Safety Data Sheet

Issuing Date 2015-05-15 **Revision Date** 2015-10-12 **Revision Number** 1

1. Identification of the substance/preparation and of the Company/undertaking

Product Identifier

Product Type Welding powder
Product name **Stelcar 9135 / JK135 powder**
Product code KSPN1020-1

Type Powder

Other means of identification

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use Industrial Manufacturing (all), Service life, cobalt and/or nickel containing alloys, steels, prefabricated parts and tools, Industrial use, Professional use, Wear and Corrosion Resistant Welding Consumable, Wear and Corrosion Resistant Components, Metallurgical Products, For use in industrial installations only

Uses advised against Consumer use.

Details of the Supplier of the Safety Data Sheet

Emergency Telephone Number

Emergency Telephone Number CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

NRC (National Response Center) USA, Poison Centres +1 800 222 1222
Canada, IWK Regional Poison Center +1 902 470 8161 or 1 800 565 8161

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2. Hazards Identification

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

Label Elements

Emergency Overview

DANGER

Hazard Statements
May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention Specific measures (see .? on this label) Specific treatment is urgent (see supplemental first aid instructions on this label) **Skin** Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. **Inhalation** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. **Ingestion** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Appearance metallic Powder **Physical State @20°C** solid **Odor** none

Hazards not otherwise classified (HNOC)

WARNING May cause sensitization by skin contact Vapors may be irritating to eyes, nose, throat, and lungs Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Welding Hazards CAUTION. Welding will create fumes which may be toxic. If welding is performed on plated or coated materials such as galvanised or painted steel, excessive fume may be produced which contains additional hazardous components, and may result in metal fume fever or other health effects. Arc Rays can injur eyes and burn skin. Electric shock can kill. The product and work surface will be hot during and after welding.

Other Hazards May cause long lasting harmful effects to aquatic life.

Unknown Aquatic Toxicty 4.725% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Chemical name	Formula	CAS-No	weight-%	GHS Classification
Chromium Carbide	Cr_3C_2	12012-35-0	> 50	Not classified
Nickel	Ni	7440-02-0	10 - 25	STOT RE 1 (H372) Resp. tract, inhalation Carc. 2 (H351) Inhalation Skin Sens. 1 (H317) S,7 Aquatic Chronic 3 (H412)
Tungsten	W	7440-33-7	1 - 2.5	Not classified

* The exact percentage (concentration) of composition has been withheld as a trade secret.

NOTE	This product may contain additional substances with a content of less than 0.1 % per substance, which are not listed. May contain additional substances in a range up to 2 % which are not classified hazardous or may not contribute to the products overall classification.
Full text of H-Statements referred to under sections 2 and 3	H317 - May cause an allergic skin reaction H351 - Suspected of causing cancer if inhaled H372 - Causes damage to the following organs through prolonged or repeated exposure if inhaled: Lungs H412 - Harmful to aquatic life with long lasting effects

4. First aid measures

FIRST AID MEASURES

General advice	Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Eye Contact	Keep eye wide open while rinsing. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash off immediately with soap and plenty of water.
Inhalation	Move to fresh air. Immediate medical attention is required. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Rinse mouth.
Self-protection of the first aider	Wear suitable gloves. Self-protection of the first aider.

Most important symptoms and effects, both acute and delayed

4.2. Most important symptoms and effects, both acute and delayed	CNS and psychiatric effects, Parkinson-like symptoms. Languor, sleepiness and weakness in legs. A stolid masklike appearance of face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking and findings in more advanced cases. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically. May cause sensitization by inhalation and skin contact. May cause sensitization of susceptible persons.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Extinguishing media which must not be used for safety reasons	none.
Specific hazards arising from the	Non-combustible, substance itself does not burn but may decompose upon heating to

chemical	produce corrosive and/or toxic fumes Thermal decomposition can lead to release of irritating and toxic gases and vapors May cause sensitization by inhalation and skin contact Carbon oxides
Protective equipment and precautions for firefighters	Use personal protective equipment as required In the event of fire, wear self-contained breathing apparatus

Component Information

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	See Section 12 for additional Ecological Information.
Environmental precautions	Avoid release to the environment.
Methods and material for containment and cleaning up	Pick up and transfer to properly labeled containers. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust.

