

# MATERIAL SAFETY DATA SHEET

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS regulations

**METALCLAD DurAlloy Base**

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	<b>METALCLAD DurAlloy Base</b>
CHEMICAL FAMILY NAME:	Mixture
U.N. NUMBER:	UN3082
U.N. DANGEROUS GOODS CLASS:	Environmentally Hazardous Substances, Liquid, n.o.s (Diglycidyl ether bisphenol A polymer), Class 9, PGIII
SUPPLIER/MANUFACTURER'S NAME:	<b>ENECON Corporation</b>
ADDRESS:	6 Platinum Court, Medford, New York 11763-2251
EMERGENCY PHONE:	800-255-3924 (U.S.A.)
	813-248-0585 (International)
BUSINESS PHONE:	516-349-0022
BUSINESS FAX:	516-349-5522
DATE OF PREPARATION:	May 26, 2012
DATE OF LAST REVISION:	January, 2009

## SECTION 2 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** This product is a gray paste with no odor. Exposure to this product can be irritating to eyes, respiratory system and skin. It is a non-flammable liquid with a flash point >250°C. The Environmental effects of this product have not been investigated, however it may cause adverse effects.

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS



NFPA RATING SYSTEM



### HEALTH HAZARDS OR RISKS FROM EXPOSURE:

**ACUTE:**

**INHALATION:** Inhalation of vapors from heated materials may cause irritation to respiratory tract

**EYE CONTACT:** Direct contact may cause irritation with pain, burning and tearing.

**SKIN CONTACT:** Prolonged or repeated contact may cause skin irritation or dermatitis.

**INGESTION:** Not a normal route of entry in normal application, however Ingestion of this product will cause gastrointestinal irritation.

**CHRONIC:** Prolonged or repeated exposure may cause dermatitis to the skin.

**TARGET ORGANS:**

ACUTE: Eye, Skin

CHRONIC: Skin

## SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Barium Sulfate	7727-43-7	231-784-4	0827	65 – 75%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Bisphenol A Diglycidyl Ether Polymer	25068-38-6	500-033-5	Not Listed	20 – 30%	HAZARD CLASSIFICATION: [Xi] Irritant, [N] Dangerous to the Environment RISK PHRASES: R36/38, R50/53
Epoxy Phenol Novolac Resin	28064-14-4	Not Listed in ESIS	Not Listed	1 - 5%	HAZARD CLASSIFICATION: [Xi] Irritant, [N] Dangerous to the Environment RISK PHRASES: R36/38, R50/53
Silicon Dioxide – Non Crystalline	67762-90-7	Not Listed in ESIS	Not Listed	1 - 3%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Silane	2530-83-8	219-784-2	Not Listed	0.5 – 2%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Titanium Dioxide	13463-67-7	236-675-5	0338	<0.5%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

## SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

# MATERIAL SAFETY DATA SHEET

## METALCLAD DurAlloy Base

**EYE CONTACT:** If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

**SKIN CONTACT:** Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

**INHALATION:** If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

**INGESTION:** If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing skin, or eye problems may be aggravated by prolonged contact.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and reduce over-exposure.

### SECTION 5 - FIRE-FIGHTING MEASURES

**FLASH POINT:** >250°C  
**FLAMMABILITY CLASS:** 111B  
**AUTOIGNITION TEMPERATURE:** Not Established  
**FLAMMABLE LIMITS (in air by volume, %):** Lower (LEL): NA Upper (UEL): NA  
**FIRE EXTINGUISHING MATERIALS:** As appropriate for surrounding fire. Carbon dioxide, foam, dry chemical, halon, or water spray.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Combustion products may be toxic.  
**Explosion Sensitivity to Mechanical Impact:** Not Sensitive.  
**Explosion Sensitivity to Static Discharge:** Not Sensitive  
**SPECIAL FIRE-FIGHTING PROCEDURES:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** Personnel should be trained for spill response operations.

**SPILLS:** Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up with an absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

### SECTION 7 - HANDLING and STORAGE

**WORK PRACTICES AND HYGIENE PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing dusts generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

**STORAGE AND HANDLING PRACTICES:** Containers of this product must be properly labeled. Store containers in a cool, dry location. Keep container tightly closed when not in use. Store away from strong acids or oxidizers.

### SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

#### EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA
Barium Sulfate	7727-43-7	Not Listed	Not Listed
Bisphenol A Diglycidyl Ether Polymer	25068-38-6	Not Listed	Not Listed
Epoxy Phenol Novolac Resin	28064-14-4	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Silicon Dioxide – Non Crystalline	67762-90-7	10 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>
Silane	2530-83-8	Not Listed	Not Listed
Titanium Dioxide	13463-67-7	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>

Currently, International exposure limits are not established for all the components of this product. Please check with competent authority in each country for the most recent limits in place.

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada. Please reference applicable regulations and standards for relevant details.*

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93.

**EYE PROTECTION:** Safety glasses or chemical goggles where splashing is possible. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

# MATERIAL SAFETY DATA SHEET

## **METALCLAD DurAlloy Base**

**SKIN PROTECTION:** Use chemical resistant gloves to prevent skin contact. Use body protection appropriate to prevent skin contact (e.g. lab coat, overalls). If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

### **SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES**

<b>PHYSICAL STATE:</b>	Liquid
<b>APPEARANCE &amp; ODOR:</b>	Gray to black paste with no odor.
<b>ODOR THRESHOLD (PPM):</b>	None
<b>VAPOR PRESSURE (mmHg):</b>	1 mm @180°C
<b>VAPOR DENSITY (AIR=1):</b>	Not Available
<b>BY WEIGHT:</b>	Not Available
<b>EVAPORATION RATE (nBuAc = 1):</b>	Not Available
<b>BOILING POINT (C°):</b>	>200°C
<b>FREEZING POINT (C°):</b>	Not Available
<b>pH:</b>	Not Available
<b>SPECIFIC GRAVITY 20°C: (WATER =1)</b>	2.5
<b>SOLUBILITY IN WATER (%)</b>	Non-Soluble
<b>VOC:</b>	26 g/L

### **SECTION 10 - STABILITY and REACTIVITY**

**STABILITY:** Product is stable

**DECOMPOSITION PRODUCTS:** When heated to decomposition this product may form formaldehyde, carbon dioxide, carbon monoxide and phenolic materials as products of incomplete combustion.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** Strong acids and strong oxidizing agents. Uncontrolled reactions with amines and bases.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Contact with incompatible materials.

### **SECTION 11 - TOXICOLOGICAL INFORMATION**

**TOXICITY DATA:** Toxicity data is available for the following components:

CAS# 25068-38-6 Oral LD50	>5000 mg/kg	Rat
CAS# 28064-14-4 Oral LD50	>10000 mg/kg	Rat
CAS# 67762-90-7 Oral LD50	>5000 mg/m <sup>3</sup>	Rat

**SUSPECTED CANCER AGENT:** One or more of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is considered to be, or suspected to be a cancer-causing agent by these agencies.

Titanium Dioxide CAS# 13463-67-7 IARC Group 2B (possible carcinogen to humans)

**IRRITANCY OF PRODUCT:** Contact with this product can be irritating to exposed skin, eyes and respiratory system.

**SENSITIZATION OF PRODUCT:** This product is not considered a sensitizer.

**REPRODUCTIVE TOXICITY INFORMATION:** No information concerning the effects of this product and its components on the human reproductive system.

### **SECTION 12 - ECOLOGICAL INFORMATION**

**ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.**

**ENVIRONMENTAL STABILITY:** No Data available at this time.

**EFFECT OF MATERIAL ON PLANTS or ANIMALS:** No evidence is currently available on this product's effects on plants or animals, however release of this product may have long term adverse effects to the environment.

**EFFECT OF CHEMICAL ON AQUATIC LIFE:** No evidence is currently available on this product's effects on aquatic life, however release of this product may have long term adverse effects to the environment.

### **SECTION 13 - DISPOSAL CONSIDERATIONS**

**PREPARING WASTES FOR DISPOSAL:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

### **SECTION 14 - TRANSPORTATION INFORMATION**

**US DOT; IATA; IMO; ADR:**

**THIS PRODUCT IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.**

**PROPER SHIPPING NAME:** Environmentally Hazardous Substances, Liquid, n.o.s (Diglycidyl ether bisphenol A polymer)

**HAZARD CLASS NUMBER and DESCRIPTION:** Class 9, Environmentally Hazardous Substance

**UN IDENTIFICATION NUMBER:** UN3082

**PACKING GROUP:** PGIII

**DOT LABEL(S) REQUIRED:** Class 9, Environmentally Hazardous Substance

**NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004):** 171

**MARINE POLLUTANT:** None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

**U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:**

This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

**TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:**

This product is classified as Dangerous Goods, per regulations of Transport Canada.

