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| Issued on: 08.2011 | Revised on: 04.2014 | Revision: 02 |
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| Designation of substance and/or preparation, company name | |
|---|---|
| Trade name | TMX Round Tools |
| Use of substance / preparation | Tools for the processing of different materials |
| Manufacturer / Supplier | TMX by Toolmex |
| Street / POB | 34 Talbot Road |
| Country code / ZIP code / Town | Northborough, MA 01532 |
| Technical information contact | support@toolmex.com |
| Phone / Fax / Email | +1-508-653-8897 / +1-508-653-5110 / 844-869-8665 (844-TMX-TOOL) support@toolmex.com |
| Emergency information | +1-508-653-8897 / 844-869-8665 (844-TMX-TOOL) |

MATERIAL SAFETY DATA SHEET

1 Potential Hazards

| | |
|--|----------------|
| Special hazard warnings for people and the environment | Not applicable |
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| Additional danger warning for persons and the environment: | HSS High Speed Steel The Alloyed Steels of our tools may contain Manganese, Tungsten, Aluminum, Copper, Niobium, Titanium and other substances that are rated as non-hazardous materials, or that are below the threshold value pursuant to the EU directive 1999/45/ or where no recognized limit value applies according to the EU directives. In the form the tools figured under no. 1 are marketed, there are no health hazard if they are inhaled, swallowed or come into contact with the skin. The alloying elements listed under No. 3 are firmly combined in the metallic structure of the workpiece material |
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2 Composition / Information on ingredients

Chemical characterization:

Hazardous ingredients:

| Substance: | CAS-No. | EINECS – No. | Range of concentration (weight amount in %) | Classification |
|------------|-----------|--------------|---|----------------|
| Nickel | 7440-02-0 | 231-111-4 | < 0.5% | R 40, R43 |
| Cobalt 1 | 7440-48-4 | 231-158-0 | < 12% | R 42/43, R53 |
| Chromium | 7440-47-3 | 231-157-5 | < 5% | |
| Molybdenum | 7439-98-7 | 231-107-2 | < 10% | |
| Manganese | 7439-96-5 | 231-105-1 | < 1% | |
| Vanadium | 7440-62-2 | 231-171-1 | < 6.5% | |
| Tungsten | 7440-33-7 | 231-143-9 | < 12% | |

| 3 Occupational exposure limits | | | |
|--|--|--------------|----------------|
| Substance | CAS – No. | EINECS – No. | MAK/TRK mg/ m3 |
| Cobalt | 7440-48-4 | 231-158-0 | 0.1 |
| 4 First aid measures | | | |
| General information | Workplace hygiene: No eating, no drinking, no smoking in the work area. Thoroughly wash your hands before eating, drinking or smoking | | |
| In case of inhalation | In case of inhalation of aerosols, move affected person into fresh air | | |
| In case of skin contact | Flush with water using mild cleaning agent | | |
| In case of eye contact | In case of eye irritation, rinse with plenty of water. Consult a physician if the skin irritation persists | | |
| In case of ingestion | Not Applicable | | |
| 5 Fire-fighting measures | | | |
| Suitable extinguishing media | Non-combustible product | | |
| Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases | None | | |
| Special protective equipment | Not Applicable | | |
| 6 Accidental release measures | | | |
| Environmental precautions | No special measures required | | |
| Methods for cleaning up | Not Applicable | | |
| 7 Additional information | | | |
| Advice on safe handling | When it comes to thermal treatment and/or mechanical processing, removal by suction at the machine and/or at the workstation; ventilation measures in general. Please observe the occupational safety regulations.(Welding, cutting and similar methods) and the technical rules for hazardous substances TRGS 900 (threshold limit values in the air, at the workplace) | | |
| Precautions against fire and explosion | No special requirements | | |

| 8 Exposure controls/ Personal protection | |
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| Occupational exposure limits resp. biological occupational exposure limits | |
| Exposure values | |
| <p>There are no workplace-related limits for the different Steel grades of round tools under item 1; however, limit values are to be observed when it comes to some elements contained in those Steels and/or their compounds. For your guidance, please see the threshold limit values regarding the aerosols created during their application. The information given in the respective current lists of hazardous substances accident insurances institutions for the industrial sector and the relevant Technical Rules for hazardous substances (TRGS) 900, 901 and 905 shall prevail.</p> | |
| Preventive measures | |
| <p>During the mechanical processing (e.g. milling, turning, boring, drilling, thread cutting operations) aerosols can be produced whose components are subject to the limit value monitoring. Observing the limits shall be ensured by suitable workplace ventilation and extraction systems</p> | |
| Hand protection | |
| Glove material: | Dependant on the respective machining process |
| Coat thickness (mm): | – |
| Breakthrough time (min): | – |
| Eye protection | |
| If required, use safety goggles depending on the process application | |
| 9 Physical and chemical properties | |
| Appearance | |
| Physical state: | Solid |
| Color: | Silver grey metallic, from matt black to high gloss finished, dependant on the tool design |
| Odor: | Odorless |
| Safety relevant data | |
| Danger of explosion: | No |
| Lower explosion limit: | – |
| Upper explosion limit: | – |
| Melting point/range: | 1,500 – 1,600 °C |
| Density: | 8.5 – 9 g/cm ³ |
| Flow time: | |
| Water solubility: | No |
| pH value: | Not Applicable |
| Boiling temperature/boiling range: | – |
| Flash point: | Not Applicable |
| Ignition temperature: | – |

