1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier
Product name: NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES
Synonym(s): KURT J. LESKER NICKEL-CHROMIUM • NICKEL-CHROMIUM

1.2 Uses and uses advised against
Use(s): INDUSTRIAL APPLICATIONS

1.3 Details of the supplier of the safety data sheet
Supplier name: DSTG EDINBURGH
Address: West Avenue, Edinburgh, SA, Australia, 5111
Telephone: (08) 7389 4269
Fax: Not supplied
Email: Not supplied
Website: Not supplied

1.4 Emergency telephone number(s)
Emergency: 13 11 26 (24 hrs 7 days)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
GHS Classification(s):
- Skin Sensitisation: Category 1
- Carcinogenicity: Category 2
- Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 1

2.2 Label elements
Signal word: DANGER
Pictograms:

Hazard statement(s)
H317: May cause an allergic skin reaction.
H351: Suspected of causing cancer.
H372: Causes damage to organs through prolonged or repeated exposure.

Prevention statement(s)
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response statement(s)
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P321: Specific treatment is advised - see first aid instructions.
P363: Wash contaminated clothing before reuse.

Storage statement(s)
P405: Store locked up.

Disposal statement(s)
Product name: NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES
P501

2.3 Other Hazards
No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS number</th>
<th>EC number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICKEL</td>
<td>7440-02-0</td>
<td>231-111-4</td>
<td>50 - 80%</td>
</tr>
<tr>
<td>CHROMIUM</td>
<td>7440-47-3</td>
<td>231-157-5</td>
<td>20 - 50%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye
If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation
If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin
If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion
For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities
No information provided.

4.2 Most important symptoms and effects, both acute and delayed
No information provided.

4.3 Immediate medical attention and special treatment needed
Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture
Non flammable. Molten material may explode in contact with water. May evolve nitrogen oxides, nickel carbonyl and hydrogen gas when heated to decomposition.

5.3 Advice for firefighters
No fire or explosion hazard exists.

5.4 Hazchem code
None allocated

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
If split, collect and reuse where possible.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.
Product name: NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. Ensure product is adequately labelled.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium Metal</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>0.5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Nickel, metal</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Nickel, soluble compounds (as Ni)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>0.1</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering Controls
Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Maintain dust / fume levels below the recommended exposure standard.

PPE

- **Eye/Face**: At high dust levels, wear dust-proof goggles.
- **Hand**: Wear leather or cotton gloves.
- **Body**: At high dust levels, wear coveralls.
- **Respiratory**: Where an inhalation risk exists, wear a Class P2 (Particulate) respirator. At high dust levels, wear a Class P3 (Particulate) respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- **Appearance**: SILVER OR GRAY METAL
- **Odour**: ODOURLESS
- **Odour Threshold**: NOT AVAILABLE
- **Flammability**: NON FLAMMABLE
- **Flash Point**: NOT RELEVANT
- **Boiling Point**: 5127°C
#CHEMICAL REPORT

**Product name**  
NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point</td>
<td>1455°C</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>pH</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>INSOLUBLE</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Upper Explosion Limit</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Lower Explosion Limit</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Oxidising Properties</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

## 9.2 Other information
No information provided.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity
Carefully review all information in sections 10.2 to 10.6.

### 10.2 Chemical stability
Stable under recommended conditions of storage.

### 10.3 Possibility of hazardous reactions
Polymerization is not expected to occur.

### 10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

### 10.5 Incompatible materials
Incompatible with acids (e.g. nitric acid), evolving flammable hydrogen gas. Dusts will react with oxidising agents (e.g. hypochlorites), acids and alkalis. If molten, will react explosively with water. Also incompatible with bromine pentafluoride, fluorine, ammonium nitrate, hydrazine, ammonia, performic acid, phosphorous, selenium, sulphur compounds, oxygen, carbon dioxide, magnesium silicate, organic solvents, aluminium, aluminium chloride, ethylene, p-dioxane, acids (e.g. nitric acid), wood and other combustible materials.