# MATERIAL SAFETY DATA SHEET

**METALCLAD DurAlloy Base**

**INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):**

This product is classified as Dangerous Goods, by rules of IATA:

**INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:**

This product is classified as Dangerous Goods by the International Maritime Organization.

## **SECTION 15 - REGULATORY INFORMATION**

**UNITED STATES REGULATIONS**

**SARA REPORTING REQUIREMENTS:** This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

**TSCA:** All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

**SARA 311/312:**

Acute Health: Yes                      Chronic Health: No                      Fire: No                      Reactivity: No

**U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA REPORTABLE QUANTITY (RQ):** None

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** None of the ingredients are on the California Proposition 65 lists.

**CANADIAN REGULATIONS:**

**CANADIAN DSL/NDL INVENTORY STATUS:** All of the components of this product are on the DSL Inventory

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** No component of this product is on the CEPA First Priorities Substance Lists.

**CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** This is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS). Class D Division 2B

**INTERNATIONAL CHEMICAL INVENTORIES:**

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt
Korean Existing Chemicals List (ECL):	Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or Exempt
Swiss Giftlist List of Toxic Substances:	Listed or Exempt
U.S. TSCA:	Listed

## **SECTION 16 - OTHER INFORMATION**

**PREPARED BY:** Paul Eigbrett

MSDS Authoring PLUS

**Disclaimer:** To the best of ENECON Corporation's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type either express or implied are provided. The information contained herein relates only to this specific product.

# MATERIAL SAFETY DATA SHEET

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS regulations

## METALCLAD DurAlloy Activator

### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: METALCLAD DurAlloy Activator  
CHEMICAL FAMILY NAME: Mixture  
U.N. NUMBER: UN2735  
U.N. DANGEROUS GOODS CLASS: Polyamines, Liquid, Corrosive, n.o.s. (Contains Nonylphenol, Aminoethyl Piperazine and Diethylene Triamine), Class 8, PGIII  
SUPPLIER/MANUFACTURER'S NAME: ENECON Corporation  
ADDRESS: 6 Platinum Court, Medford, New York 11763-2251  
EMERGENCY PHONE: 800-255-3924 (U.S.A.)  
813-248-0585 (International)  
BUSINESS PHONE: 516-349-0022  
BUSINESS FAX: 516-349-5522  
DATE OF PREPARATION: May 26, 2012  
DATE OF LAST REVISION: January, 2009

### SECTION 2 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** This product is a white paste with an ammonia odor. Corrosive: may cause severe eye damage. Vapors may be irritating to eyes. May be toxic if absorbed through skin. Inhalation of vapors can be irritating to the respiratory tract. It is a non-flammable liquid with a flash point >95°C. The Environmental effects of this product have not been investigated, however this product may cause significant adverse effects

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS



NFPA RATING SYSTEM



#### HEALTH HAZARDS OR RISKS FROM EXPOSURE:

##### ACUTE:

**INHALATION:** Inhalation of mists or vapors from heated materials may cause irritation to respiratory tract

**EYE CONTACT:** Corrosive to the eye and may cause severe damage. Vapors may be irritating to eyes.

**SKIN CONTACT:** May be toxic if absorbed through skin. Sensitization may occur. Corrosive to the skin.

**INGESTION:** Not a normal route of entry in normal application, however ingestion of this product will cause burns to mouth and throat.