| 10 Stability and reactivity | | |
|---|--|---|
| Conditions to be avoided | The substance is stable under normal conditions | |
| Substances to be avoided | Avoid contact with strong acids | |
| Hazardous decomposition products | Stable and non-reactive under normal conditions | |
| 11 Toxicological information | | |
| Toxicity tests | | |
| Exposure Limits No data available | | |
| Acute toxicity | | |
| Inhalation No data available | | |
| Skin contact According to the occupational health experience, no sensitization is known when handling Steel products as described under number 1, with the usual skin contact | | |
| Ingestion No data available | | |
| Eye contact Can lead to irritant effects on the eyes | | |
| Chronic toxicity | | |
| Inhalation No data available | | |
| 12 Ecological information | | |
| Ecotoxicity – Not applicable | | |
| 13 Disposal considerations | | |
| 13.1 | Designation | Alloyed Steel scraps |
| 13.2 | Recommendation for unused substance/ preparation | Return to the Steel producer through the scrap trade |
| 13.3 | Recommendation for unused substance/scrap/preparation | Return to the Steel producer through the trade |
| 13.4 | Disposal of packaging materials | According to the legal requirements |
| Waste codes according to the waste catalogue ordinance (AVV) | | |
| 12 01 01 | Iron filings and turning chips | |

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| 14 Transport information | |
| Land transport ADR / RID | |
| Classification: No dangerous transportation good pursuant to the regulations on carriage of dangerous goods | |
| Class: | – |
| Hazard number: | – |
| UN-No: | – |
| Classification code: | – |
| 15 Regulatory information | |
| Chemical safety assessment | |
| – | |
| Labeling according to EC regulations | |
| The tools marketed in solid form, are no health or environment hazard due to their physiochemical properties. Therefore, they are not subject to the labeling requirements according to the guidelines 1999/45/EG and 67/548/EEC | |
| No hazard(ous) components for labeling: | |
| R-phrases: | 40: Suspected of causing cancer 42/43: Possible sensitization due to inhalation and skin contact 43: Possible sensitization due to skin contact 53: Possible detrimental effects on waters, in the long run |
| S-phrases: | 22: Avoid inhaling dust 24: Avoid skin contact 36: Suitable protective clothing is required at work 37: Wear suitable protection gloves 61: Any release to the environment must be prevented Ask for special instructions/consult the safety data sheet |
| Explanation | |
| The information given in the present material safety data sheet is based on our current knowledge and experience. The material safety data sheet describes the products in terms of safety requirements. The information is not quality assurance | |
| National regulations | |
| Water hazard class | |
| Class: | WGK 0 as solid |
| Technical instructions Air | |
| Sec.5.2.2, class II | |
| Hazardous incident regulations | |
| Not listed in the annexes | |
| Solvent regulations (31) | |
| Employment restrictions: None | |

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| 16 Additional information | |
| Applicable EC guidelines | |
| Guidelines 91/155/EEC | |
| Restrictions on use, recommended by the manufacturer: – | |
| R-phrases referred to in the sections 2 and 3: – | |
| 17 Other information /US | |
| <p>Users Responsibilities This Material Safety Data Sheet provides information consistent with recommended applications of these products and anticipated activities involving the product. It is the user's responsibility to identify and protect against health and safety hazards presented by modification of cemented Carbide powders and products after manufacture. Individuals handling cemented Carbide powders should be informed of all relevant hazards and recommended safety precautions, and should have access to the information contained in this MSDS</p> | |
| <p>Disclaimer The information contained herein is based upon data provided by manufacturers and suppliers of raw materials used in the manufacture of cemented Carbide powders. The information is offered in good faith as accurate and correct, but no representations, guarantees, or warranties of any kind are made as to its accuracy or completeness, suitability for particular applications, hazards connected with the use of the powder, or the results to be obtained from the use thereof. User assumes all risk and liability of any use or handling of any material beyond Toolmex Industrial Solutions control. Variations in methods, conditions, equipment used to store, handle, or process the material, and hazards connected with the use of the powder are solely the responsibility of the user and remain at its sole discretion</p> <p>This MSDS is intended to be used solely for the purpose of satisfying informational requests made pursuant to Title 29 of the Code of Federal Regulations, Section 1910.1200 et seq. It is not intended to pre-empt, replace, or expand the terms contained in Toolmex Industrial Solutions Conditions of Sale. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe workplace, to examine all aspects of its operation, and to determine if or where precautions, in addition to those described herein, are required. This information may not be valid for these powders when manufactured with alternate materials meeting the special requirements of a particular user</p> | |
| <p>Company compiling the data sheet:</p> | <p>Department – Toolmex Sales and Marketing Toolmex QA Lab Toolmex Industrial Solutions 34 Talbot Road, Northborough, MA 01532 +1 508 653 8897 / 844-869-8665 (844-TMX-TOOL) support@toolmex.com</p> |