7. Handling and Storage

Precautions for safe handling	Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Use only with adequate ventilation. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Conditions for safe storage, including any incompatibilities

Storage	Keep in properly labeled containers. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a cool, well-ventilated place.
Incompatible products	None known based on information supplied.
Specific use(s)	Welding. Restricted to professional users. For use in industrial installations only.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Guidelines Exposure Guidelines

Chemical name	USA - ACGIH TLV	USA - OSHA PEL	USA - NIOSH IDLH	Argentina	Brazil
Nickel	1.5 mg/m³ TWA (inhalable fraction)	1 mg/m³ TWA	10 mg/m³ IDLH	TWA: 1.5 mg/m³	-
Tungsten	10 mg/m³ STEL 5 mg/m³ TWA 3 mg/m³ TWA (respirable particulate matter, as W); TLV basis: lung damage	-	-	TWA: 5 mg/m³ STEL: 10 mg/m³	-
Chemical name	**Canada - Alberta**	**Canada - British Columbia**	**Canada - Ontario**	**Canada - Quebec**	**Canada - Manitoba**
Nickel	1.5 mg/m³ TWA	0.05 mg/m³ TWA	1 mg/m³ TWA (inhalable)	1 mg/m³ TWAEV	1.5 mg/m³ TWA (inhalable fraction)
Tungsten	5 mg/m³ TWA 10 mg/m³ STEL	5 mg/m³ TWA 10 mg/m³ STEL	5 mg/m³ TWA 10 mg/m³ STEL	-	5 mg/m³ TWA 5 mg/m³ TWA (as W) 10 mg/m³ STEL
Chemical name	**Chile**	**Colombia - OEL**	**Mexico OEL (TWA)**	**Nicaragua**	**Peru**
Nickel	TWA: 0.8 mg/m³	1.5 mg/m³ TWA (inhalable fraction)	1 mg/m³ TWA LMPE-PPT	1.5 mg/m³ TWA (inhalable fraction)	1.5 mg/m³ TWA
Tungsten	-	5 mg/m³ TWA 5 mg/m³	-	5 mg/m³ TWA 5 mg/m³	5 mg/m³ TWA

		TWA (as W) 10 mg/m³ STEL 10 mg/m³ STEL (as W)		TWA (as W) 10 mg/m³ STEL	
Chemical name	**Uruguay**	**Venezuela**	**...**	**...**	**...**
Chromium Carbide	-	TWA: 0.5 mg/m³	-	-	-
Nickel	1.5 mg/m³ TWA (inhalable fraction)	TWA: 1.5 mg/m³	-	-	-
Tungsten	10 mg/m³ STEL 5 mg/m³ TWA	STEL: 10 mg/m³ TWA: 5 mg/m³	-	-	-

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Hexavalent Chrome may be formed during welding.

Chemical name	Derived No Effect Level (DNEL)	Predicted No Effect Concentration (PNEC)
Nickel	0.05 mg/m³ local inhalation; 0.05 mg/m³ systemic inhalation	0.0035-0.0218 mg/l freshwater; 0.0023 mg/l marine water
Tungsten	5.8 mg/m³ systemic inhalation	Tungsten 0.338 mg/l freshwater; 0.0338 mg/l marine water; 2.17 mg/kg soil; 11 mg/kg food

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles).

Skin Protection Wear impervious gloves and/or clothing if needed to prevent contact with the material.

Hand Protection Protective gloves. The product and work surface will be hot during and after welding. Ensure adequate protection is in place to stop individuals from burning themselves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. If exposure limits are likely to be exceeded or if irritation or other symptoms are experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn.

Hygiene Measures Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing. Keep working clothes separately.

