Omega Aleaciones S.A. de C.V.

Omega® Solder Paste

MATERIAL SAFETY DATA SHEET

Components: PETROLATE / ZINC CHLORIDE / AMMONIUM CHLORIDE
MSDS Number: MSDS-41
Preparation date: January, 2018
Revision date: January, 2021
Revision Level: 03

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

Section 1.- Product and company identification

Trade Name:
Solder paste (flux) Omega®.

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 a flux for plumbing.

Section 2.- Hazard identification

2.1 Classification of the substance or mixture

GHS05

GHS05

GHS07

H318: Causes serious eye damage. Serious eye damage / Eye irritation 1.

GHS07

H302: Harmful if swallowed. Acute Tox. 4.
H315: Causes skin irritation. Skin Irrit.2.

2.2 Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard Pictograms

GHS05

GHS07

Signal word: **Danger**

Hazard statements

H302: Harmful if swallowed. Acute Tox. 4
H315: Causes skin irritation. Skin Irrit.2.
H318: Causes serious eye damage. Eye Irrit. 1.

Precautionary statements

P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/ eye protection/ face protection.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P301 + P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313: IF SKIN IRRITATION OCCURS: Get medical advice/ attention.
P501: Dispose of contents/ container to an approved waste disposal plant.

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency Overview	WARNING!

	CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Routes of entry	Inhalation and Ingestion.

Potential acute health effects	
Eyes	It causes burns of the eyes.
Skin	It causes skin burns.
Inhalation	Irritating to respiratory system. High temperatures or mechanical action can form dust and fumes that can irritate the respiratory tract.
Ingestion	Harmful if swallowed. Ingestion can cause burns on the lips, oral cavity, upper respiratory system, esophagus and possibly in the digestive tract.
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.

Section 3.- Composition and information on components

COMPONENT	C.A.S. NUMBER	WEIGHT %
Petrolate	8009-03-8	55 - 85
Zinc Chloride	7646-85-7	15 - 40
Ammonium Chloride	12125-02-9	0 - 51

All concentrations are indicated in percent by weight unless the ingredient is a gas. The concentrations of gases are in percentage by volume.

Section 4.- First aid measures

Eyes:
Wash thoroughly with water for at least 15 minutes. Take off your glasses if you wear them and you can do it easily. Get medical attention immediately.

Inhalation:
Move to the affected person in the open air. If breathing is difficult, give oxygen. Do not use the mouth-to-mouth resuscitation if the victim inhaled the substance. Induce artificial respiration with the help of a pocket mask equipped with a unidirectional valve or other suitable respiratory medical device. Get medical attention immediately.

Ingestion:
Wash out mouth with water only If the person is conscious. Never give anything by mouth to an unconscious or convulsing victim. If vomiting occurs naturally, have the victim lean forward to reduce the risk of aspiration. Do not use the mouth-to-mouth resuscitation if the victim ingested the substance. Induce artificial respiration with the help of a pocket mask equipped with a one-way valve or other suitable respiratory medical device. Get medical attention immediately.

Notes to physician:
Symptomatic treatment Exposure may aggravate pre-existing respiratory, lung or kidney disorders.

General advice:
Show this safety sheet to the doctor who is on duty.

Section 5.- Fire fighting measures

Flammability of the product	None known
Extinguishing media **Suitable** **Not suitable**	Dry chemical, foam, Carbon dioxide. None.
Special exposure hazards	Fire can cause irritating, corrosive or toxic gases.
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

Personal precautions:
Put on appropriate personal protective equipment (see Section 8). Avoid inhalation of dust and contact with skin and eyes.

Environmental precautions:
Avoid new leaks or spills if it can be done without risk. Do not pollute the water.

Methods for cleaning up:
Neutralize with soda or sodium bicarbonate. Dilute yourself with lots of water. Dispose in accordance with EPA directives.

Section 7.- Handling and storage

Handling:
Put on appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid inhalation of dust and fumes. Avoid contact with eyes, skin and clothing. Wash carefully after handling.

Storage:
Store in plastic containers in a cool area away from heat. Keep away from incompatible materials.

