

SECTION 1: IDENTIFICATION
1.1. Product Identifier

Product Form: Article

Product Name: k HSS Tools

Synonyms: M7 & M42 HSS Cutting Tools

1.2. Intended Use of the Product

Use of the Substance/Mixture: For professional use only

1.3. Name, Address, and Telephone of the Responsible Party Company

k u

1.4. Emergency Telephone Number No additional information available

SECTION 2: HAZARDS IDENTIFICATION
2.1. Classification of the Substance or Mixture
Classification (GHS-US)

Not classified

2.2. Label Elements
GHS-US Labeling

No labeling applicable

2.3. Other Hazards

During normal operation and usage, this product does not present inhalation, ingestion, or other chemical hazards. However, operations such as grinding, cutting, burning, and welding may release dusts, fumes, or vapors which may present health hazards. The health hazards described below relate to these non-routine operations, as well as exposure to component materials. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Short term overexposure to the dust, fumes, and/or oxides of certain components of steel products may cause irritation of the eyes, nose and throat; or, may result in metal fume fever characterized by a metallic or sweet taste, dryness and irritation of the throat, wheezing, discoloration of the tongue, and flu-like symptoms.

Chronic, excessive, and prolonged overexposure to the dust, fumes, and/or oxides of certain components of steel products may result in chronic interstitial pneumonitis, discoloration of the skin and hair, allergic bronchitis, neoplasms, and/or loss of coordination/balance.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Iron oxide (Fe ₂ O ₃)	(CAS No) 1309-37-1	84.4	Not classified
Molybdenum	(CAS No) 7439-98-7	<= 9.8	Comb. Dust, H232
Cobalt	(CAS No) 7440-48-4	<= 8.3	Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:dust,mist), H330 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Carc. 2, H351 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Chromium	(CAS No) 7440-47-3	4.05	Comb. Dust, H232

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Tungsten	(CAS No) 7440-33-7	1.7	Flam. Sol. 1, H228 Self-heat. 2, H252
Vanadium pentoxide	(CAS No) 1314-62-1	1.2	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 4 (Inhalation:dust,mist), H332 Carc. 2, H351
Carbon	(CAS No) 7440-44-0	1.1	Comb. Dust, H232

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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

Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/Injuries After Inhalation: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath.

Symptoms/Injuries After Skin Contact: Dust may cause irritation in skin folds or by contact in combination with tight clothing. May cause an allergic reaction in sensitive individuals.

Symptoms/Injuries After Eye Contact: Eye contact with dust may cause mechanical irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive. Reacts with strong acids to generate explosive hydrogen gas.

Reactivity: May form explosive hydrogen gas on contact with acids.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Do not breathe fumes or vapors from fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Eliminate ignition sources. Ventilate area.

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6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8. Transfer spilled material to a suitable container for disposal.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Use care during processing to minimize generation of dust. Avoid dust production that exceeds permissible exposure limits.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers.

7.3. Specific End Use(s) For professional use only

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Cobalt (7440-48-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.02 mg/m ³
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ (dust and fume)
USA IDLH	US IDLH (mg/m ³)	20 mg/m ³ (dust and fume)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.1 mg/m ³ (dust and fume)
Chromium (7440-47-3)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.5 mg/m ³
USA IDLH	US IDLH (mg/m ³)	250 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³
Iron oxide (Fe ₂ O ₃) (1309-37-1)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³ (dust and fume)
USA IDLH	US IDLH (mg/m ³)	2500 mg/m ³ (dust and fume)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³ (fume) 15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Molybdenum (7439-98-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
USA IDLH	US IDLH (mg/m ³)	5000 mg/m ³
Vanadium pentoxide (1314-62-1)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³ (inhalable fraction)
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	0.05 mg/m ³ (dust and fume)
USA IDLH	US IDLH (mg/m ³)	35 mg/m ³ (dust and fume)
Tungsten (7440-33-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³

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USA ACGIH	ACGIH STEL (mg/m ³)	10 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³

8.2. Exposure Controls

Appropriate Engineering Controls : Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. Ensure all national/local regulations are observed.

Personal Protective Equipment : Not generally required. The use of personal protective equipment may be necessary as conditions warrant.

Materials for Protective Clothing : Chemically resistant materials and fabrics.

Hand Protection : Chemically resistant gloves are recommended, but not required.

Eye Protection : Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Solid silver metal; Various shapes
Odor	: Odorless
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: ≈ 1371 °C (2499.80 °F)
Freezing Point	: No data available
Boiling Point	: > 2760 °C (5000 °F)
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: 7.8 - 8.2 at 15.56 °C (60 °F) (water=1)
Solubility	: Insoluble
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** May form explosive hydrogen gas on contact with acids.
- 10.2. Chemical Stability:** Stable at standard temperature and pressure.
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures.
- 10.5. Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.
- 10.6. Hazardous Decomposition Products:** Carbon oxides (CO, CO₂). Metal oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Carbon (7440-44-0)	
LD50 Oral Rat	> 10000 mg/kg

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Cobalt (7440-48-4)	
LD50 Oral Rat	215.9 - 1140 mg/kg
LC50 Inhalation Rat	> 10 mg/l (Exposure time: 1 h)
Chromium (7440-47-3)	
LD50 Oral Rat	> 5000 mg/kg
Iron oxide (Fe₂O₃) (1309-37-1)	
LD50 Oral Rat	> 10000 mg/kg
Molybdenum (7439-98-7)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
Vanadium pentoxide (1314-62-1)	
LD50 Oral Rat	10 mg/kg
LD50 Dermal Rabbit	50 mg/kg
LC50 Inhalation Rat	4.29 mg/l/4h

Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified

Cobalt (7440-48-4)	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Chromium (7440-47-3)	
IARC group	3
Iron oxide (Fe₂O₃) (1309-37-1)	
IARC group	3
Vanadium pentoxide (1314-62-1)	
IARC group	2B
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath.

Symptoms/Injuries After Skin Contact: Dust may cause irritation in skin folds or by contact in combination with tight clothing. May cause an allergic reaction in sensitive individuals.

Symptoms/Injuries After Eye Contact: Eye contact with dust may cause mechanical irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity No additional information available

12.2. Persistence and Degradability

HSS Tools	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

HSS Tools	
Bioaccumulative Potential	Not established.
Cobalt (7440-48-4)	
BCF fish 1	(no bioaccumulation)

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12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Carbon (7440-44-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Cobalt (7440-48-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	0.1 %
Chromium (7440-47-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %
Iron oxide (Fe₂O₃) (1309-37-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Molybdenum (7439-98-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Vanadium pentoxide (1314-62-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
SARA Section 302 Threshold Planning Quantity (TPQ)	≤ 10000
Tungsten (7440-33-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2 US State Regulations

Cobalt (7440-48-4)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Vanadium pentoxide (1314-62-1)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Cobalt (7440-48-4)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Chromium (7440-47-3)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances	
U.S. - Pennsylvania - RTK (Right to Know) List	

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Iron oxide (Fe₂O₃) (1309-37-1)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Molybdenum (7439-98-7)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Vanadium pentoxide (1314-62-1)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Tungsten (7440-33-7)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 05/01/2015
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Flam. Sol. 1	Flammable solids Category 1
Repr. 2	Reproductive toxicity Category 2
Resp. Sens. 1B	Respiratory sensitisation Category 1B
Self-heat. 2	Self-heating substances and mixtures Category 2
Skin Sens. 1	Skin sensitization Category 1
H228	Flammable solid
H232	May form combustible dust concentrations in air
H252	Self-heating in large quantities; may catch fire
H300	Fatal if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)