

# SAFETY DATA SHEET

## BW006 Bare Aluminium wire electrodes and Rods



Version number: 2  
Replaces SDS: 2009-11-23  
Issued: 2014-03-25

**Not for sale in the USA**  
**Ensure that this SDS is received by the appropriate person**

### Section 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

**Trade name** NEXUS TIG & MIG WIRE Grades 5356, 4043, 5556A, 1050 and 5183

**Article-no**

Product/Article	Diameter(mm)	Packaging (pk/ea)	Part Number
NEXUS TIG WIRE 5356	1.6MM	2.5KG	505019734
NEXUS TIG WIRE 5356	2.4MM	2.5KG	505059240
NEXUS TIG WIRE 5356	3.2MM	2.5KG	505001470
NEXUS TIG WIRE 5356	4.0MM	2.5KG	505021208
NEXUS TIG WIRE 4043	1.6MM	2.5KG	505058999
NEXUS TIG WIRE 4043	2.4MM	2.5KG	505039252
NEXUS TIG WIRE 4043	3.2MM	2.5KG	505043017
NEXUS TIG WIRE 5556A	1.6MM	5KG	505001678
NEXUS TIG WIRE 5556A	2.4MM	5KG	505026084
NEXUS TIG WIRE 5556A	3.2MM	5KG	505015213
NEXUS TIG WIRE 5183	2.4MM	5KG	505036555
NEXUS TIG WIRE 5183	3.2MM	5KG	505014100
NEXUS MIG WIRE 5356	0.8MM	7KG	505000909
NEXUS MIG WIRE 5356	1.0MM	7KG	505039671
NEXUS MIG WIRE 5356	1.2MM	7KG	505027326
NEXUS MIG WIRE 5356	1.6MM	7KG	505024538
NEXUS MIG WIRE 4043	0.8MM	7KG	505028055
NEXUS MIG WIRE 4043	1.0MM	7KG	505056489
NEXUS MIG WIRE 4043	1.2MM	7KG	505056965
NEXUS MIG WIRE 1050	0.8MM	7KG	505012634
NEXUS MIG WIRE 1050	1.0MM	7KG	505055515
NEXUS MIG WIRE 1050	1.2MM	7KG	505022762
NEXUS MIG WIRE 5183	0.8MM	7KG	505017153
NEXUS MIG WIRE 5183	1.0MM	7KG	505044120
NEXUS MIG WIRE 5183	1.2MM	7KG	505028868
NEXUS MIG WIRE 5356	0.8MM	0.5KG	505034442
NEXUS MIG WIRE 5356	1.0MM	0.5KG	505000913
NEXUS MIG WIRE 5356	1.2MM	0.5KG	505018985

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	NEXUS MIG WIRE 4043	0.8MM	0.5KG	505057442
	NEXUS MIG WIRE 4043	1.0MM	0.5KG	505003757
	NEXUS MIG WIRE 4043	1.2MM	0.5KG	505047762
	NEXUS MIG WIRE 5183	0.8MM	0.5KG	505041435
	NEXUS MIG WIRE 5183	1.0MM	0.5KG	505048447
	NEXUS MIG WIRE 5183	1.2MM	0.5KG	505013119

*1.2 Relevant identified uses of the substance or mixture and uses advised against*

<b>Article type</b>	GMAW (MIG) Gas Metal arc welding, GTAW (TIG) Tungsten Inert gas welding AWS A5.10 or ISO 18273
<b>Use</b>	Gas shielded Arc welding

*1.3 Details of the supplier of the safety data sheet*

<b>Supplier</b>	ISS,
Street address	Redfield Road, Lenton, Nottingham NG7 2UJ
Telephone	
Fax	
<b>Email</b>	isstechsupport@boc.com

*1.4 Emergency telephone number*

<b>Available outside office hours</b>	NO
<b>Emergency phone number</b>	

Other

<b>Additional product information</b>	<b>Web site:</b> <a href="http://www.nexusweld.com">www.nexusweld.com</a>
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## Section 2. HAZARDS IDENTIFICATION

*2.1 Classification of the substance or mixture*

Classification according to Regulation (EC) No1271/2008[CLP] applicable

*2.2 Label elements*

Not applicable

*2.3 Other hazards*

When the product is used in the welding process the most important hazards are:

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Overexposure to fumes and gases from welding can be dangerous to health.  
Watch out for splatter, hot metal and slag. It may cause skin burn and cause fire.  
Arc rays can injure eyes and burn skin. Electric shock can kill. Avoid touching live electrical parts.

### Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1 Substances

This product is a mixture and please refer to Section 3.2

#### 3.2 Mixtures

AWS Specification	Al %	Si %	Fe %	Cu %	Mn %	Mg %	Cr %	Zn %	Ti %
CAS No	7429-90-5	7440-21-3	7439-89-6	7440-50-8	7439-96-6	7439-95-4	7440-47-3	7440-67-7	7439-89-6
A5.10/R4043	Bal.	4.5-6.0	0.8	0.30	0.05	0.05	-	0.10	0.20
A5.10/R 5356	Bal. As above	0.25	0.4	0.1	0.05-0.20	4.5-5.5	0.05-0.20	0.10	0.06-0.20
A5.10 / others	Bal. As above	13.0	0.8	6.8	1.0	5.5	0.35	0.25	0.30

### Section 4. FIRST AND MEASURES

#### 4.1 Description of first aid measures

<b>Inhalation</b>	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.
<b>Skin contact</b>	Burns should be treated by a doctor.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Burns from radiation, see doctor.
<b>Ingestion</b>	Contact a doctor if more than an insignificant amount has been swallowed.

#### 4.2 Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons.
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#### 4.3 Indication of any immediate medical attention and special treatment needed

Not applicable

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### Section 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable extinguishing media** Carbon dioxide (CO<sub>2</sub>), powder or diffuse jet of water. In case of major fire: Extinguish fire with diffuse jet of water or foam.

#### 5.2 Special hazards arising from the substance or mixture

Not applicable

#### 5.3 Advice for fire fighters

**Special protective equipment for fire fighters** Wear self contained breathing apparatus

### Section 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Skin contact should be avoided to prevent possible allergic reactions.

#### 6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

#### 6.3 Methods and material for containment and cleaning up

Not applicable

#### 6.4 Reference to other sections

For *Personal protection* see section 8. For *Disposal* see section 13. For *Environmental precautions* see section 12. For *Precautions for safe handling* see 7.1.

### Section 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

**Preventive handling precautions** Ensure adequate ventilation for the welder and others. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Remove all flammable materials and liquids before welding.

**General hygiene** Wash hands before breaks and immediately after handling the product.

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### 7.2 Conditions for safe storage, including any incompatibilities

Store welding consumables inside a room without humidity. Do not store welding consumables directly on the ground or beside walls. Store away from chemical substances like acids which could cause chemical reactions.

### 7.3 Specific end use(s)

Welding process.

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

Welding fume component	CAS No.	WEL <sup>3</sup> 8hr TWA	STEL <sup>3</sup> 15min TWA	Hazard Classification 67/548/EC	Hazard Classification (GHS) 1272/2008
Aluminium Oxides	1344-28-1			R15/R17	H261/H250
Total inhalable dust		10		Pyrophoric	Pyrophoric
Respirable dust		4		R15/R10 stabilised	H261/H228 stabilised
Iron oxide fume (as Fe)	1309-37-1	5	10		
Manganese and its inorganic compounds (as Mn)	7439-96-5	0.5			
Silica, amorphous					
(total inhalable dust)	-	6			
(respirable dust)		2.4			
Magnesium oxide (as Mg)					
Total inhalable dust	1309-48-4	10			
Respirable dust		4	10		
Copper, fume	7440-50-8	0.2			
Zinc oxide, fume	1314-13-2	5	10		
Carbon Dioxide	124-38-9	5000ppm	15000ppm		
Carbon Monoxide	630-08-0	30ppm	200ppm		
Nitrogen dioxide (NO <sub>2</sub> )	10102-44-0	0.5ppm <sup>5</sup>	0.95ppm <sup>5</sup>		
Ozone (O <sub>3</sub> )	10028-15-6		0.2ppm <sup>6</sup>		
Nitrogen monoxide (NO)	10102-43-9	0.5ppm <sup>5</sup>	0.63ppm <sup>5</sup>		

**Notes**

3 Units are in mgm/m<sup>3</sup>, except stated otherwise

4 WEL Workplace exposure limits

5 As recommended by MAK Commission based on scientific experience and is not establish law

6 As recommended by EH40 (2005) in the UK

### 8.2 Exposure controls

*Environmental Exposure controls- Refer to Section 6 of this SDS*

#### Technical precaution measures

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits.

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<b>Eye / face protection</b>	Wear eye protection appropriate for welding.
<b>Safety gloves</b>	Skin contact should be avoided to prevent possible allergic reactions.
<b>Other skin protection</b>	Wear body protection which helps to prevent injury from radiation, sparks and electric shock.
<b>Respiratory protection</b>	Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding.

### Section 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

<b>Appearance, colour</b>	Light grey metallic colour
<b>Appearance, physical state</b>	Aluminium wire or Rod
<b>Auto-ignition temperature</b>	Not applicable
<b>Auto-inflammability</b>	Not auto-flammable
<b>Decomposition temperature</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Explosive properties</b>	Not explosive
<b>Flammability (solid gas)</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Form</b>	Fast
<b>Initial boiling point and boiling range</b>	Not applicable
<b>Melting point / Freezing point</b>	Not applicable
<b>Odour</b>	Odourless
<b>Odour threshold</b>	Not applicable
<b>Oxidising properties</b>	Not applicable
<b>Partition coefficient: n-octanol / water</b>	Not applicable
<b>pH value</b>	Not applicable
<b>Relative density</b>	Not applicable
<b>Solubility</b>	Not applicable
<b>Solubility in water</b>	Insoluble
<b>Upper / lower flammability or explosive limits</b>	Not applicable
<b>Vapour density</b>	Not applicable
<b>Vapour pressure</b>	Not applicable
<b>Viscosity</b>	Not applicable

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9.2 Other information

Not applicable

Other

**Density** 2.7g/cm<sup>3</sup>

**Section 10. STABILITY AND REACTIVITY**

10.1 Reactivity

Not applicable

10.2 Chemical stability

Stable at normal conditions.