Biological standards

Chemical name	USA ACGIH -BEI	Argentina - Occupational Exposure Limits - Biological Exposure Indices (BEIs)	Chile - Occupational Exposure Limits - Biological Exposure Indices (BEIs)
Nickel	-	<5 µg/g Creatinine urine Ni	-

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State @20°C solid
Odor none
Appearance metallic, Powder
Melting point / melting range 965-1040 °C / 1770-1900 °F

flash point	not applicable	**Vapor Pressure**	not applicable
Vapor Density	not applicable	**Water solubility**	Insoluble in water
Autoignition temperature	N/A	**Dynamic viscosity**	solid
Density VALUE	8.44 g/cm3	**Explosive properties**	not applicable

9.2. Other information

VOC Content (%) Not Applicable

Component Information

Chemical name	Mol. Weight	Water Solub.	Vap. Press.	Vap. Dens.	pH Val.	Autoign. Temp.	Evap. Rate	Boil. Temp.
Nickel	58.69 g/mol	-	1 mmHg at 1810 °C	-	-	-	-	-
Tungsten	183.84 g/mol	-	0.00000001 hPa at 1700 °C	-	-	-	-	-
Chemical name	**Density VALUE**	**Melt. Temp.**	**Flash Point**	**Water Sol.**	**Bulk Dens.**	**Odor**	**State**	**color**
Nickel	8.9 g/cm3 at 25 °C	-	-	insoluble	-	-	-	-
Tungsten	19.3 g/cm3 at 20 °C	3422 °C	-	slightly soluble	2100 - 9000 kg/m³	-	-	-

10. Stability and Reactivity

Reactivity Stable under normal conditions

Chemical stability Stable under normal conditions.
Possibility of Hazardous Reactions None under normal processing.
Conditions to avoid Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.
incompatible materials Acids. Strong oxidizing agents.
Hazardous decomposition products Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

11. Toxicological Information

Information on likely routes of exposure

Inhalation May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye Contact Contact with eyes may cause irritation. Particulates may cause irritation due to mechanical abrasion. May cause eye irritation with susceptible persons.

Skin contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Prolonged contact may cause redness and irritation. Prolonged skin contact may defat the skin and produce dermatitis. May cause sensitization by skin contact.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
Nickel	>9000 mg/kg bw	Data waiving - Other Justification	NOAEC >=10.2 mgL air
Tungsten	LD50 >2000 mg/kg bw	LD50 >2000 mg/kg bw	LC50 >5.4 mg/L air

Information on toxicological effects

Chemical name	US ACGIH - Critical effects
Nickel	dermatitis; pneumoconiosis
Tungsten	lower respiratory tract irritation

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Repeated exposure may cause skin dryness or cracking.

Sensitization May cause sensitization of susceptible persons.

MUTAGENIC EFFECTS None known.

Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical name	ACGIH	IARC	NTP: (National Toxicity Program)	OSHA
Nickel	A5 - Not Suspected as a Human Carcinogen	Nickel Compounds: Group 1 - Known Human Carcinogen - Nickel, Metalic & Alloy: Group 2B - Possible Human Carcinogen	Reasonably Anticipated To Be A Human Carcinogen (listed under Nickel compounds and metallic nickel) Present (nanoparticles)	Not Listed
Chemical name	**Chile**	**Argentina**	**Venezula**	**Peru**
Chromium Carbide	-	-	Present	-
Nickel	A1 - Confirmed Human Carcinogen	A5 - Not Suspected as a human carcinogen	Present	A1 - Confirmed Human Carcinogen
Chemical name	**Canada Alberta**	**Canada British Coloumbia**	**Canada Manitoba**	**Canada Quebec**
Nickel	-	IARC Category 2B - Possible Human Carcinogen	A5 Not Suspected as a Human Carcinogen	-

Developmental toxicity None known

Chronic toxicity Prolonged exposure may cause chronic effects. CNS and psychiatric effects, Parkinson-like symptoms. Languor, sleepiness and weakness in legs. A stolid masklike appearance of face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking and findings in more advanced cases. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Repeated or prolonged exposure may cause central nervous system damage.