**CHRONIC:** Prolonged or repeated exposure may cause dermatitis to the skin.

##### TARGET ORGANS:

ACUTE: Eye, Skin

CHRONIC: Skin

### SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Fibrous Glass	65997-17-3	266-046-0	Not Listed	40 – 50%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Nonylphenol	25154-52-3	246-672-0	0309	10 – 20%	HAZARD CLASSIFICATION: [Xn] Harmful, [C] Corrosive, [N] Dangerous to the Environment RISK PHRASES: R21/22, R34, R43, R52/53
Aminoethyl Piperazine	140-31-8	205-411-0	Not Listed	10 – 20%	HAZARD CLASSIFICATION: [Xn] Harmful, [C] Corrosive, [N] Dangerous to the Environment RISK PHRASES: R21/22, R34, R43, R52/53
Diethylenetriamine	111-40-0	203-865-4	0620	1 – 10%	HAZARD CLASSIFICATION: [Xn] Harmful, [C] Corrosive RISK PHRASES: R21/22, R34, R43
Bisphenol A	80-05-7	201-245-8	0634	1 – 5%	HAZARD CLASSIFICATION: [Xi] Irritant, [N] Dangerous to the Environment RISK PHRASES: R37, R41, R43, R52
Titanium Dioxide	13463-67-7	236-675-5	0338	1 – 5%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38

# MATERIAL SAFETY DATA SHEET

## METALCLAD DurAlloy Activator

Silicon Dioxide – Non Crystalline	67762-90-7	Not Listed in ESIS	Not Listed	1 - 3%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

### SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

**EYE CONTACT:** If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

**SKIN CONTACT:** Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

**INHALATION:** If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

**INGESTION:** If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing skin, or eye problems may be aggravated by prolonged contact.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and reduce over-exposure.

### SECTION 5 - FIRE-FIGHTING MEASURES

**FLASH POINT:**

>95°C

**FLAMMABILITY CLASS:**

111B

**AUTOIGNITION TEMPERATURE:**

Not Established

**FLAMMABLE LIMITS (in air by volume, %):**

Lower (LEL): NA Upper (UEL): NA

**FIRE EXTINGUISHING MATERIALS:**

As appropriate for surrounding fire. Carbon dioxide, foam, dry chemical, halon, or water spray.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Oxides of nitrogen and nitrogen containing organic compounds may be formed during combustion. Combustion products may be toxic.

Explosion Sensitivity to Mechanical Impact:

Not Sensitive.

Explosion Sensitivity to Static Discharge:

Not Sensitive

**SPECIAL FIRE-FIGHTING PROCEDURES:**

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** Personnel should be trained for spill response operations.

**SPILLS:** Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up with an absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

### SECTION 7 - HANDLING and STORAGE

**WORK PRACTICES AND HYGIENE PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing dusts generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

**STORAGE AND HANDLING PRACTICES:** Containers of this product must be properly labeled. Store containers in a cool, dry location. Keep container tightly closed when not in use. Store away from strong acids or oxidizers and reactive materials.

### SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

**EXPOSURE LIMITS/GUIDELINES:**

Chemical Name	CAS#	ACGIH TWA	OSHA TWA
Fibrous Glass	65997-17-3	Not Listed	Not Listed
Nonylphenol	25154-52-3	Not Listed	Not Listed
Aminoethyl Piperazine	140-31-8	Not Listed	Not Listed

# MATERIAL SAFETY DATA SHEET

## METALCLAD DurAlloy Activator

Diethylenetriamine	111-40-0	Not Listed	Not Listed
Bisphenol A	80-05-7	Not Listed	Not Listed
Titanium Dioxide	13463-67-7	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Silicon Dioxide – Non Crystalline	67762-90-7	10 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>

Currently, International exposure limits are not established for all the components of this product. Please check with competent authority in each country for the most recent limits in place.

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapors. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada. Please reference applicable regulations and standards for relevant details.

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93.

**EYE PROTECTION:** Safety glasses or chemical goggles where splashing is possible. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

**SKIN PROTECTION:** Use chemical resistant gloves to prevent skin contact. Use body protection appropriate to prevent skin contact (e.g. lab coat, overalls). If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

### SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	Paste
<b>APPEARANCE &amp; ODOR:</b>	White paste with an ammonia odor.
<b>ODOR THRESHOLD (PPM):</b>	None
<b>VAPOR PRESSURE (mmHg):</b>	Not Available
<b>VAPOR DENSITY (AIR=1):</b>	Not Available
<b>BY WEIGHT:</b>	Not Available
<b>EVAPORATION RATE (nBuAc = 1):</b>	Not Available
<b>BOILING POINT (C°):</b>	>200°C
<b>FREEZING POINT (C°):</b>	Not Available
<b>pH:</b>	Not Available
<b>SPECIFIC GRAVITY 20°C: (WATER =1)</b>	1.48
<b>SOLUBILITY IN WATER (%)</b>	Non-Soluble
<b>VOC:</b>	26 g/L

### SECTION 10 - STABILITY and REACTIVITY

**STABILITY:** Product is stable

**DECOMPOSITION PRODUCTS:** When heated to decomposition this product may form carbon dioxide, carbon monoxide, oxides of nitrogen and unidentified organic compounds.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** Strong acids and strong oxidizing agents.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Contact with incompatible materials.