10.3 Possibility of hazardous reactions

Not applicable

10.4 Conditions to avoid

None under normal conditions

10.5 Incompatible materials

Not applicable

10.6 Hazardous decomposition products

Welding fumes and gases. Additional fume may arise from coatings and contaminants on the base material.

Welding fume component	CAS No.	Classification (67/548EEC)	CLP (1272/2008)		Concentration of classified fume components
Aluminium oxide (Al)	1344-28-1	-	-	-	0
Chromium III compounds (as Cr)	24613-89-6	R45: May cause cancer R35: Causes severe burns R43: May cause sensitisation by skin contact	Carc. 1B Skin Corr. 1A Skin Sens. 1	H350 H314 H317	<1.0
Copper oxide (Cu)	1317-38-0	-	-	-	<.1
Iron oxide (Fe)	1332-37-2	-	-	-	<0.1 to 3.0
Magnesium oxide (Mg)	1309-48-4	-	-	-	<0.1 to 5.0

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Manganese (Mn)	7439-96-5	-	-	-	<0.1 to 10.0
Nickel (Ni)	7440-02-0	R40: Limited evidence of carcinogenic effect R43: May cause sensitisation by skin contact R48/23: Toxic danger of serious damage to health by prolonged exposure through inhalation R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment	Carc. 2 Skin sens 1 STOT RE 1	H351 H317 H372	≤1.0
Zinc (Zn)	7440-66-6	-	-	-	≤1.0

Classification information relates to the fume during use

Classification	H phrase	Text
Skin sensitiser: Category 1	H317	May cause an allergic skin reaction
Carcinogenicity: Category 1B	H350	May cause cancer

Analysis wt %	
Al bal	Mg <1
Fe 1 to 3	Zn <1
Cr <1	Cu <1

**Section 11. TOXICOLOGICAL INFORMATION**



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11.1 Information on toxicological effects

Conditions to avoid: none in the form supplied

When welding, fumes and gases generated can be dangerous to health.

<b>Acute toxicology</b>	Excessive exposures may affect human health, as follows: Aspiration may cause pulmonary oedema and pneumonitis Short-term overexposure can cause dizziness, nausea and irritation of the nose, throat or eyes.
<b>Irritation</b>	Not applicable
<b>Corrosive effects</b>	Not applicable
<b>Sensitisation</b>	May cause sensitisation by skin contact
<b>Mutagenicity</b>	Not applicable
<b>Carcinogenicity</b>	Welding fumes are possibly carcinogenic to humans
<b>Repeated dose toxicity</b>	Not applicable
<b>Reproductive toxicity</b>	Not applicable

**Section 12. ECOLOGICAL INFORMATION**

12.1 Toxicity

The welding process can effect the environment if fume is released directly into the atmosphere. Residues from welding consumables could degrade and accumulate into soils and ground water.

12.2 Persistence and degradability

Not applicable

12.3 Bio accumulative potential

Not available

12.4 Mobility in Soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

Not applicable

**Section 13. DISPOSAL CONSIDERATIONS**

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13.1 Waste treatment methods

**Disposal considerations** Dispose of any product, residue or packing material according to national and local regulations. Spent fume extraction filters shall be disposed of as dangerous waste.

Other

**Waste code (EWC)** 12 01 13 - welding waste

**Section 14. TRANSPORT INFORMATION**

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Other

**Dangerous goods** No

**Section 15. REGULATORY INFORMATION**

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15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture.

**EU regulations** The product does not need to be labelled in accordance with EC directives or respective national laws.

**National regulations** EH40/2005 Workplace exposure limits  
The Waste Regulations 2011 No. 988  
Local laws and regulations should be carefully observed.

15.2 Chemical safety assessment

Not applicable

### Section 16. OTHER INFORMATION

**References to key literature and** Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH).

**data sources** Regulation (EC) No 1272/2008 of the European Parliament and of the Council.

EH40/2005 Workplace exposure limits.

The Waste regulations 2011 No.988

C&L Inventory database

Annex VI CLP Regulation (EC) 1272/2008

**Phrase meaning** H317 - May cause an allergic skin reaction

H350 - May cause cancer.

Other

**Manufacturer's notes** Read this Safety Data Sheet carefully and become aware of hazards implied and the safety information.

End of Document