SAFETY DATA SHEET

This SDS is prepared in accordance with OSHA 29 CFR 1910.1200

Section 1. Identification

PRODUCT IDENTIFIER	**e9 Metal Advantage**	Code	Mixture
		CAS #	Mixture
RECOMMENDED USE	SURFACE COATING PRODUCT		
	For Industrial use only. Not recommended for Medical Device or Drug use.	In Case of Emergency	ChemTel
MANUFACTURER / SUPPLIER	e9 TREATMENTS	(US/Canada)	1-800-255-3924
	159 Enterprise Parkway, Boerne, TX - 78006	(International)	+01-813-248-0585
	P: 210-824-5364 TF: 888-301-2400+C13		

Section 2. Information on Hazardous Ingredients

HAZARD CLASSIFICATION

LABEL ELEMENTS	SINGLE WORD	Danger	
	PICTOGRAMS		

HAZARD STATEMENTS	Highly flammable liquid and vapor Causes Serious eye irritation
POTENTIAL ACUTE HEALTH EFFECTS	Skin: May cause skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May be absorbed through the skin. Ingestion: May be fatal or cause blindness if swallowed. May cause systemic toxicity with acidosis. May cause liver and kidney damage. May cause central nervous system depression, characterized by Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause respiratory tract irritation. May cause effects similar to those described for ingestion. May cause drowsiness, unconsciousness, and central nervous system depression.
PRECAUTIONARY STATEMENTS	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P242 Use only non-sparking tools. Take precautionary measures against static discharge. P280 Wear protective clothing. P233 Keep container tightly closed. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337+P313 If eye irritation persists: Get medical advice/attention. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
HAZARD NOT OTHERWISE CLASSIFIED	Not applicable

Section 3. Composition / Information on ingredients

DESCRIPTION LIQUID

INGREDIENT		C.A.S. NO.	% BY WT
Hydrochloric Acid		7647-01-0	< 2% Trade Secret*
Ethyl Alcohol		64-17-5	< 90% Trade Secret*

* The exact percentage (concentration) of this composition has been withheld as a Trade Secret.

Section 4. First Aid Measures

INHALATION	Supply fresh air; consult doctor in case of complaints.
SKIN CONTACT	Immediately wash with water and soap and rinse thoroughly. If symptoms develop, seek medical help.
EYE CONTACT	Rinse opened eye for several minutes under running water. Remove contacts if easy to do. If symptoms persist, seek medical help.
INGESTION	Do not induce vomiting; call for medical help immediately. Rinse mouth with water.
MOST IMPORTANT SYMPTOMS AND EFFECTS	See Section 11 Information on Toxicological effects.
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT	Symptomatic treatment

Section 5. Fire Fighting Measures

SUITABLE/UNSUITABLE EXTINGUISHING MEDIA	Non-combustible. Use fire extinguishing methods suitable to surrounding conditions. Foam. Fire-extinguishing powder. Carbon dioxide.

SPECIFIC HAZARDS (IE HAZARDOUS	Formation of toxic gases is possible during heating or in case of fire. Vapors are heavier than air Vapors spread on the ground to a distant ignition source and flash back Carbon monoxide and carbon dioxide
SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS	When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

Section 6. Accidental Release Measures

PERSON PRECAUTIONS, PPE	Ensure adequate ventilation. Wear protective equipment. Keep unprotected persons away. Keep away from ignition sources.
ENVIRONMENTAL PRECAUTIONS	Do not allow to enter sewers/ surface or ground water. Prevent from spreading (e.g. by damming-in or oil barriers) Inform respective authorities in case of seepage into water course or sewage system.
METHODS & MATERIALS OF CONTAINMENT & CLEANING	Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate organic solvent. Seal the container. Send for recovery or disposal in suitable receptacles.

Section 7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING	Ensure good ventilation/exhaustion at the workplace. Do not breathe thermal decomposition products. Avoid skin contact with hot material. For industrial or professional use only. Store work clothes separately from other clothing, food and tobacco products. Avoid release to the environment. Avoid contact with oxidizing agents (e.g., chlorine, chromic acid etc.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products. Keep away from heat and direct sunlight.
CONDITIONS FOR SAFE STORAGE	Store in cool, dry conditions. Keep container tightly sealed. Only use containers compatible with the product. Store only in unopened original receptacles. Do not store together with oxidizing and acidic materials as well as heavy metal compounds.

