MATERIAL SAFETY DATA SHEET

Components:	TIN / SILVER / COPPER / ROSIN ACTIVATED
MSDS Number:	MSDS-23
Preparation date:	July, 2015
Revision date:	January, 2021
Revision Level:	03

NA = Not Applicable NE = Not Established NAV = Not Available

Section 1.- Product and company identification

Trade Name:
Omega® Tin-Silver-Copper solder with Rosin Activated wire of different diameters, it applies to all part numbers with this alloy and resin type.

Product Name:
As indicated on the label.

Manufacturer:
Omega Aleaciones, S.A. de C.V.
Eje 132 No. 120 Zona Industrial
San Luis Potosí, S.L.P. Zip code 78395
México
E-mail: calidad@omegaaleaciones.com
Phone Number: +52 (444) 824 00 03
Fax: +52 (444) 824 11 73

Main purpose:
As solder in the metalworking and electronics industries.

Section 2.- Hazard identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008

GHS07

GHS07

H319: Causes serious eye irritation. Eye Irrit. 2.
H317: May cause an allergic skin reaction. Skin Sens. 1
H335: May cause respiratory irritation. STOT SE 3.

STOT SE: Specific target organ toxicity- single exposure

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008.

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word: **Warning**

Hazard statements

H319: Causes serious eye irritation.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.

Precautionary statements

P280: Wear protective gloves/ eye protection.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P402: Store in a dry place.
P501: Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency Overview	WARNING! CAUSE EYE IRRITATION, SKIN AND RESPIRATORY TRACT. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. It irritates the eyes, skin and respiratory tract. Avoid contact with eyes, skin and clothing. Do not breathe the dust. Use only with adequate ventilation. Keep the container tightly closed and sealed until the time of its use. Wash thoroughly after handling.
Routes of entry	Inhalation and Ingestion.

Potential acute health effects	
Eyes	Fumes may cause eye irritation.
Skin	Fumes may cause skin irritation.

Inhalation	Inhalation of this or other welding products can cause headache, nausea, and muscle pain.
Ingestion	Ingestion of this or other welding products can cause headache, nausea, and muscle pain.
Medical conditions aggravated by overexposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by overexposure to this product. Prolonged or repeated exposure due to the ingestion may cause anemia, insomnia, weakness, constipation and abdominal pain.
Chronic	TIN: It has been shown to increase the incidence of sarcoma in animal tests. SILVER: Contact with skin or chronic ingestion of dusts, salts or silver vapor can result in a condition known as argyria, a condition with a bluish pigmentation of the skin and eyes. COPPER: Overexposure to vapors may cause metal fume fever (chills, muscle aches, nausea, fever, dry throat, cough, weakness, lassitude); metallic or sweet taste; discoloration of the skin and hair. ROSIN: May cause allergic skin reactions with repeated exposure. Prolonged inhalation of vapors may cause respiratory sensitization.

Section 3.- Composition and information on components

COMPONENT	C. A. S. NUMBER	WEIGHT %	OSHA PEL	ACGIH TLV
Tin	7440-31-5	1.0 - 99.0	2.0 mg/m^3	2.0 mg/m^3
Silver	7440-22-4	0.3 - 5.0	0.01 mg/m^3	0.1 mg/m^3
Copper	7440-50-8	0.3 - 5.0	0.1 mg/m^3	0.2 mg/m^3
Rosin Activated	8050-09-7	0.5 -3.3	0.1 mg/m^3	0.1 mg/m^3

Section 4.- First aid measures

Skin:

MOLTEN PRODUCT: In case of contact, immediately place bags of cold water for at least 15 minutes. Do not put ice directly on the skin. Do not attempt to remove the solidified product of the skin, this could cause damage. Get medical attention immediately.
SOLID PRODUCT: In case of contact, immediately wash skin with soap and plenty of water while removing contaminated clothing and shoes. Wash the clothing before wearing again. Clean the shoes completely before returning it to use. Use lotion to prevent dryness. Get medical attention if irritation persists.

Eyes:

MOLTEN PRODUCTS: Wash the burns with plenty of water at low pressure. Get immediate medical attention.
SOLID PRODUCT: Check if the victim takes contact lenses and in this case, withdraw them from it. Wash thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation develops.