Target organ effects blood, Eyes, Jaw, kidney, liver, Lungs, Nasal Cavities, respiratory system, Skin, Teeth.

Neurological effects Repeated or prolonged exposure may cause central nervous system damage. Prolonged or excessive exposure to manganese in dust or fume may cause irreversible central nervous system damage (Manganism). Symptoms resemble Parkinson's disease and include tremors, impaired speech, mask like face and impaired movement.

Numerical measures of toxicity No data available

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 732 mg/kg
ATEmix (dermal) 5 mg/kg
ATEmix (inhalation-gas) 10 mg/l

12. Ecological Information

12.1. Ecotoxicity 4.60000000000001% of the mixture consists of components(s) of unknown hazards to the

aquatic environment

12.2 Persistence and degradability Product/Substance is inorganic. not applicable.

12.3 Bioaccumulative potential No information available.

12.5 Results of PBT and vPvB assessment The components in this formulation do not meet the criteria for classification as PBT or vPvB

12.6 Other adverse effects

13. Disposal Considerations

Waste treatment methods
Waste from residues/unused products Should not be released into the environment.
Reuse or recycle.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

California Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Chromium Carbide	Toxic Corrosive Ignitable
Nickel	Toxic Ignitable

14. Transport Information

DOT Not regulated

Chemical name	U.S. - DOT Reportable Quantities	DOT Marine Pollutant	DOT Severe Marine pollutant
Nickel	100 lbs RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).); 45.4 kg RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).)	-	-

TDG Not regulated

MEX Not regulated

IMO / IMDG Not regulated

ICAO / IATA-DGR Not regulated

15. Regulatory Information

Chemical name	TSCA
Chromium Carbide	Present

Nickel	Present Added 2012
Tungsten	Present
Chemical name	**Bolivia - hazardous substances regulated under Bolivia's Environmental Regulations for the Industrial Manufacturing Sector**
Nickel	Present
Chemical name	**Chile - Chemical substances identified as dangerous to health by the Government of Chile**
Nickel	Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Chemical name	CAS-No	weight-%	SARA 313 - Threshold Values %
Chromium Carbide	12012-35-0	> 50	-
Nickel	7440-02-0	10 - 25	-
Tungsten	7440-33-7	1 - 2.5	-

SARA 311/312 Hazard Categories

Acute health hazard	yes
Chronic Health Hazard	yes
Fire Hazard	no
Sudden release of pressure hazard	no
Reactive Hazard	no

Clean Water Act This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel	Not Applicable	Present	Present	Not Applicable

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Nickel	100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)	-	100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

U.S. State Regulations

California Proposition 65 This product contains the following Proposition 65 chemicals:.

Chemical name	California - Proposition 65 - Carcinogens List	California - Proposition 65 - Developmental Toxicity	California - Proposition 65 - Reproductive Toxicity	California - 22 CCR - Toxic and Extremely Hazardous Carcinogenic Wastes
Nickel	carcinogen, 10/1/1989 (metallic)	-	-	-

California Prop. 65 . WARNING. This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm. Additional information available from:. www.P65Warnings.ca.gov.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nickel	sn 1341	Carcinogen; Extraordinarily hazardous	Environmental hazard; Special hazardous substance Present
Tungsten	sn 1959	Present	Present

CANADA

WHMIS Statement This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

Chemical name	WHMIS Classifications of Components
Nickel	D2A, D2B; B6, D2A (Raney)
Tungsten	Uncontrolled product according to WHMIS classification criteria

16. Other Information

Global Automotive Declarable Substance List Classifications

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Nickel	Declarable Substance (FI)	0.1 %

NFPA **Health hazard** 2 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** -

HMIS **Health hazard** 2 **Flammability** 0 **Physical hazards** 0 **Personal precautions** -

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Revision Note No information available

Disclaimer

Kennametal urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDS's obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

End of Safety Data Sheet