### SECTION 11 - TOXICOLOGICAL INFORMATION

**TOXICITY DATA:** Toxicity data is available for the following components:

CAS# 25154-52-3 Oral LD50	1300 mg/kg	Rat
CAS# 140-31-8 Oral LD50	>1620 mg/kg	Rat
CAS# 13463-67-7 Oral LD50	>24000 mg/kg	Rat

**SUSPECTED CANCER AGENT** One or more of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is considered to be, or suspected to be a cancer-causing agent by these agencies.

Titanium Dioxide CAS# 13463-67-7 IARC Group 2B (possible carcinogen to humans)

**IRRITANCY OF PRODUCT:** Contact with this product can be irritating to exposed skin, eyes and respiratory system.

**SENSITIZATION OF PRODUCT:** This product is not considered a sensitizer.

**REPRODUCTIVE TOXICITY INFORMATION:** No information concerning the effects of this product and its components on the human reproductive system.

### SECTION 12 - ECOLOGICAL INFORMATION

**ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.**

**ENVIRONMENTAL STABILITY:** No Data available at this time.

**EFFECT OF MATERIAL ON PLANTS or ANIMALS:** No evidence is currently available on this product's effects on plants or animals, however release of this product may cause significant adverse effects.

**EFFECT OF CHEMICAL ON AQUATIC LIFE:** No evidence is currently available on this product's effects on aquatic life, however release of this product may cause significant adverse effects.

# MATERIAL SAFETY DATA SHEET

**METALCLAD DurAlloy Activator**

## SECTION 13 - DISPOSAL CONSIDERATIONS

**PREPARING WASTES FOR DISPOSAL:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

## SECTION 14 - TRANSPORTATION INFORMATION

**US DOT; IATA; IMO; ADR:**

**THIS PRODUCT IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.**

**PROPER SHIPPING NAME:** Polyamines, Liquid, Corrosive, n.o.s. (Contains Nonylphenol, Aminoethyl Piperazine and Diethylene Triamine)

**HAZARD CLASS NUMBER and DESCRIPTION:** Class 8 Corrosive

**UN IDENTIFICATION NUMBER:** UN2735

**PACKING GROUP:** PGIII

**DOT LABEL(S) REQUIRED:** Corrosive

**NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004):** 153

**MARINE POLLUTANT:** None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

**U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:**

This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

**TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:**

This product is classified as Dangerous Goods, per regulations of Transport Canada.

**INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):**

This product is classified as Dangerous Goods, by rules of IATA:

**INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:**

This product is classified as Dangerous Goods by the International Maritime Organization.

## SECTION 15 - REGULATORY INFORMATION

**UNITED STATES REGULATIONS**

**SARA REPORTING REQUIREMENTS:** This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows:

**SARA 313 REPORTING:** Bisphenol A CAS# 80-05-7 <5%

**TSCA:** All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

**SARA 311/312:**

Acute Health: Yes                      Chronic Health: No                      Fire: No                      Reactivity: No

**U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA REPORTABLE QUANTITY (RQ):** None

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** None of the ingredients are on the California Proposition 65 lists.

**CANADIAN REGULATIONS:**

**CANADIAN DSL/NDL INVENTORY STATUS:** All of the components of this product are on the DSL Inventory

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** No component of this product is on the CEPA First Priorities Substance Lists.

**CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** This is considered to be a hazardous material under the Hazardous Products Act Class D Division 2 and Class E, as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).

**INTERNATIONAL CHEMICAL INVENTORIES:**

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt
Korean Existing Chemicals List (ECL):	Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or Exempt
Swiss Giftlist List of Toxic Substances:	Listed or Exempt
U.S. TSCA:	Listed

## SECTION 16 - OTHER INFORMATION

**PREPARED BY:** Paul Eigbrett

MSDS Authoring PLUS

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