Inhalation:

Move to the affected person in the open air. If you are experiencing the symptoms of overexposure, evacuate to the fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen everything that might be tight, as the collar of a shirt, tie or belt. Get medical attention immediately.

Ingestion:

Wash out mouth with water. If the person is conscious, immediately give 2 glasses of water. Do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders:

Do not take any action that involves some personal risk or that does not provide for adequate training. If it is suspected that the vapors are still present, the person in charge of the rescue you must use an appropriate mask or a self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician:

Not available.

Section 5.- Fire fighting measures

Flammability of the product	May be combustible at high temperatures.
Hazardous termal decomposition products	Decomposition products may include the following materials: Carbon dioxide. Carbon monoxide. Metal oxide/oxides.
Extinguishing media **Suitable** **Not suitable**	Use an extinguishing agent suitable for the surrounding fire. Alcohol foam, carbon dioxide or dry chemical. Do not use water.
Special exposure hazards	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. No specific fire or explosion. Closed containers may explode when exposed to fire.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.

Section 6.- Accidental release measures

If the material is in its solid state, pick up and reuse. When molten, allow to solidify, and the reuse if it is not contaminated. If contaminated, refer to section 13 for disposal information.

Personal precautions:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up:

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7.- Handling and storage

Handling:
Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid contact with eyes, skin and clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container.

Containers:
Empty containers retain product residue and can be hazardous (solids or vapors). Note the precautions in the boxes. Do not expose the containers to heat or flames. Use appropriate containment to avoid environmental contamination.

Storage:
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep the container away from sources of ignition. Do not store in unlabeled containers.

Other storage conditions:
The lifetime of tin base (non-ferrous) solders in solid form (bars and wires) is very long; as long as it is kept in its original packaging and under controlled storage conditions, mainly avoiding moisture and dust.
Applying direct heat is the only thing that can modify its shape and physical properties.
After 5-10 years it can only lose its shine, but not its functionality.

It is recommended that the relative humidity of the storage area for welding consumables does not exceed 60%, if the ambient temperature falls below 15 ° C. The storage temperature should be kept about 2 degrees above room temperature. The reason for this recommendation is to avoid moisture condensation on the consumables. It is important that the storage area is dry.
Recommended storage temperature: 10 ° C to 40 ° C.

Hygiene practices in the workplace:
Wash hands thoroughly after handling welding, before eating or smoking.

Section 8.- Exposure controls and personal protection

Engineering measures
If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes:
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Respiratory:
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Use a NIOSH approved respirator when necessary.

Hands:
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Skin:
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Ventilation:
Have adequate ventilation to keep exposure below the limits of allowable concentration in the air.

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Product name	Exposure limits
Tin	**ACGIH TLV (United States, 1/2005).** TWA: 2 mg/m³ 8 hour(s). State: All forms. **NIOSH REL (United States, 12/2001). Notes: The REL and PEL also apply to other inorganic tin compounds (as Sn) except tin oxides.** TWA: 2 mg/m³ 10 hour(s). State: All forms. **OSHA (United States, 0/1997). Notes: Respirable.** TWA: 2 mg/m³ **NIOSH (United States, 0/1994). Notes: Respirable.** TWA: 2 mg/m³ STEL: 4 mg/m³
Silver	**NIOSH REL (United States, 12/2001).** TWA: 0.01 mg/m³ 10 hour(s). State: All forms. **OSHA PEL (United States, 8/1997).** TWA: 0.01 mg/m³ 8 hour(s). State: All forms. **OSHA PEL 1989 (United States, 3/1989).** TWA: 0.01 mg/m³ 8 hour(s). State: All forms. **ACGIH TLV (United States, 1/2006). Notes: Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.** TWA: 0.1 mg/m³ 8 hour(s). State: Metallic form.
Rosin Activated	**NIOSH REL (United States, 12/2001). Notes: Carcinogenic in the presence of formaldehyde, acetaldehyde, or malonaldehyde. See Appendix C (Aldehydes) See Appendix A - NIOSH Potential Occupational Carcinogen.** TWA: 0.1 mg/m³ 10 hour(s). Form: All forms. **OSHA PEL 1989 (United States, 3/1989).** TWA: 0.1 mg/m³ 8 hour(s). Form: All forms.

