DATA SHEET MATERIAL SAFETY (MSDS)
WELDING ALLOYS QUALITIUM™
HARFACING ALLOYS MIC 11100

IDENTIFICATION OF WELDING

ALLOYS QUALITIUM ™, INC ..
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I. CHEMICAL

ALLOY MIC 11100	C	Mn	Si	Cr	Mo	Fe	Fluorides	Others
MN	1.0	15.0	1.0	3.5	-	Bal.	0.0-2.0	-
HM	0.4	15.0	0.8	15.0	-	Bal.	0.0-2.0	-
MB	0.1	2.5	0.8	1.3	-	Bal.	<1.0	-
C	0.2	2.0	1.0	3.4	-	Bal.	<1.0	-
44	2.5	1.5	1.2	9.5	1.5	Bal.	<1.0	0.4 Cu
HI	3.0	1.2	1.0	16.0	-	Bal.	<1.0	-
W	0.3	2.1	1.2	6.3	1.1	Bal.	<1.0	1.5 W
57-GW	0.5	2.0	1.2	5.5	-	Bal.	<1.0	-
58	0.6	0.6	0.6	8.0	-	Bal.	<1.0	-
58-GV	0.8	1.4	1.2	8.0	0.6	Bal.	<1.0	1.0 V, 5-8 TiO_2
TIC	1.8	2.0	1.5	7.0	1.4	Bal.	<1.0	5.0 Ti
CD	4.8	1.2	1.2	27.0	-	Bal.	<1.0	-
CR	6.5	1.2	1.2	28.0	-	Bal.	<1.0	-
62	2.5	0.5	0.7	7.0	0.7	Bal.	<1.0	1.0 V
HW	5.4	1.2	1.2	23.0	-	Bal.	<1.0	7.0 Cb
CHW	5.4	1.0	1.2	22.0	5.5	Bal.	<1.0	6.0 Cb, 1.0 V
SUGARMIC	3.0	1.0	1.0	15.0	-	Bal.	<1.0	-
105-S	0.4	3.0	1.5	4.5	0.6	Bal.	<1.0	0.1 V
420-S	0.3	1.0	0.6	12.5	-	Bal.	<1.0	-
423-S	0.1	1.2	0.5	13.5	1.1	Bal.	<1.0	2.5 Ni, 0.2 V, 0.2 Cb

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II. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients:

Important: This section covers the materials from which the product is manufactured. The fumes and gases produced during normal use of this product are covered in Section V. The term "hazardous" in "hazardous material" should be interpreted as a term required and defined in "OSHA" communication standard hazard or (current) 29 CFR-1910 to 1200 and does not necessarily imply the existence of danger. The chemicals or compounds or combinations reported by section 313 of "SARA" are marked by the symbol #.

Ingredient	% Weight	CAS No.	OSHA PEL (mg/m^3)	ACGIH TLV (mg/m^3)
TYPE I:				
Iron	70-95	7439-89-6	10	5 (Respirable Fraction)
Manganese	0.5-2	7439-96-5	5 (stop limit)	0.2
Titanium dioxide	0-3	13463-67-7	5 (Respirable Fraction)	10
Silicon	0-2	7440-21-3	5 (Respirable Fraction)	10
Aluminum	2-12	7789-75-5	2.5 (as F)	2.5 (as F)
Fluoride	1-5	7429-90-5	5 (Respirable Fraction)	1 (Respirable)
Magnesium	1-3	7439-95-4	5 (Respirable Fraction	10
Compound Bario (present in 701, 700GS, 78)	1-5	7440-39-3	0.5 (as Ba)	0.5 (as Ba)
Litium carbonate (present in 78)	0-2	554-13-2	10	10
Litium oxide (present in 78)	0-3	12057-24-8	10	10
Iron oxide (present in 78)	8-12	1309-37-1	10	5 (Respirable)
Zirconium	0-2	7440-67-7	5	5
TYPE II:				
Iron	75-95	7439-89-6	10	5 (Respirable Fraction)
Manganese	1-4	7439-96-5	5 (stop limit)	0.2
Titanium dioxide	4-10	13463-67-7	5 (Respirable Fraction)	10
Silicon	0.5-3	7440-21-3	5 (Respirable Fraction)	10
Fluoride	0-2	7789-75-5	2.5 (as F)	2.5 (as F)
Nickel	0-4	7440-02-0	1	1.5 (Metal)
Chrome	0-10	7440-47-3	1	0.5
Molybdenum	0-2	7439-98-7	5 (Respirable Fraccion)	10
Copper	0-1	7440-50-8	1 (powder)	1 (powder)
TYPE III:				
Iron	80-98	7439-89-6	10	5 (Respirable Fraction)
Manganese	1-4	7439-96-5	5 (stop limit)	0.2
Titanium dioxide	0-3	7440-21-3	5 (Respirable Fraction)	10
Silicon	0-4	7440-02-0	1	1.5 (Metal)
Fluoride	0-3	7440-47-3	1	0.5
Nickel	0-2	7439-98-7	5 (Respirable Fraction)	10
Chrome	0-1	7440-50-8	1 (powder)	1 (powder)

III. HAZARD IDENTIFICATION

Effects of acute exposure:
Route (s) of Entry: Inhalation and skin contact.

