

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Stainless Steels
MANUFACTURER INFORMATION:
ACEROS BERGARA, S.A. - IRESTAL GROUP
Ctra. De Olesa a Martorell, Km 4,5 - 08630 Abrera.
BARCELONA (SPAIN)

USE / DESCRIPTION: Solid product, various forms and uses.
CLASSIFICATION: Corrosion, heat and creep resisting grades with ferritic, martensitic, duplex or austenitic microstructure.

SECTION 2 – HAZARDS IDENTIFICATION

Solid stainless steel products, various forms and uses: Coils, plates, sheets, strips, bars, tubes, semi-finished products and structural shapes.

GENERAL HAZARD STATEMENT: Solid metallic products are generally classified as “ARTICLES” and do not constitute a hazardous materials in solid form under the definitions of the OSHA Hazard Communication Standard. Any articles manufactured from these solid products would be generally classified as non-hazardous. **However**, some hazardous elements contained in these products can be emitted under certain processing conditions such as but not limited to: burning, melting, cutting, sawing, brazing, grinding, machining, milling, and welding.

EMERGENCY OVERVIEW:

Effects of Over-exposure:

Unless heated or processed in a manner that generates dust or fumes, normal handling of these products will not result in hazardous exposures.

SHORT-TERM (Acute) OVEREXPOSURE to dust generated from stainless steel use and processing may produce irritation of the eyes and respiratory system. Inhalation of high concentrations of freshly-formed oxide fumes of iron may cause fever, characterized by a metallic taste in the mouth, dryness and irritation of the throat, eyes and nose.

LONG-TERM (Chronic) OVEREXPOSURE to dust or fumes, e.g. welding, cutting, or grinding, can lead to siderosis (iron deposits in lungs), central nervous system, liver or kidney damage, skin and respiratory sensitization (allergic reaction), and is believed by some investigators to affect pulmonary function. Stainless Steels do not cause nickel sensitization in humans, however, in individuals already sensitized to nickel, prolonged skin contact may result in an allergic reaction. 20AP grade contains a small amount of lead. Prolonged overexposure to lead dust and fumes may result in lead poisoning with damage to the nervous system, kidneys, reproductive system and the unborn child.

PRIMARY ROUTE OF ENTRY is the respiratory system.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing eye, respiratory or allergic conditions.

CARCINOGENICITY:

Certain hexavalent chromium compounds and nickel metal and compounds are listed in the National Toxicology Program (NTP) Annual Report on Carcinogens, found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs, or listed by OSHA/ACGIH (Occupational Safety and Health Administration/American Conference of Governmental Industrial Hygienists) as potential carcinogens.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS.

The following is composition information of the product as manufactured.

Hazardous Ingredient	CAS Number	% Weight
Chromium (Cr)	7440-47-3	10-30
Iron (Fe)	7439-89-6	Balance (45-90)
Manganese (Mn)	7439-96-5	11% max.
Molybdenum (Mo) 2)	7439-98-7	8% max.
Nickel (Ni)	7440-02-0	38% max.
Copper (Cu) 1)	7440-50-8	5% max.
Silicon (Si)	7440-21-3	5% max.
Titanium (Ti)	7440-32-6	5% max.
Carbon © 3)	7440-44-0	1% max.
Lead (Pb) 3)	7439-92-1	0.2% max.
Sulphur (S) 3)	7704-34-9	0.05% max.
Cobalt (Co)	7440-48-4	5% max.
Nitrogen (N)	7727-37-9	0.06% max.
Vanadium (V)	7440-62-2	1% max.
Tantalum (Ta)	7440-25-7	1% max.
Niobium (Nb)	7440-03-1	1% max.
Aluminium (Al)	7429-90-5	4% max.
Tungsten (W)	7440-33-7	4% max.

- 1) Only in Copper alloyed grades.
- 2) Only in Molybdenum alloyed grades.
- 3) Only in 20AP grade.

Refer to Section 8 for occupational exposure limits.