Components	Nº CAS - Nº EINECS	PEL mg/m³	TLV-TWA mg/m³	TLV-STEL mg/m³
TIN	7440-31-5/231-141-8			

	Omega® Tin-Silver-Copper Solder with Rosin Activated			
	(USA)	2	2	-
	(EU)	-	2	4
	(Canada)	-	2	4
	(Singapore)	2	-	-
SILVER	7440-22-4/231-131-3			
	(USA)	0.01	0.1	-
	(EU)	-	0.1	-
	(Canada)	-	0.1	0.3
	(Singapore)	0.1	-	-
	(Mexico)	-	0.1	-
COPPER	7440-50-8 (USA)	0.1	0.2	-
	(EU)	-	0.2 (steam)	-
	(Canada)	-	0.2	0.6
	(Singapore)	0.2	-	-
	(Mexico)	-	0.2	2
	(China)	-	0.2 (steam)	0.6

EU = Occupational Exposure Limits of the European Union.

Section 9.- Physical and chemical properties

General data	
Physical state:	Solid
Shape:	Wire
Color:	Gray
Odor:	Odorless
Valor pH:	NAV
Melting point:	226 °C or 438.8 °F
Boiling point:	NAV
Flash point and method:	NAV
Flammability (solid, gas):	NAV
Flammable limits:	NAV
Vapor pressure:	NAV
Vapor density:	NAV
Specific gravity:	7.3
Density:	NAV
Autoignition temperature:	NAV
% Volatile:	NAV
Evaporation rate:	NAV
Dispersibility properties:	NAV
Solubility:	Partially soluble in the following materials: strong acids and strong alkalis. Slightly soluble in the following materials: NAV Insoluble in the following materials: NAV

Section 10.- Stability and reactivity

Stability and reactivity	The product is stable.
Incompatibility with various substances	Reactive or incompatible with the following materials: fluorine, chlorine and bromine. Oxidizing compounds (chlorate, bromate, iodate, etc.), strong acids, strong bases, hydrogen peroxide and solutions, ammonia (air drying), nitric acid, sulfuric acid.
Hazardous decomposition products	Carbon monoxide, carbon dioxide, smoke copper (Cu) by combustion.

Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions of reactivity	Dust explosion is possible, when the shape of dust or granule is mixed with air.

Section 11.- Toxicological information

Toxicity data				
Product name or ingredient	**Test**	**Result**	**Route**	**Species**
Tin	LD50 LD50 LDLO	2000 mg/kg 2000 mg/kg 388 mg/kg	oral dermal oral	rat rabbit duck
Silver	LD50 LD50	> 5000 mg/kg > 2000 mg/kg	oral dermal	guinea pig rat
Copper	LDLO LD50	120 µg/g > 5000 mg/kg	oral oral	rabbit mouse
Rosin Activated	LD50 LD50	2.2 g/kg 3 g/kg	oral oral	mouse rat

Chronic effects on humans	Carcinogenic effects: Classified None. By NIOSH [Tin]. Classified None. By NIOSH [Silver]. Classified 4 (Probably not for humans.) By IARC, None. Classified None. By NIOSH [Copper]. Classified 4 (Probably not for humans.) By IARC, None. By IARC [resin acids and rosin, hydrogenated]. Contains material which causes damage to the following organs: lungs, mucous membranes, upper respiratory tract, skin, eyes, nose, sinuses and thyroid.
Other toxic effects on humans	Hazardous by the following route of exposure: of skin contact (sensitizer), of ingestion, of inhalation (lung sensitizer).

Specific effects	
Carcinogenic effects	No significant effects or critical hazards.
Mutagenic effects	No significant effects or critical hazards.
Teratogenicity / Reproductive toxicity	No significant effects or critical hazards.

Section 12.- Ecological information

Environmental precautions	Toxicity to aquatic organisms. Class 2 (flux). Because the behavior in water was unknown, classified in Class 4. TI (Cu). Toxicity to aquatic organisms for long-term influence. Class 2 (flow)
Products of degradation	Products of degradation: carbon oxides (CO, CO2).
Toxicity of the products of biodegradation	The products of degradation are more toxic than the product itself.

