0,25	0,40	0,10	0,05 - 0,20	4,5 - 5,5	0,05 - 0,20	0,10	0,06-0,20	0,0003	Rest./Bal.

#### Mechanical properties, typical as weld

Mechanical properties of the deposited metal are determined by the dilution with the base material.

	Gas	Temp.	Condition	Yield Strength 0,2%	Tensile Strength	Elongation
Values acc. to DIN 1732-3	11	20°C	As welded	≥ 120 N/mm <sup>2</sup>	≥ 250 N/mm <sup>2</sup>	≥ 18%

#### Usual base materials to be welded

Suitable for joint welding of aluminium alloys from 5000 and 6000 series.

ER5183

#### Product description

Aluminium-Magnesium basis solid wire for GMAW and GTAW aluminium alloys welding.

#### Applications

Weldings where high tensile strength, high resilience resistance and excellent seawater corrosion resistance are needed. It can be applied in the construction of ships, railway, offshore and cryogenic plants.

#### Classification

EN ISO 18273	Al 5183 (Al Mg4,5 Mn0,7(A))
AWS/SFA-5.10/5.10M	ER 5183
UNS	A95183
ISO TR 17671-4 / EN 1011-4	Type 5
ASME IX	F-N°22 (QW-432)

#### Approvals

Vd TÜV 1153 DB N. 61.254.01	CE N. 0035-CPR-C616
-----------------------------	---------------------

#### Chemical composition (weight %)

Chemistry according to EN ISO 18273. Individual values indicated in the table are maximum values.

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Be	Al
0,40	0,40	0,10	0,50 - 1,0	4,3 - 5,2	0,05 - 0,25	0,25	0,15	0,0003	Rest./Bal.

#### Mechanical properties, typical as weld

Mechanical properties of the deposited metal are determined by the dilution with the base material.

	Gas	Temp.	Condition	Yield Strength 0,2%	Tensile Strength	Elongation
Values acc. to DIN 1732-3	11	20°C	As welded	≥ 130 N/mm <sup>2</sup>	≥ 275 N/mm <sup>2</sup>	≥ 18%

#### Usual base materials to be welded

Suitable for joint welding of aluminium alloys from 5000 and 6000 series.

ER1070

#### Product description

Aluminium-Magnesium basis solid wire for GMAW and GTAW aluminium alloys welding.

#### Applications

Excellent surface finish, very good weldability. Iron/metalwork, water conduction, electric elements.

#### Classification

EN ISO 18273	S Al 1070 (Al 99,7)
AWS/SFA-5.10/5.10M	ER 1070
UNS	-
ISO TR 17671-4 / EN 1011-4	-
ASME IX	EN AW-1070A

#### Approvals

CE N. 0035-CPR-C616

#### Chemical composition (weight %)

Chemistry according to EN ISO 18273. Individual values indicated in the table are maximum values.

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Be	Al
0,20	0,25	0,04	0,03	0,03	-	0,04	0,03	0,0003	99,70

#### Mechanical properties, typical as weld

Mechanical properties of the deposited metal are determined by the dilution with the base material.

	Gas	Temp.	Condition	Yield Strength 0,2%	Tensile Strength	Elongation
Values acc. to DIN 1732-3	11	20°C	As welded	-	≥ 60 N/mm <sup>2</sup>	≥ 35%

#### Usual base materials to be welded

Suitable for joint welding of aluminium alloy 1000. It can be used with alloys 5000 or other alloys whenever water tightness in the union is required or there are no mechanical requirements.



#### **Spools Manipulation**

#### Security advices

#### Handling risks:

- The beginning and end of the wire might produce injuries.
- · Fall of spools might cause hits.
- · Unsuitable warehousing might cause collapses.
- · Piling spools up is unstable and can produce hits.

#### Measures to be taken:

- It is recommended the use of gloves in spools handling
- · It is recommended the use of the security shoes.
- It is recommended not to pile spools up out of its original packaging.

These instructions must be available at each area /place where the spools are handled.

Independently of the advices included in these instructions, local security rules will be applicable.

The manufacturer is not responsible for damages as consequence of an incorrect or unsuitable use of the delivered material.

#### Storage Recommendations

It is recommended to use the material no later than 18 months from its reception, as long as it is kept in its original packaging and stored somewhere protected from humidity and dirt. Once the package is opened, and in case of not using all the material, keep into its original case closed and preferably in a heated cabinet, at least at 20°C.

Avoid the wire contamination with foreign substances.



#### Recommendations of using

Letting go the wire (freely) in the feeding process of the machine could produce spring effect, and the spires could come out from their accommodate. We recommend to hold with the hands the superficial spires to avoid this effect before hooking the wire to the metallizing machine.



# TECHNICAL ADVICE

Avoid wire crosses in the feeding process of the machine because they will cause serious problems in the correct working.

Avoid the fall of spools in the process of handling them, because it will cause the breakage of the spools. Take special care with handling of the spools type IRU 320.

YES.



NO.



#### **Environmental information**

Plastic reels can be reused and recycled; packagings materials can be recycled.

The end user is responsible of managing the residues in a suitable way, according to the European Directive 94/62/CE or local rules.







