

TRÜNANO™

TRUNANO METAL ARMOR BIOSURFACE  
MATERIAL SAFETY DATA SHEET

DATE OF PREPARATION  
June 14, 2010

**SECTION 1- PRODUCT AND COMPANY INFORMATION**

**COMPANY**

Evolution Surface Solutions  
7000 S. Cottonwood Street  
Midvale, Utah 84847  
855.878.6266  
[www.tru-nano.com](http://www.tru-nano.com)

**PRODUCT NAME**

TruNano Metal Armor BioSurface

**Regulatory Information** 800-424-8802

**Medical Emergency** 911

**Transportation Emergency\*** 800-424-9300

\*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

**SECTION 2-COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient	C.A.S. Number	Concentration	ACGIH TLV	OSHA PEL
Trade Secret A-1	Proprietary	23-25	1000 ppm	n/a
Trade Secret A-2	Proprietary	9-10	10 ppm	100 ppm
Ethyl Alcohol	64-17-5	9-10	1000 ppm	1000 ppm
Methyl Acetate	79-20-9	36-39	200 ppm	200 ppm
Trade Secret B	Proprietary	13-16	n/a	n/a

**SECTION 3-HAZARDS IDENTIFICATION**

**ROUTES OF EXPOSURE**

INHILATION of vapor or spray mist  
EYE or SKIN contact with the product, vapor, or spay mist

**EFFECTS OF OVEREXPOSURE**

**EYES:** irritation, redness  
**SKIN:** irritation, redness  
**INHILATION:** headaches or dizziness

NFPA Est.	HMIS Est.
Health: 1	Health: 1
Fire: 0	Fire: 0
React: 0	React: 0

**SECTION 4-FIRST AID MEASURES**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.  
**Skin:** In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and shoes. Do not use organic solvents for cleanup as they may dry or irritate the skin and act as a carrier for chemical absorption.

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**Inhalation:** If aerosol or mists are formed, remove affected person to fresh air. Seek immediate medical attention if breathing difficulties occur. Also keep patient half sitting with upper body raised.

**Ingestion:** If accidentally swallowed, rinse mouth thoroughly with water and, afterwards, drink plenty of water. In case of discomfort, obtain medical attention. Notes to physician: If substance has been swallowed obtain early endoscopy in order to assess mucosa lesions in the esophagus and stomach, which may appear. If necessary, aspirate leftover substance.

**SECTION 5-FIREFIGHTING MEASURES**

<b>FLASH POINT:</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMABILITY CLASSIFICATION</b>
<93° C	NOT SURE	NOT SURE	RED LABEL -- Flammable, Flash below 100 °F (38 °C)

**EXTINGUISHING MEDIA**

Use water spray, foam, dry chemical, or CO2

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Hazardous fumes (ethanol, phenolics, oxides of carbon and nitrogen) may be evolved upon exposure to heat or open flame.

**SPECIAL FIRE FIGHTING PROCEDURES**

N/A

**SECTION 6-ACCIDENTAL RELEASE MEASURES**

Dike area to prevent spreading. Absorb on vermiculite, sand or other inert absorbing material. Dispose of as a chemical waste in accordance with current local, state and federal regulations.

**SECTION 7- HANDLING AND STORAGE**

**DOT STORAGE CLASS:** class 3

**PROPER DOT SHIPPING NAME:** Flammable Liquid

**HANDLING:** Provide good ventilation or extraction. Avoid prolonged or repeated breathing of vapor. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, flames and other sources of ignition. Wash hands thoroughly after handling.

**STORAGE:** Avoid storage over 100° F, contamination with incompatible materials. Keep containers tightly closed in a cool, well ventilated place. Protect from moisture. Residual vapors might explode on ignition. Do not apply heat, cut, drill, and grind or weld on or near this container.

**SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION**

**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation. Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using.

**VENTILATION SYSTEM**

Positive fresh air exhaust should be provided in the work area. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use.

**SKIN PROTECTION**

Avoid skin contact. Wear butyl-rubber gloves and impervious protective clothing.

**EYE PROTECTION**

Do not wear contact lenses. Chemical safety goggles or splash shields are recommended.

**SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES**

**VAPOR PRESSURE:** 9 hPa @ 20° C

**VAPOR DENSITY:** Heavier than air

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**SPECIFIC GRAVITY:** 1.02  
**BOILING POINT:** >90°C  
**SOLUBILITY IN WATER:** Insoluble  
**APPEARANCE:** Clear to slightly milky liquid  
**ODOR:** Mild fruity  
**VOLATILE ORGANIC COMPOUNDS:** <100 g/l

**SECTION 10- STABILITY AND REACTIVITY**

**STABILITY:** Stable

**HAZARDOUS DECOMPOSITION PRODUCTS:** Ethanol

**INCOMPATIBILITIES:** oxidizers, alkalis, acids, aliphatic amines, nitrates, water

**HAZARDOUS POLYMERIZATION:** may occur

**SECTION 11 – TOXICOLOGICAL INFORMATION**

<b>Ingredient</b>	<b>Target Organs</b>	<b>IARC CATEGORY</b>
Trade Secret A-1	IRR, LIV, KID	NO
Trade Secret A-2	IRR, LIV, KID	NO
Ethyl Alcohol	HEART, IRR, LIV, KID	NO
Methyl Acetate	IRR	NO
Trade Secret B	NONE	NO

**ABBREVIATIONS:**

IRR = Irritant

LIV = Liver

KID = Kidney

**SECTION 12- ECOLOGICAL INFORMATION**

**ECOTOXICOLOGICAL INFORMATION**

No data available

**SECTION 13 – DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**SECTION 14 – TRANSPORT INFORMATION**

**DOT and IATA Hazard Classification:** Class 3 Flammable Liquid

**Proper DOT Shipping Name:** Coatings Solution

**Identification Number:** DOT – UN 1139 IATA – UN 1139

**SECTION 15-REGULATORY INFORMATION**

**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

**CAS number**

**Chemical Compound**

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64-17-5	Ethyl Alcohol
540-88-5	Methyl Acetate

**CALIFORNIA PROPOSITION 65**

This product does not contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

**SECTION 16 – OTHER INFORMATION**

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

**IMPORTANT  
LIABILITY DISCLAIMER**

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct as it was obtained from sources we believe are reliable. However, no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place, to examine all aspects of its operation and to determine if or where precautions, in addition to those described herein, are required.