SECTION 4 - FIRST AID MEASURES

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Consult a physician.

Skin: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Ingestion: Do NOT induce vomiting. Call a physician or Poison Control Centre immediately. Drink plenty of water. Never give anything by mouth to an unconscious person.

SECTION 5 – FIRE FIGHTING MEASURES

GENERAL FIRE HAZARDS: This product does not present fire or explosion hazards as shipped. Stainless steel are not combustible.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This solid formed alloy does not constitute a fire or explosion hazard. However, finely divided, suspended particulates may present a fire and explosion hazard in the presence of an ignition source. In addition, applied coatings may be combustible. For fires involving coated alloys, consult the appropriate coating MSDS.

Finely divided alloy (e.g. dust, shavings, etc.) may be combustible; may be ignited by heat, sparks or flames; and may burn rapidly with flare-burning effect. Fire may produce irritating or poisonous gases. High concentrations of airborne dust in an enclosed area can explode or burn if exposed to a source of ignition. Care should be taken to avoid the generation of airborne dust. Use of water on finely divided alloy may cause explosive hydrogen gas and heat to be evolved.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Minimal problems with spills of this product would be expected to occur because of its solid form. If there is a spill of alloy dust, the following precautions should be taken:

- Shut off ignition sources; no flares, smoking or flames should be in or near hazard area.
- Do not touch or walk through spilled material. Clean up using methods which avoid dust generation.
- Compressed air should not be used to clean up spills.
- During cleanup, skin and eye contact and inhalation of dust should be avoided as much as possible.
- Provide local exhaust or dilution ventilation as required.
- Use appropriate clothing, such as welder's aprons and gloves, when welding or burning. (See Personal Protection)
- Collect material in appropriate, labeled containers for recovery.
- Dispose of in accordance with applicable government and local regulations.

SECTION 7 – HANDLING AND STORAGE

Do not breathe dust or fumes from processing. If dust or fumes are generated during processing, use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

Use air sampling to determine the need for corrective action. Refer to OSHA Lead Standard (1910.1025) for requirements for the control of occupational exposure to lead and the OSHA Hexavalent Chromium Standard (1910.1026) for requirements for the control of occupational exposure to hexavalent chromium if appropriate (Refer to Section 10 for additional information)

Normal precautions should be taken to avoid physical injury from coiled or bundled products, possibly with sharp edges.

- Straps or bands, used to secure some products, should not be used for lifting.
- Coils and bundled products may spring apart when banding is removed and the banding itself can cause eye and other injury when the tension is released.
- All products are likely to have sharp edges that can cause lacerations.
- Flying particles may be produced when cutting or shearing.

Storage: Store in a clean dry area.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

The following are the occupational exposure limits for the components of the product as manufactured.

Ingredient	OSHA PEL	ACGIH TLV
Chromium (Cr)	1 mg/m ³ TWA (Time-Weighted Average)	0.5 mg/m ³ TWA (Time-Weighted Average)
Iron (Fe) (as Iron Oxide)	10 mg/m ³ TWA (Fume)	5 mg/m ³ TWA (Respirable Fraction)
Manganese (Mn)	5 mg/m ³ Ceiling Limit	0.02 mg/m ³ (Respirable) 0.1 mg/m ³ (inhalable)
Molybdenum (Mo) ²⁾	15 mg/m ³ TWA (Total dust)	3 mg/m ³ TWA (Respirable Fraction) 10 mg/m ³ TWA (inhalable)
Nickel (Ni)	1 mg/m ³ TWA (Time-weighted Average)	1.5 mg/m ³ TWA (inhalable)
Copper (Cu) ¹⁾ (as Dust and mists)	1 mg/m ³ TWA (Time-weighted Average)	1 mg/m ³ TWA (Time-Weighted Average)
Silicon (Si)	5 mg/m ³ TWA (Respirable Fraction) 15 mg/m ³ TWA (Total dust)	None Established
Titanium (Ti)	None Established	None Established
Carbon © ³⁾	None Established	None Established
Lead (Pb) ³⁾	0.05 mg/m ³ TWA (Time-weighted Average) 0.03 Action Level	0.05 mg/m ³ TWA (Time-Weighted Average)
Sulphur (S) ³⁾	None Established	None Established

If these products are welded, the following are the occupational exposure limits for the typical decomposition products.