Eyes and Skin: when welding, arc rays can injure eyes and burn skin

Inhalation: Exposure to nickel-containing dust and welding fumes may cause irritation of the upper respiratory pipeline. May cause respiratory sensitization in susceptible persons or individuals. Hopefully a reasonable decomposition products from normal use of these products including complex oxides of the materials listed in Section 2, as well as carbon monoxide, carbon dioxide, ozone and nitrogen oxides (refer to "characterization welding fumes arc "available from the American Welding Society). The TLV for manganese (0.02 mg / m3) was reached before the general limit for welding fumes 5 mg / m3 is reached on the monitor levels of manganese fumes. The only way to determine the true identity of decomposition products is based on sampling and analysis. The composition and quantity of fumes and gases to which a worker may be overexposed can be determined based on a sample obtained inside the welder's helmet (for wear) or the worker's breathing zone. See ANSI / AWS F1.1 "Method for Sampling of airborne particles generated by welding and related processes." Available by the American Welding Society.

Ingestion: The amounts swallowed incidental to industrial handling are not likely to cause injury. Isolated oral dose toxicity is low.

The effects of chronic exposure: Refer to section 11 for specific toxicological information.

IV. FIRST AID MEASURES

Inhalation: If effects occur, remove the victim to a place with fresh air and fresh

Skin: Wash with soap and enough water

Eyes: Flush with water for several minutes
.
Ingestion: Rinse mouth

Note to Physician: No warnings in particular

V. FIRE FIGHTING MEASURES

Extinguishing Media: It is safe to take special measures.

Special protective equipment when fighting fire: none.

VI. ACCIDENTAL RELEASE MEASURES

Individual precautions: Eliminate dust formation / breathing dust.

Environmental Protection Precautions: No special indications.

Measures Cleaning: Remove mechanically damaged or past products.

VII. STORAGE AND HANDLING

HANDLING
With standard transport equipment.

STORAGE
Store in a dry place in closed packages.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Technical measures: Use adequate suction system for welding fumes
Avoid inhalation of dust from sanding.

Exposure Limits: See Section 2

Self Protection:

-**Protection Respiratory:** Use air-purifying respirator
-Protection For hands: use appropriate gloves to prevent skin contact
-Protection Eyes: wear a helmet or mask welding
-Protection Skin: wear appropriate clothing to prevent skin contact or body (overalls special)

PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid.

Odor: none

PH: not applicable

Melting Point: 1830-2730 ° F, 1000-1500 ° C

Relative Density: 5-8 g / cm3

Solubility: soluble in water is not

IX. STABILITY AND REACTIVITY

STABILITY
Conditions to abolish: not applicable.
Materials to avoid: reaction with acids.
Hazardous Decomposition Products: Unknown.

X. TOXICOLOGICAL INFORMATION

Effects of acute exposure
Animal toxicity: LD / LC 50 Nickel> September 000mg / Kg
Local effects: not applicable.
Inhalation: Not applicable for product. For welding fumes see Section 3.

Ingestion: not applicable.
Skin contact: May cause dermatitis in sensitive individuals.

CANCEROGENISIDAD:

Metallic nickel and certain alloys are classified as possibly carcinogenic to humans, based on inadequate evidence of effects in humans. While epidemiological studies have shown an increased risk of nasal cancer, lung and possible risk of cancer of the larynx, the causative agents of these risks are nickel sulphides. Nickel sulphides and nickel oxide. The process of refining nickel sulphide nickel calcine are linked to cancer but not with nickel metal itself.
The evidence implicating the metal nickel or nickel alloy or hydrometallurgical refining of nickel as respiratory carcinogenic to humans is false. Cohort mortality studies

workers in industries where exposure was limited to nickel metal or hydrometallurgical processes found no association between exposure to nickel metal and its alloys the subsequent development of respiratory cancer.
The effects of chronic overexposure (thermal long) to air pollutants can lead to accumulation in the lungs, a condition which could be seen as dense areas on radiographs. The severity of change is proportional to the exposure time. The changes seen are not necessarily associated with symptoms or signs with reduced function or lung disease. Changes in the X-rays can be caused by factors associated with work such as smoking, etc. Nickel and Chromium (some products) are considered carcinogenic. Long term overexposure to nickel fumes may also cause pulmonary fibrosis and edema. Overexposure to manganese compounds may affect the central nervous system. Symptoms include weakness, listlessness, lack of sleep, muscle weakness, emotional and spasmodic alteration. The manganese effect in the nervous system is irreversible.

XI. ECOLOGICAL INFORMATION

About the Product: unknown data
About the Ingredient: unknown data

XII. CONSIDERATIONS WASTE DISPOSAL

Product: For product disposal, consult recycling companies or appropriate local authorities.
Packaging: Product can get rid of approved garbage in landfills provided for that purpose and subject to the regulations of the town.

XIII. TRANSPORTATION INFORMATION

INTERNATIONAL REGULATIONS:

Embark on earth: safely
- Rail / road (RID / ADR):
Shipment by sea: no danger
Shipping by air: no danger

XIV. REGULATORY INFORMATION

CEE Label: not applicable
Hazard symbols and indications: Xn
R- phrases: R40:
R43:
S- Phrases: S22:
S36:

XV. **OTHER INFORMATION**

The information in this document is believed to be correct at the date of publication. However there is no express warranty that involves accuracy and completeness of this information. This information and product are provided on condition that the person receiving it shall make or take their own determination as proper particular purpose under the conditions that this person assumes the risk of using it.

The datasheet of safety equipment complies mandate EC 91/155 / EEC and 93/112 / EEC
Including amendments 2001/58 / EC.
Kindly the OHSA communication standard 29 CFR 1910.1200 and amendments "Superfund" and Reauthorization Act (SARA) of 1986 Public Law - 99-499

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