Safety data sheet № 4/0/ПБ-2013
Bronzed bead wire

Date: 05.04.2013
Revision date:

1 Material identification and manufacturer information
1.1 Commercial name: bronzed bead wire
1.2 Application: for reinforcement of tire bead ring
1.3 Manufacturer / Supplier: OJSC "Byelorussian Steel Works - management company of "Byelorussian Metallurgical Company" holding",
247210, Republic of Belarus, Gomel Region
Zhlobin, str. Promyshlennaya, 37
Tel. + 375 (2334) 2-29-93
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2 Composition / information about ingredients
2.1 General description: bronzed bead wire for tire bead rings– made of steel with bronze plating.
2.2 Chemical composition of steel used for bronzed bead wire production:

Element	Mass content, %
Iron, not less	97,0
Carbon	0,60-0,90
Manganese, not more	0,7
Silicon, not more	0,3
Phospho, not more r	0,016
Sulfur, not more	0,016
Chrome, not more	0,3
Nickel, not more	0,12

2.3 Chemical composition of plating:

Element	Mass content, %
Copper, not less	97,0
Tin, not more	3,0

2.4 Anticorrosive coating:

Hydrocarbon resin, g/kg, not more	0,2

3 Types of danger and conditions for their occurrence
3.1 Classification EC:
According to Directive 1999/45/EC this product is not classified as dangerous.
3.2 Hazards for people and environment: not hazard.
3.3 Inflammability hazard:
Minor risk of ignition exists in case of product exposure to open flame.
3.4 Potential health hazard

Influence:	Measures:
Inhalation	Excluded
Contact with skin	Use knitted gloves
Contact with eyes	Use protective glasses

4 First aid measures
No special measures are required for this product.

5 Fire prevention measures

Special methods:	Material is nonflammable
Specific types of hazards:	None

6 Measures to be taken in a case of leakage

6.1 Personal protection:	Excluded
6.2 Environment protection	Excluded
6.3 Methods for cleaning / absorption/neutralization	Excluded

7 Handling and storage
7.1 Handling:

Safe handling measures	none
Flame and explosion safety	none

7.2 Storage

Requirements for storage	Protect from contact with humidity, acids and other corrosive substances.

8 Правила и меры по обеспечению безопасности пользователя

8.1 Technical measures: During welding, cutting, grinding and annealing of bronzed bead wire dust, smoke, dirt can appear and it is necessary to exhaust them.

8.2 Maximum permissible concentration of substances: GOST 12.1.005-88 «General hygiene and sanitary conditions for air in working area»

Substance name	**Maximum permissible concentration (mg/m^3)**
Welding aerosol	6,0
Manganese oxide	0,2
Carbon oxide	20
Nitrogen oxide	2,0
Copper	1,0
Dust containing silicon (above 10 %)	2,0
Chromium	0,01
Nickel	0,05

8.3 Personal protective equipment

Breathing mask

During welding, cutting, grinding and annealing of bronzed bead wire it is necessary to use breathing mask corresponding to the level of environmental contamination and recommended for use by Institute of labor and health protection, if dust and smoke amount is not regulated by ventilation system.

Hands protection

As bronzed bead wire has high elasticity, in order to avoid pricking by the wire it is required to use protective gloves during its unpacking and handling.

Eyes protection

All works should be done in protective glasses.

9 Chemical and mechanical properties

Physical state:	solid
Color:	bronze
Smell:	none
pH:	not applicable
Melting temperature:	1538-1704 °C (2800-3100 ° F)
Ignition temperature:	not applicable
Explosive properties:	not applicable
Solubility in water:	insoluble
Specific density:	7,8 kg/dm^3

10 Stability and chemical activity

In normal environmental conditions bronzed bead wire is stable and poses no hazard of ignition or explosion. It should be protected from contacts with moisture, acids and other corrosive substances.

In case of contact with nitrogen acids nitrogen oxides can be formed. (Maximum permissible concentration of nitrogen dioxide is – 5,7 mg/m^3, nitrogen oxide – 183 mg/m^3).

Decomposition products: ferric oxide, copper oxide, metal evaporation at very high temperatures.

Wire can leave light-green deposit consisting of copper carbonate and sulphate with different composition. That deposit can be hazard if swallowed and can cause irritation in case of contact with skin, eyes and respiratory tract.

11 Toxicity

There is no information about toxicity of the product.

Inhalation of fumes during welding, cutting, grinding and annealing of bronzed bead wire without breathing mask in the absence of ventilation system can cause irritation of eyes and respiratory tract.

People with sensitive skin in case of long or repeated contact with wire theoretically can have irritation on skin but there were no description of such cases in special literature.

12 Influence on environment

In case of corresponding application, storage and utilization of bronzed bead wire it is considered to be safe product.

This product is stable and in normal conditions does not decompose.

13 Utilization and waste disposal

Waste disposal should be done in accordance with regulations of customer's country.

Spools for bronzed bead wire are property of OJSC "BSW - management company of "BMC" holding" and have to be returned to the supplier.

14 Transportation rules

In case of transportation (by sea, by land, by air) in accordance with international rules product pose no hazard.

According to criteria of European Directive 67/548/EEC and its subsequent appendixes, marking is not required.

15 Standard documentation.

This product is not classified as a hazardous in accordance with Directive Директивой 1999/45/EC.
Bronzed bead wire is manufactured article (finished product) and not substance or medium, according to Directive 67/548/EEC and its subsequent revisions.

16 Additional information.

- This document contains safety, health, sanitary and environment information and is meant for people who work with bronzed bead wire due to their occupation.

This information is based on our current knowledge and may be used for precise fulfillment of safety measures while using bronzed bead wire.

The information provided in this document does not guarantee quality parameters of the product.

OJSC "BSW - management company of "BMC" holding" bears no responsibility for incorrect use of bronzed bead wire and/or this information.

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