GASES

Fume Constituent	OSHA PEL	ACGH TLV	ACGIH STEL
Dinitrogen Tetroxide (N ₂ O ₄)	None Established	None Established	
Nitric Oxide (NO)	25 ppm TWA	25 ppm TWA	
Nitrogen Dioxide (NO ₂)	5 ppm Ceiling Limit	0.2 ppm TWA	
Ozone (O ₃)	0.1 ppm TWA	0.1 ppm TWA***	
Phosgene (COCl ₂) *	0.1 ppm TWA	0.1 ppm TWA	
Phosphine (PH ₃) **	0.3 ppm TWA	0.3 ppm TWA	1 ppm

SOLIDS

Fume Constituents	OSHA PEL	ACGH TLV
Chromates (CrO ₃) (CrVI)	0.005 mg/m ³ TWA (as Cr VI) 0.0025 action level	0.05 mg/m ³ TWA Water soluble (as Cr) 0.01 mg/m ³ TWA (as certain water insoluble) (as Cr)
Chromium (III) Compounds	0.5 mg/m ³ TWA (as Cr)	0.5 mg/m ³ TWA (as Cr)
Copper Oxide (CuO) ¹⁾ (as Cu)	0.1 mg/m ³ TWA (Fume)	0.2 mg/m ³ TWA (Fume)
Iron Oxide	10 mg/m ³ TWA (Fume)	5 mg/m ³ TWA (Respirable Fraction)
Manganese Tetraoxide (Mn ₃ O ₄) (as Mn)	5 mg/m ³ (Fume) Ceiling Limit	0.2 mg/m ³ TWA (Fume)
Molybdenum Trioxide (MoO ₃) ²⁾ (as Mo)	15 mg/m ³ TWA (Total dust)	3 mg/m ³ TWA (Respirable Fraction) 10 mg/m ³ TWA (inhalable)
Nickel Oxide (NiO) (as Ni)	1 mg/m ³ TWA	0.2 mg/m ³ TWA (inhalable)
Titanium Dioxide (TiO ₂)	15 mg/m ³ TWA (Total dust)	10 mg/m ³ TWA
Lead Oxide (PbO ₂) ³⁾ (as Pb)	0.05 mg/m ³ TWA 0.03 Action Level	0.05 mg/m ³ TWA

- 1). Only in Copper alloyed grades
- 2). Only in Molybdenum alloyed grades.
- 3). Only in 20AP grade.

DEFINITIONS:

Permissible Exposure Limit (PEL) OSHA (29CFR 1910) (mg/m ³)	- An exposure limit that is published and enforced by OSHA as a legal standard.
Threshold Limit Value (TLV) (mg/m ³) American Conference of Governmental Industrial Hygienists (ACGH)	- Time weighted average (TWA) concentration for a normal 8-hour work day and a 40-hour week to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
Short Term Exposure Limit (STEL) OSHA (29CFR 1910) (mg/m ³)	- A 15 minute time weighted average exposure which should not be exceeded at any time during a work day.
Ceiling Limit	- The concentration that should not be exceeded during any part of the working exposure.

- * May result from contact with chlorinated hydrocarbon vapors.
- ** May result from welding on phosphate coated steels.
- *** For light work: 0.1 ppm For moderate work: 0.08 ppm For heavy work: 0.05 ppm of O₃.

Ventilation: Use sufficient general or local exhaust ventilation to keep the concentration of dusts, fumes and gases below (TLV/PEL) in the workers' breathing zone and the general area.