Ecotoxicity data			
Product name or ingredient	**Species**	**Period**	**Result**
Silver	Daphnia magna (EC50) Pimephales promelas (LC50) Pimephales promelas (LC50) Pimephales promelas (LC50) Pimephales promelas (LC50) Pimephales promelas (LC50)	48 hours 96 hours 96 hours 96 hours 96 hours 96 hours	0.0092 mg/L 0.00213 mg/L 0.00238 mg/L 0.00276 mg/L 0.00312 mg/L 0.00342 mg/L
Copper	Pulga de agua (Daphnia obtusa) (EC50)	48 hours	0.0076 - 0.026 mg/L

	Pseudokirchneriella subcapitata (EC50) Pseudokirchneriella Subcapitata (EC50) Peces óseos superclase (Osteichthyes) (LC50) Pimephales promelas (LC50) Pimephales promelas (LC50) Oncorhynchus mykiss (LC50) Poecilia reticulate (LC50) Pimephales promelas (LC50) Cyprinus carpio (LC50) Cyprinus carpio (LC50) Lepomis macrochirus (LC50)	96 hours 72 hours 96 hours 96 hours 96 hours 96 hours 96 hours 96 hours 96 hours 96 hours 96 hours	0.031 -0.054 mg/L 0.0426 -0.0535 mg/L 0.0051 - 0.015 mg/L 0.0068 -0.0156 mg/L < 0.3 mg/L 0.052 mg/L 0.112 mg/L 0.2 mg/L 0.3 mg/L 0.8 mg/L 1.25 mg/L
Rosin Activated	Daphnia magna (EC50) Desmodesmus Subspicatus (EC50)	48 hours 72 hours	3.8 -5.4 mg/L 400 mg/L

Environmental Impact Data: (percentage by weight)					
CFC:	HFC:	Cl. Solv:	VOC:	HCFC	ODP
0	0	0	0	0	0

Section 13.- Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations (refer to section 7 and Section 8).

If hazardous under 40 CFR 261, subparts b and c, material must be treated or disposed in a facility meeting the requirements of 40 CFR 254 or 265. If non-hazardous, material should be disposed in a facility meeting the requirements of 40 CFR 257. These criteria apply E.U.A. To classify the type of material in Mexico should refer to the Official Mexican Standard NOM-052-SEMARNAT-2005.

Resource Conservation and Recovery Act (RCRA). Status of Unused Material: If discharged in unaltered form, material should be tested to determine if it must be classified as a hazardous waste for disposal purposes. Under specific circumstances, application can be made to the EPA administrator to have a particular waste designated non-hazardous.

Section 14.- Transport information

Regulatory information	ONU number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	Not regulated	-	-		-	-
TDG Classification	Not regulated	-	-		-	-
ADR/RID Class	Not available	-	-		-	-

IMDG Class	Not regulated	-	-		-	-
IATA-DGR Class	Not regulated	-	-		-	-

PG*: Packing group.

Ground	Not regulated
Air	Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations. **UN Number:** None. **UN Pack Group:** NA. **UN Class:** Non Hazardous. **ICAO/IATA:** Non Hazardous. **Shipping Name:** Non Hazardous.
Sea	Not regulated

DOT (Department of Transportation).
Proper Shipping Name: Not regulated by DOT.

Section 15.- Regulatory information

United States	
HCS Classification	Toxic material. Target organ effects.
USA Federal regulations	**TSCA 6 proposed risk management:** No products were found. **TSCA 8(a) PAIR:** No products were found. **TSCA 8(a) IUR:** Partial exemption. **TSCA 8(b) inventory:** Tin. **TSCA 8(d) H and S data reporting:** No products were found. **TSCA 12 (b) annual export notification:** No products were found. **United States inventory (TSCA 8b):** Not determined. **SARA 302/304/311/312 extremely hazardous substances:** No products were found. **SARA 302/304 emergency planning and notification:** No products were found. **SARA 302/304/311/312 hazardous chemicals:** Rosin; Tin; Silver. **SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** Rosin: Immediate (acute) health hazard, Delayed (chronic) health hazard; Tin: Immediate (acute) health hazard; Silver: Immediate (acute) health hazard. **Clean Water Act (CWA) 307:** No products were found. **Clean Water Act (CWA) 311:** No products were found. **Clean Air Act (CAA) 112 accidental release prevention:** No products were found. **Clean Air Act (CAA) 112 regulated flammable substances:** No products were found. **Clean Air Act (CAA) 112 regulated toxic substances:** No products were found. **SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4):** Reportable ingredients: Silver CAS# 7440-22-4; Copper CAS# 7440-50-8. **TSCA (Toxic Substances Control Act of 1976, USA):** All substances are TSCA listed or exempt from listing. **CAA (Clean Air Act, USA):** This product does not contain any class 1-ozone depletors. This product does not contain any class 2-ozone depletors. This product does not contain any chemicals listed as hazardous air pollutants. **California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, May 1, 1997 revision, USA):**

