

**1 Material identification and enterprise details**

**1.1 Commercial name:** steel cord

**1.2 Application:** for reinforcement of tires and other mechanical rubber products

**1.3 Producer / Supplier:** Open Joint Stock Company «Byelorussian Steel Works- management company of “Byelorussian Metallurgical company” holding»  
37 Promyshlennaya st.,  
247210 Zhlobin, Gomel Region,  
Republic of Belarus  
Tel.: + 375 (2334) 2-29-93  
Fax: + 375 (2334) 2-42-61

**2 Composition / Information on ingredients:**

**2.1 General description:** Steel cord – twisted product formed of steel brass-plated wire.

**2.2 Chemical composition of steel for steel cord production:**

Element	Percentage, %
Iron, min.	97,0
Carbon, max	1,0
Manganese, max.	1,0
Silicon, max.	0,5
Chromium, max.	0,30
Phosphorus	0,010-0,015
Sulfur	0,010-0,015

Such elements as nickel, chromium, copper are also present in the product in percentage not exceeding 0,05 % each.

**3 Possible harmful factors:**

**3.1 EC classification:**

This product is not included into the group of harmful substances acc. EC Directive 1999/45/EC.

**3.2 Special harm to people and environment:** None.

**3.3 Emergency safety:**

Insignificant danger of product inflammation exists if it is exposed to open fire.

**3.4 Appearance:** Hard material.

**3.5 Odor:** None.

**3.6 Potential harm to health**

**Influence:**

Inhalation  
Skin protection  
Eyes protection

**Measures:**

excluded  
Knitted gloves to protect hands  
Protective goggles

**4 First aid**

No special procedures are required for this product.

**5 Fire safety**

Special influence: The material is non-combustible  
Special danger: None.

**6 Protective measures in case of incidental spillage or leakage**

**6.1 Personal safety measures:** Not required  
**6.2 Environmental protection:** Not required  
**6.3 Methods of cleaning / absorption / neutralization:** Not required

**7 Handling and storage requirements**

**7.1 Handling:**

Safety handling: Not determined  
Explosion and fire safety: Not determined

**7.2 Storage**

Storage requirements: Avoid exposure to moisture, acid and other corrosive substances. Store carton-packed products far from ignition sources.

**8 User's safety rules and measures****8.1 Technical measures:**

Small flying particles produced during welding, cutting, grinding and annealing of steel cord can cause injury of eyes.

**8.2 Maximum allowable concentration**

GOST 12.1.005-88 «General health requirements of working air »

**Substance description****MAC, (mg/m<sup>3</sup>)**

Welding spray	6,0
Manganese oxide	0,2
Carbon oxide	20
Nitric oxide	2,0
Zinc	1,0
Copper	1,0
Dust with silicon content (over 10 %)	2,0
Chromium	0,01
Nickel	0,05

**8.3 Personal protection equipment****Protection of hands**

It is necessary to put on gloves while handling steel cord.

**Protection of eyes**

Goggles should be used while doing all types of work with steel cord.

**9 Chemical and physical properties**

Physical state:	hard
Colour:	goldish
Odor:	none
pH:	n/a
Melting temperature:	1538-1704°C (2800-3100°F)
Fire temperature:	n/a
Explosive properties:	n/a
Water solubility:	insoluble
Specific density:	7,85 kg/dm <sup>3</sup>

**10 Stability and chemical activity**

In normal environment steel cord is a stable product and is not dangerous from the point of view of inflammation or explosion.

It is required to avoid contact with moisture, acid and other substances evoking corrosion of metal.

**11 Toxicity**

There are no product toxicity data available.

Inhalation of smoke while welding, cutting, grinding or steel cord annealing without ventilation and a breather, may irritate eyes and respiratory apparatus.

If people with skin sensitive to certain components have a long and frequent contact with steel cord, theoretically their skin may be irritated, but there are no references to such cases in special literature.

**12 Environmental influence**

When used, stored and utilized in a proper way, steel cord is a safe product.

In normal state steel cord is stable and practically does not decompose.

**13 Utilization and burial of wastes**

Utilization should be in accordance with the law of the user's country.

Containers for steel cord supplies (steel spools, plastic pallets and separators) are property of OJSC «BSW- management company of "BMC" holding» and should be returned in the producer's packaging according to a supply contract.

**14 Rules of transportation**

This product is not dangerous during international transportation (by land, by sea, by air).

In accordance with the criteria of EC Directive 67/548/EEC and corresponding annexes marking is not required.

**15 Normative information:**

This MSDS is made according REACH - Position (EU) № 1907/2006.

This product is not included into the classification of harmful substances in accordance with Directive 1999/45/EC.

Tire cord is a product (finished product) but not substance or means in accordance with Directive 67/548/EEC and subsequent amendments.

**16 Additional information**

In the quality certificates.

This document contains safety, health, sanitary and environment information and is meant for people who work steel cord due to their occupation.

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

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 steel cord and/or this information.

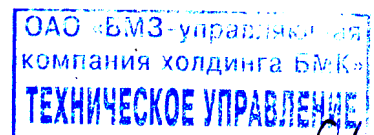
Deputy Chief of Technical department

A. Krautsou

Coordinated with:

Deputy chief engineer on LP Dpt, IS Dpt and environment protection department

V.V. Efimenko



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