Respiratory Protection: None needed under normal handling conditions. If a dust or fume is generated in the use of the product and the exposure limits are exceeded, use an approved dust or fume respirator or air-supplied respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, OSHA 1910.1026, OSHA 1910.1025, ANSI Z88.2 and good Industrial Hygiene practice.

Protective Clothing: Wear head, hand, and body protection as needed to help prevent injury from sharp edges, flying particles, contact with cutting oils, radiation, sparks, and electric shock as applicable. This may include puncture resistant gloves and long-sleeved clothing. For welding operations, see ANSI Z49.1 and OSHA 1910.1026.

Eye Protection: Safety glasses with side shields should be worn when handling products. For welding operations, wear helmet or use face shield with filter lens. Lens filter should be as dark as possible without obstructing view of the weld zone. Provide protective screens and flash goggles, if necessary, to shield others.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: NIF for steel product (Fe-5432/Cr-3992/Ni-5252 °F) Melting Point : NIF for steel product (Fe-2797/Cr-3452/Ni-2681 °F) – 1370 – 1520 °C Appearance and Odor: Silver-gray metallic solid form, odorless.	Specific Gravity (H₂O = 1): 7-9 Solubility in water: Insoluble
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SECTION 10 – STABILITY AND REACTIVITY







Stability: Stable under normal conditions of storage or use.

Incompatibility / Conditions to Avoid: May react with strong acids to release gaseous hydrogen and oxides of nitrogen.

Hazardous Decomposition Product: If heated above the melting point, hazardous metal fumes as described in Section 8 may be generated.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicological information has not been established for this product as sold. However, processing of this product in operations such as high temperature (burning, welding), sawing, brazing, machining and grinding may produce fumes and/or particulates, which would result in the material being classified as hazardous under OSHA 29 CFR 1910.1200. The categories of Health Hazards as defined in “GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev.3” United Nations, New York and Geneva, 2009 have been evaluated and are listed below:

Potential Hazard	Hazard Category	Hazard Symbol	Signal Word	Hazard Statement.
Acute Toxicity Hazard	4 ^a		Warning	Harmful if swallowed
Skin Irritation	3 ^b	No Symbol	Warning	Causes skin irritation
Eye Damage / Irritation	2B ^c	No Symbol	Warning	Causes eye irritation
Skin Sensitization	1 ^d		Warning	May cause an allergic skin reaction
Carcinogenicity	2 ^g		Warning	Suspected of causing cancer
Toxic Reproduction	2 ^h		Warning	Suspected of damaging the unborn child
Specific Target Organ Systemic Toxicity (STOST) Following Single Exposure	3 ⁱ		Warning	May cause respiratory irritation
STOST following Repeated Exposure	1 ^j		Danger	Causes damage to lungs through prolonged or repeated inhalation exposure. Causes damage to the central nervous system.

Notes:

a. No **LC₅₀** or **LD₅₀** has been established for **Stainless Steel** (semi-finished steel products). The following data has been determined for the components:

- **Iron:** LD₅₀ = 1060 mg/kg (Oral/Rat)
- **Manganese:** Mn single oral exposures, LD₅₀ ranged from 275 to 804 mg/kg body weight per day for manganese chloride in different rat strains
- **Chromium (as Cr^{+VI}):** LD₅₀ = 80 mg/kg (oral/Rat)
- **Silicon:** LD₅₀ = 3160 mg/kg (Oral/Rat); and as **Silicon Dioxide:** LD₅₀>15.000 mg/kg (Oral/Rat); LD₅₀>5000 mg/kg (Dermal/Rat); LC₅₀>0.69 mg/l/4hr (Inhalation/Rat)
- **Nickel:** LD₅₀>9000 mg/kg (Oral/Rat); LC₅₀>10.2 mg/l (Inhalation/Rat)
- **Boron:** LD = 650 mg/kg (Oral/Rat)

b. No **Skin (Dermal) Irritation** data available for **Stainless Steel** (semi-finished steel products) as a mixture. The following Skin (Dermal) Irritation information was found for the components:

- **Iron:** Causes skin irritation
- **Chromium: (as Cr^{+VI}):** Corrosive. Human skin sensitizer
- **Nickel:** Slight irritation only in rabbits
- **Molybdenum:** Irritating
- **Tungsten:** Skin contact may cause irritation due to abrasive action of the dust.

c. No **Eye Irritation** data available for **Stainless Steel** (semi-finished steel products) as a mixture. The following Eye Irritation information was found for the components:

- **Iron, Molybdenum :** Causes eye irritation.
- **Silicon:** Slight eye irritation in rabbit protocol.
- **Chromium (as Cr^{+VI}):** Corrosive
- **Nickel:** Slight eye irritation from particulate abrasion only
- **Tungsten:** Eye contact may cause irritation due to abrasive action of the dust

d. No **Skin (Dermal) Sensitization** data available for **Stainless Steel** (semi-finished steel products) as a mixture. The following Skin (Dermal) Sensitization information was found for the components:

- **Nickel:** Human skin sensitizer
- **Copper, Chromium (as Cr^{+VI}):** May cause allergic skin reaction
- **Copper:** It is reported that copper may induce allergic contact dermatitis in susceptible individuals

e. No **Respiratory Sensitization** data available for **Stainless Steel** (semi-finished steel products) as a mixture. The following Respiratory Sensitization information was found for the components:

- **Chromium (as Cr^{+VI}):** Occupational asthma reported in workers

f. No **Germ Cell Mutagenicity** data available for **Stainless Steel** (semi-finished steel products) as a mixture. The following Mutagenicity and Genotoxicity information was found for the components:

- **Iron:** Some positive and negative findings in vitro
- **Nickel:** Positive results in vitro and in vivo but insufficient data for classification
- **Chromium (as Cr^{+VI}):** Positive in vitro and in vivo assays including cell transformation in vitro and dominant lethal in vivo
- **Aluminum:** Not mutagenic in vitro; but has marginal effects in vivo.

SECTION 11 – TOXICOLOGICAL INFORMATION (continued)

g. **Carcinogenicity:** IARC, NTP, and OSHA do not list **Stainless Steel** (semi-finished steel products) as carcinogens. The following Carcinogenicity information was found for the components:

- **Welding Fumes,** IARC Group 2B carcinogen, a mixture that is possibly carcinogenic to humans.
- **Nickel and certain nickel compounds-** IARC Group 2B carcinogens that are possibly carcinogenic to humans. Insoluble nickel compounds – ACGIH confirmed human carcinogen. Nickel-EURAR Insufficient evidence to conclude carcinogenic potential in animals or humans, suspect carcinogen classification Category 2 Suspected of causing cancer. Nickel Oxide-HSDB listed as Category 1a, may cause cancer. Human data in which exposure to nickel refinery dust caused lung and nasal tumors.
- **Chromium metal and trivalent chromium compounds-**IARC Group3 carcinogens, not classifiable as to their human carcinogenicity. Hexavalent chromium compounds –IARC as Group 1 carcinogens, carcinogenic to humans. Chromium metal – ACGIH not classifiable as a human carcinogen. NTP Fourth Annual report on Carcinogens cites “Certain Chromium compounds” as human carcinogens.

h. No **Toxic Reproduction** data available for **Stainless Steel** (semi-finished steel products) as a mixture. The following Toxic Reproduction information was found for the components:

- **Hexavalent Chromium:** Developmental toxicity in the mouse.
- **Nickel:** Oral administration to experimental animals caused fetotoxicity.
- **Aluminum:** May cause delay in development of neurobehavioral indices.

i. No **Specific Target Organ Systemic Toxicity (STOST)** following a **Single Exposure** data was available for **Stainless Steel** (semi-finished steel products) as a mixture. The following STOST following a Single Exposure data was found for the components:

- **Iron, Molybdenum:** May cause respiratory irritation

j. No **Specific Target Organ Systemic Toxicity (STOST)** following **Repeated Exposure** data was available for **Stainless Steel** (semi-finished steel products) as a whole. The following STOST following Repeated Exposure data was found for the components:

- **Aluminum:** Chronic exposure to aluminum flake has been reported to cause pneumoconiosis in workers. Repeat oral exposure to aluminum results in decrements in neurobehavioral function and development.
- **Boron:** Mice exposed to amorphous boron at 72 mg/m³ for 6 weeks did not exhibit toxicity.
- **Hexavalent Chrome:** Inflammation of lung, skin irritation and ulceration with repeat exposures in workers.
- **Nickel:** Rats exposed to Nickel by inhalation at 1 mg/m³ for 90 days developed lung inflammation, hyperplasia and fibrosis.
- **Manganese:** Neurobehavioral alterations in worker populations with Mn and MnO including: speed and coordination for motor function are especially impaired.

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

SECTION 12 – ECOLOGICAL INFORMATION

No specific data is available. These products are not expected to present an environmental hazard.

SECTION 13 – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Prevent waste from contaminating the surrounding environment. Discard any product, residue, disposable container, or liner in an environmentally accepted manner, in full compliance with federal, state, and local regulations.

SECTION 14 – TRANSPORT INFORMATION

These products are not regulated for transportation under US Department of Transportation (DOT), The International Maritime Dangerous Goods (IMDG) and International Air Transport Association (IATA)

SECTION 15 – REGULATORY INFORMATION

CERCLA 103 Reportable Quantity: These products are not subject to CERCLA reporting requirement (Comprehensive Environmental Response, Compensation, and Liability Act.).

SARA TITLE III:

Hazard Category for Section 311/312:	Acute Health, Chronic Health
Section 313 (40CFR 372) Toxic Chemicals:	This product contains the following chemicals subject to SARA (Superfund Amendment and Reauthorization Act.) Title III Section 313 Reporting requirements.

Chromium (Cr) *	7440-47-3	10-30%
Copper (Cu) *	7440-50-8	5% max
Manganese (Mn) *	7439-96-5	11% max
Nickel (Ni) *	7440-02-0	38% max
Lead (Pb) (Only in 20AP grade)	7439-92-1	0.2% max
* This includes all compounds of these elements.		

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

California Proposition 65: This product contains chromium and nickel, which are known to the State of California to cause cancer. The 20AP grade contains lead that is known to the State of California to cause cancer and reproductive toxicity (male, female and developmental).

Canadian Environmental Protection Act [CEPA]: All of the ingredients are listed on the Canadian Domestic Substances List.

Canadian WHMIS Classification: Class D-2-A (Very Toxic Material causing other toxic effects).

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

EU RoHS: Finished welds using welding consumables are RoHS compliant. Stainless Steel Welding Products contain Chromium. When welded Stainless Steel Welding Products will produce Cr (VI) (hexavalent chrome), however, the weld deposit does not contain Cr (VI) as it will all be in the zero valent state or as Cr (III) as an oxide. Finished products manufactured using IRESTAL GROUP Stainless Steel Welding Products will not contain Cr (VI).

SECTION 16 – OTHER INFORMATION

For SOLID formed product:

HMIS Rating (Hazardous Materials Identification System):	Health - 1*	Flammability - 0	Reactivity - 0
NFPA Rating (National Fire Protection Association):	Health - 1*	Flammability - 0	Reactivity - 0

* Indicates the potential for chronic health effects.

MSDS- Material Safety Data Sheet Updated May 2013: Comprehensive Review. Updated exposure limits.

DISCLAIMER:

All information, recommendations, and suggestions appearing herein concerning the product are based upon data believed to be reliable. It is the user's responsibility to determine the safety, toxicity, and suitability for their own use of the product described herein. IRESTAL GROUP assume any liability arising out of use by others of the product referred to herein. IRESTAL GROUP shall not in any event be liable for special, incidental or consequential damages in connection with this MSDS. This MSDS is not intended as a license to operate under, or recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

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