Section 8.- Exposure controls and personal protection

Occupational Exposure Limits
USA Threshold Limit Values ACGIH

Components	Type	Value	Form
Ammonium Chloride	STEL	20 mg/m3	Fume

(CAS 12125-02-9)	TWA	10 mg/m3	Fume
Zinc Chloride	STEL	2 mg/m3	Fume
(CAS 7646-85-7)	TWA	1 mg/m3	Fume

Mexico. Occupational Exposure Limits

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(CAS 7646-85-7)	TWA	1 mg/m3	Fume

Components	Type
Exposure guidelines	Use personal protective equipment when required. Keep the work clothes separate from the rest of the clothes.
Engineering controls	There should be adequate general ventilation (typically 10 air changes per hour). The frequency of air renewal must correspond to the conditions. If possible, use extractor hoods, local exhaust ventilation or other technical measures to maintain exposure levels below recommended exposure limits. If no exposure limits have been established, the level of airborne contaminants must be maintained at an acceptable level.
Personal Protective Equipment	
Eyes and face protection	Wear safety glasses or approved glasses.
Skin protection	Wear protective gloves.
Respiratory Protection	Use a respirator when local exhaust or ventilation is not adequate to maintain exposure below the Occupational Exposure Limit (OEL). In confined spaces it may be necessary to use a ventilator with air supply. The selection and use of respiratory protection equipment must be in compliance with OSHA's general industry standard 29 CFR 1910.134; or in Canada with the CSA Z94.4 standard.
Considerations	Always follow good personal hygiene measures, such as general hygiene washing after handling the material and before eating, drinking and / or smoking. Routinely wash work clothes and protective equipment to remove contaminants.

Section 9.- Physical and chemical properties

General data	
Appearance:	Cream color
State:	Semisolid
Shape:	Paste
Color:	Cream
Odor:	Slightly oil
Olfactory threshold:	It is not known.
Valor pH:	It is not known.
Vapor pressure:	NAV
Vapor density:	NAV
Boiling point:	NAV
Melting / freezing point:	37.78 °C (100 °F)
Solubility (water):	Insoluble
Specific gravity:	0.9
Flashpoint:	182.2 - 221.1 °C (360.0 - 430.0 °F).

Upper limit of inflammability in air,% in volume	It is not known.
Lower limit of flammability in air,% in volume:	It is not known.
Autoinflammation temperature	NAV
Evaporation rate:	NAV

Section 10.- Stability and reactivity

Stability and reactivity	The product is stable
Incompatibility with various Substances	Strong oxidizing agents, Chlorine, Turpentine, Potassium, Cyanides, Zinc sulfides powder.
Hazardous decomposition Products	Chlorine, Hydrogen chloride, Carbon monoxide.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions of reactivity	None known

Toxicity data

Product name or ingredient	Test	Result	Route	Species
Ammonium Chloride	LD50	1650 mg/kg	Oral	rat
Zinc Chloride	LD50	<= 1.975 mg/l, 10 Minutes	Inhalation	rat
	LD50	350 mg/kg	Oral	rat

Section 11.- Toxicological information

Sensitization	Is not known.
Serious effects	It causes burns. Harmful if swallowed. Irritates the respiratory tract. Exposure to high levels of smoke.
Carcinogenicity	None of the materials in this product have been classified as carcinogenic by IARC, NTP or ACGIH.
Symptoms and organs affected	Causes burns to the skin and eyes.

Section 12.- Ecological information

Ecotoxicity	This material has not been tested for environmental effects.
Persistence and degradability	There are no data on the degradability of the product.
Bioaccumulation / Accumulation	It is not known.
Mobility in the environment	Alloys in their massive forms are not mobile in the environment.

Ecotocixity daya

Product name or ingredient	Species	Period	Result
Zinc Chloride	Crassostrea virginica (EC50)	48 hours	0.1511 - 0.2782 mg/l,
	Oncorhynchus mykiss (LC50)	96 hours	0.101 - 0.197 mg/l,

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

State Regulations of the USA: This product is qualified as "chemically hazardous." According to the OSHA Hazard Communication Standard Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, subsection D) (Export notification)
Not regulated
Clean Air Act (CAA) section 112
Not regulated.
USA EPCRA (SARA Title III) Section 313 - Toxic chemical: minimis concentration

Ammonium Chloride (CAS 12125-02-9)	1.0 %
Zinc Chloride(CAS 7646-85-7)	1.0 % N982

USA EPCRA (SARA Title III) Section 313 - Substance listed as toxic

Ammonium Chloride (CAS 12125-02-9)	List
Zinc Chloride (CAS 7646-85-7)	N982 List

Reportable quantity (lb) according CERCLA (Superfund) (40 CFR 302.4)

Zinc Chloride: 1000
Ammonium Chloride: 5000

Superfund Amendments and Reauthorization Act1986 (SARA)

Hazard categories	
Immediate danger:	Yes
Delayed danger:	Yes
Ignition Risk:	No
Pressure danger:	No
Reactivity Risk:	No

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A) No

Section 311/312 (40 CFR 370)
Yes

(FDA) (21 CFR 1308,11-15)
Not controlled

Canadian regulations
This product has been classified according to the hazard criteria of the CPR and the HDS contains all the information required by the CPR.

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.

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