### 10.6 Hazardous decomposition products
May evolve nitrogen oxides, nickel carbonyl and hydrogen gas when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No information provided.</td>
</tr>
</tbody>
</table>

This report was compiled based on the SDS dated 21 Mar 2012.
12. ECOLOGICAL INFORMATION

12.1 Toxicity
No information provided.

12.2 Persistence and degradability
No information provided.

12.3 Bioaccumulative potential
No information provided.

12.4 Mobility in soil
No information provided.

12.5 Results of PBT and vPvB assessment
No information provided.

12.6 Other adverse effects
AQUATIC: Mobility of nickel is controlled by various sorbents which scavenge it from solution. In pristine environments, hydrous oxides of iron & manganese control its mobility via sorption & co-precipitation. In polluted environments, the most abundant organic material will keep nickel soluble. Nickel is one of the most mobile heavy metals in aquatic environments and can persist indefinitely in natural waters. It is toxic to plants at 50 - 200 ppm.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

<table>
<thead>
<tr>
<th>Waste disposal</th>
<th>Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dispose of in accordance with relevant local legislation.</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

<table>
<thead>
<tr>
<th>Land Transport (ADG)</th>
<th>Sea Transport (IMDG/IMO)</th>
<th>Air Transport (IATA/ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
</tbody>
</table>

14.1 UN number

14.2 UN proper shipping name

This report was compiled based on the SDS dated 21 Mar 2012
Product name  NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES

14.3 Transport hazard classes
DG Class  None Allocated  None Allocated  None Allocated
Subsidiary risk(s)  None Allocated  None Allocated  None Allocated

14.4 Packing group  None Allocated  None Allocated  None Allocated

14.5 Environmental hazards

14.6 Special precautions for user
Hazchem Code  None Allocated

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Poison schedule  A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Classifications  Carc. - Carcinogen  T - Toxic  Xi - Irritant

Safety phrases  S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

WHS regulatory information

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>Regulation</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHROMIUM</td>
<td>7440-47-3</td>
<td>Restricted Hazardous Chemicals</td>
<td>Chromium &amp; its compounds. For abrasive blasting &gt;0.5% (except as specified for wet blasting).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schedule 14 - Health Monitoring</td>
<td>Chromium (inorganic)</td>
</tr>
<tr>
<td>NICKEL</td>
<td>7440-02-0</td>
<td>Restricted Hazardous Chemicals</td>
<td>Nickel &amp; its compounds. For abrasive blasting &gt;0.1%.</td>
</tr>
</tbody>
</table>

Inventory listing(s)  AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.

15.2 Chemical safety assessment
No information provided.

16. OTHER INFORMATION

Additional information  BEFORE ADDING TO FURNACE: Ensure all water, grease, oil, chemical residues or ANY foreign material is removed before placing in furnace as contamination may cause explosion. Preheat material and keep dry before placing into furnace.
RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including:
NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES

frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Abbreviations
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS #: Chemical Abstract Service number - used to uniquely identify chemical compounds
- CNS: Central Nervous System
- EC No.: EC No - European Community Number
- EMS: Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
- GHS: Globally Harmonized System
- GTEPG: Group Text Emergency Procedure Guide
- IARC: International Agency for Research on Cancer
- LC50: Lethal Concentration, 50% / Median Lethal Concentration
- LD50: Lethal Dose, 50% / Median Lethal Dose
- mg/m³: Milligrams per Cubic Metre
- OEL: Occupational Exposure Limit
- pH: relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
- ppm: Parts Per Million
- STEL: Short-Term Exposure Limit
- STOT-RE: Specific target organ toxicity (repeated exposure)
- STOT-SE: Specific target organ toxicity (single exposure)
- SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
- SWA: Safe Work Australia
- TLV: Threshold Limit Value
- TWA: Time Weighted Average

Report Status
This ChemAlert report has been independently compiled by RMT’s scientific department utilising the original Safety Data Sheet (“SDS”) for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This ChemAlert report does not constitute the manufacturer’s original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this ChemAlert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this ChemAlert report.
NICKEL-CHROMIUM, (80/20, 70/30, 60/40, 50/50) PIECES

Prepared By
Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au

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End of Report