	When used for soldering and similar applications chemicals may be produced which are known to some states to cause birth defects or other reproductive harm. **EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45):** This product contains the following chemicals subject to the reporting requirements of Section 313 of Title III of the SARA of 1986 and 40 CFR part 372: No products were found.

SARA 313			
	Product name	CAS number	Concentration
Form R - Reporting requirements	Silver	7440-22-4	0.29
Supplier notification	Silver	7440-22-4	0.29

SARA 313 notifications must not be detached from the Material Safety Data Sheets (MSDS) and any copying and distribution shall include copying and distribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations of the USA	**Connecticut Carcinogen Reporting**: None of the components are listed. **Connecticut Hazardous Material Survey**: None of the components are listed. **Florida Substances**: Tin, Silver, Rosin. **Illinois Chemical Safety Act**: None of the components are listed. **Illinois Toxic Substances Disclosure to Employee Act**: None of the components are listed. **Louisiana Reporting**: None of the components are listed. **Louisiana Spill**: None of the components are listed. **Massachusetts Spill**: None of the components are listed. **Massachusetts RTK Hazardous Substances**: Tin, Silver, Copper. **Michigan Critical Material**: Silver. **Minnesota Hazardous Substances**: Tin, Silver, Rosin. **New Jersey Hazardous Substances**: None of the components are listed. **New Jersey Spill**: Tin. **New Jersey Toxic Catastrophe Prevention Act**: None of the components are listed. **New Jersey RTK Hazardous Substances**: Tin, Silver, Copper. **New York Acutely Hazardous Substances**: None of the components are listed. **New York Toxic Chemical Release Reporting**: None of the components are listed. **Pennsylvania RTK Hazardous Substances**: Tin, Silver, Copper. **Rhode Island Hazardous Substances**: Tin.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
-	-	-	-	-

Section 16.- Other information

References:

- ACGIH, Threshold Limit Values, 1994-1995.
- IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996).
- NFPA, Fire Protection Guide to Chemical Hazards, 11th edition.
- NIOSH, Pocket Guide to Chemical Hazards, revision June 1994.
- TSCA (Toxic Substance Control Act), Chemical Substance Inventory List, 1985.
- CFR29, OSHA's Permissible Exposure Limits, revision July, 1993.
- CFR29, part 1910.1200, Hazard Communication.
- CHEMTOX database.
- Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- CSST (Commission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances.
- CRC Handbook of chemistry and physics, 67th edition, CRC Press Inc., Boca Raton, Florida.
- Sigma-Aldrich handbook of fine chemicals, 1998.
- The United Nations Economic Commission for Europe. Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Rev 5, 2013.
- Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures.
- Mexican Official Standards

    - NOM-004-SCT2-2008, Sistema de identificación de unidades destinadas al transporte terrestre de materiales y residuos peligrosos.
    - NOM-005-STPS-1998, Relativa a las condiciones de seguridad en los centros de trabajo para el manejo, transporte y almacenamiento de sustancias químicas peligrosas.
    - NOM-008-SCFI-2002, Sistema general de unidades de medida. México.
    - NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
    - NOM-018-STPS-2015, Sistema para la identificación y comunicación de peligros y riesgos por sustancias químicas peligrosas en los centros de trabajo.

Section 17.- Additional information

This information of Safety Data Sheet is considered accurate but is not exhaustive and shall only be used as a guideline based on current knowledge of the chemical substance or mixture. Safety precautions suitable for the product must be applied.
This material safety data sheet is only for information, consideration and investigation. Omega Aleaciones, S.A. de C.V. not warrant or assume responsibility for the accuracy or correctness of the data content and not responsible for any damage from handling or contact with the above product. Expressly disclaims to the civil liability, loss or damage by the use of this information. Please read the information in this sheet and turn to the person responsible for your company; this as compliance with federal and state laws. This information should be available to any employee who requests it.