Section 8. Exposure Controls/Personal Protection

COMPONENT	Exposure Limits
Hydrochloric Acid	**ACGIH TLV (United States).** **STEL: 5 (ppm)** STEL: 7.5 (mg/m3) **OSHA PEL (United States).** TWA: 5 ppm 8 hours. TWA: 7 mg/m³ 8 hours. **NIOSH REL (United States).** CEIL: 5 ppm 10 hours. CEIL: 7.5 mg/m³ 10 hours.
Ethyl Alcohol	**ACGIH TLV (United States, 3/2012).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **OSHA PEL (United States, 6/2010).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 1/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.

VENTILATION /ENGINEERING CONTROLS	Provide appropriate local exhaust when product is heated. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.
SKIN PROTECTION	Wear protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Consider penetration times, rates of diffusion and the degradation of material when selecting gloves.
MATERIAL OF GLOVES	Reinforced nitrile rubber, NBR Suitable gloves not only depend on material, but also on manufacturing quality. Gloves should be checked prior to use for good manufacturing quality. Penetration time of glove material The exact breakthrough time of the glove material has to be found out by the manufacturer of the protective glove and has to be observed.
RESPIRATORY PROTECTION	Use suitable respiratory protective device in case of insufficient ventilation.
THERMAL HAZARDS	Wear heat insulating gloves when handling hot material to prevent thermal burns.
EYE PROTECTION	Wear safety glasses with side shields.
CLOTHING	Use protective suit. Solvent resistant protective clothing.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Colorless liquid
Odor	Alcohol-like
Odor threshold	80 ppm
pH	Not applicable

Melting/Freezing Point	-20º C
Initial boiling point and boiling range	78° C
Flash point	< 21º C
Evaporation rate	49 [Ref Std: BUOAC=1]
Flammability (solid, gas)	Not applicable
Upper flammability or explosive limits:	3.5 Vol %
Lower flammability or explosive limits:	15 Vol %
Vapor pressure	57 hPa (Ethanol)
Density at 20 C	0.8 g/cm3
Relative Density	Not determined
Solubility (in H_2O)	Not miscible or difficult to mix. Product precipitates.
Partition coefficient: n-octanol/water	Not determined
Auto-ignition Temperature	> 425 C
Decomposition temperature	Not determined
Viscosity	Not determined

Section 10. Stability and Reactivity Data

INCOMPATIBILITY WITH VARIOUS SUBSTANCES	Avoid strong acids and strong bases and strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	At elevated temperatures: Carbon monoxide ; carbon dioxide At extreme conditions of heat toxic vapor, Gas, Particulate may be released.

Section 11. Toxicological Information

COMPONENT		Test	Control Parameter
7647-01-0 Hydrochloric Acid		Oral Rat LD 50	238 - 277 mg/kg
		Inhalation Rat LD 50	3124 ppm/hour
64-17-5 ethanol		Oral Rat LD 50	7060 mg/kg
		Dermal Rabbit LD50	20000 mg/kg

INHALATION	Inhalation of high vapor concentrations may have a narcotic effect.
SKIN CONTACT	Irritation to skin and mucous membrane possible. Defatting effect on the skin.
EYE CONTACT	Irritation effect
INGESTION	No known health effects.
ACUTE EFFECT ON HUMANS	No known health effects.
CHRONIC EFFECT ON HUMANS	No known health effects.

Section 12. Ecological Information

ECOTOXICITY	**Test Organism**	**Result**
	EC0 6500 mg/l (Pseudomonas putida)	> 7.9 mg/l
	LC50 8150 mg/l (Leuciscus idus)	> 8.9 mg/l

Section 13. Disposal Considerations

WASTE INFORMATION	Send to an approved waste facility. All wastes must be handled in accordance with local, state and federal regulations. Do not allow product to reach sewage system or any water course.

Section 14. Transport Information

UN-Number- ADR, IMDG, IATA	UN1170
UN proper shipping name	Ethanol (Ethyl alcohol) or Ethanol solution (Ethyl alcohol solution)
TDG Classification	UN1170, Class 3 Flammable Liquid, PG II
DOT Pictogram	

Section 15. Other Regulatory Information and Pictograms

NFPA Hazard Classification	**Health: 3**	**Flammability: 1**	**Reactivity: 0**	Special Hazards: None

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

HMIS Hazard Classification	**Health: 1**	**Flammability: 1**	**Reactivity: 0**	**Protection: X - See PPE section.**

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

Section 16. Other Information

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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