PRODUCT NAME: ABRO Epoxy Steel Industrial Strength (Hardner)

PRODUCT NUMBER/SIZE: ES-506 **Revision Date: 03/17/2015**

SECTION 1
Identification of the Substance and of the Company/Undertaking

MANUFACTURER'S NAME: ABRO INDUSTRIES, INC.

ADDRESS: 3580 Blackthorn Court
South Bend, IN 46628
USA

PRODUCT DESCRIPTION: Adhesive

COMPANY PHONE: 574-232-8289

EMERGENCY 24-HR TELEPHONE: Chemtrec: US/Canada 1-800-424-9300
International +1-703-527-3887

SECTION 2
Hazards Identification

Health	2
Flammability	0
Physical Hazard	0

OSHA/HCS Status: Not classified.

Classification:

Physical hazards: Not classified.

Health hazards: Acute toxicity, oral. Category 4
Acute toxicity, dermal. Category 4.
Acute toxicity, inhalation. Category 4.
Skin corrosion/irritation. Category 2.
Serious eye damage/eye irritation. Category 2
Sensitization, respiratory. Category 1
Sensitization, skin. Category 1
Carcinogenicity. Category 2.
Reproductive toxicity (fertility). Category 2
Specific target organ toxicity, repeated exposure. Category 2.

Environmental hazards: Hazardous to the aquatic environment, acute hazard. Category 2.
Hazardous to the aquatic environment, long-term hazard. Category 3.

Label Pictogram(s):

Signal Word: **DANGER**

Hazard Phrases: Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary Phrases: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Response: If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a poison center/doctor. Take off contaminated clothing and wash before reuse.

Storage / Disposal: Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

Other: 73.87% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 73.31% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

SECTION 3
Composition/Information on Ingredients

COMPONENTS	CAS Number	Percent by weight
Barium Sulfate	7727-43-7	20 - < 30 %
Calcium Carbonate	1317-65-3	20 - < 30 %
Magnesium Carbonate	546-93-0	5 - < 10 %
Furfuryl Alcohol	98-00-0	3 - < 5 %
Talc	14807-96-6	3 - < 5 %
Titanium Dioxide	13463-67-7	1 - < 3 %
Triethylenetetramine	112-24-3	1 - < 3 %
Bisphenol A	80-05-7	< 1 %

Diethylenetriamine	111-40-0	< 1 %
Other components below reportable levels		20 - < 30%

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4
First Aid Measures

First Aid Measures

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Skin Contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Ingestion

Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

Most Important Signs & Symptoms/Effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General Information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

SECTION 5
Fire Fighting Measures

Suitable Extinguishing Media:	Water fog. Foam. Dry chemical powder. Carbon dioxide (C02).
Unsuitable Extinguishing Media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific Hazards Arising From the Chemical:	During fire, gases hazardous to health may be formed.
Special Protective Equipment and Precautions for Fire-Fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-Fighting Equipment/Instructions:	Move containers from fire area if you can do so without risk.
Specific Methods:	Use standard firefighting procedures and consider the hazards of other involved materials.
General Fire Hazards:	No unusual fire or explosion hazards noted.

SECTION 6
Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up:	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 7
Handling and Storage

Precautions for Safe Handling

Precautions for safe handling:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8
Exposure Controls/Personal Protection

Occupational Exposure Limits:

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Barium Sulfate (CAS 7727-43-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Calcium Carbonate (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Furfuryl Alcohol (CAS 98-00-0)	PEL	200 mg/m3	
		50 ppm	
Magnesium Carbonate (CAS 546-93-0)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Titanium Dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		20 mppcf	
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Barium Sulfate (CAS 7727-43-7)	TWA	5 mg/m3	Inhalable fraction.
Diethylenetriamine (CAS 111-40-0)	TWA	1 ppm	
Furfuryl Alcohol (CAS 98-00-0)	STEL	15 ppm	
	TWA	10 ppm	
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction.

Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3

US. NIOSH:Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Barium Sulfate (CAS 7727-43-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Calcium Carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Diethylenetriamine (CAS 111-40-0)	TWA	4 mg/m3	
		1 ppm	
Furfuryl Alcohol (CAS 98-00-0)	STEL	60 mg/m3	
		15 ppm	
	TWA	40 mg/m3	
		10 ppm	
Magnesium Carbonate (CAS 546-93-0)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Triethylenetetramine (CAS 112-24-3)	TWA	6 mg/m3	
		1 ppm	

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation	
Diethylenetriamine (CAS 111-40.0)	Can be absorbed through the skin.
Furfuryl alcohol (CAS 98-0Q.O)	Can be absorbed through the skin.
US - Minnesota Haz Subs: Skin designation applies	
Diethylenetriamine (CAS 111-40.0)	Skin designation applies.
Furfuryl alcohol (CAS 98-0Q.O)	Skin designation applies.
US - Tennessee OELs: Skin designation	
Furfuryl alcohol (CAS 98-00-0)	Can be absorbed through the skin.
US ACGIH Threshold Limit Values: Skin designation	
Diethylenetriamine (CAS 111-40-0)	Can be absorbed through the skin.
Furfuryl alcohol (CAS 98-00-0)	Can be absorbed through the skin.
US NIOSH Pocket Guide to Chemical Hazards: Skin designation	
Diethylenetriamine (CAS 111-40-0)	Can be absorbed through the skin.
Furfuryl alcohol (CAS 98-00-0)	Can be absorbed through the skin.
US WEEL Guides:Skin designation	
Triethylenetetramine (CAS 112-24-3)	Can be absorbed through the skin.

Appropriate Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/Face Protection: Wear safety glasses with side shields (or goggles).

Skin Protection:

Hand Protection: Wear appropriate chemical resistant gloves.

Other: Wear appropriate chemical resistant clothing.

Respiratory Protection: Wear positive pressure self-contained breathing apparatus (SCBA).

Thermal Hazards: Wear appropriate thermal protective clothing, when necessary.

General Hygiene Considerations: When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

SECTION 9
Physical and Chemical Properties

Appearance:	
Physical State:	Liquid.
Form:	Liquid.
Color:	Not Available.
Odor:	Not Available.
Odor Threshold:	Not Available.
pH:	Not Available.
Melting Point/Freezing Point:	1814 °F (990 °C) estimated
Initial Boiling Point and Boiling Range:	Not Available.
Flash Point:	Not Available.
Evaporation Rate:	Not Available.
Flammability (Solid, Gas):	Not Applicable.
Upper/Lower Flammability or Explosive Limits:	
Flammability Limit – Lower (%)	Not Available.
Flammability Limit – Upper (%)	Not Available.
Explosive Limit – Lower (%)	Not Available.
Explosive Limit – Upper (%)	Not Available.
Vapor Pressure:	0.00001 hPa estimated
Vapor Density:	Not Available.
Relative Density:	Not Available.
Solubility(ies):	
Solubility (water):	Not Available.
Partition Coefficient: (N-Octanol/Water)	Not Available.
Auto-Ignition Temperature:	Not Available.
Decomposition Temperature:	Not Available.
Viscosity:	Not Available.

Other Information:

Density:	14.81 lbs/gal
Percent Volatile:	0.93 % estimated
Specific gravity:	1.78
VOC:	0.93 % estimated

SECTION 10
Stability and Reactivity

Reactivity:	The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use.
Conditions to Avoid:	Contact with incompatible materials.
Incompatible Materials:	Aluminum, Phosphorus, Fluorine.
Hazardous Decomposition Products:	No hazardous decomposition products are known.

SECTION 11
Toxicological Information

Information on the likely routes of exposure:

Eye Contact:	Causes serious eye irritation.
Inhalation:	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Contact:	Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Ingestion:	Harmful if swallowed.

Symptoms Related To The Physical, Chemical And Toxicological Characteristics:

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing. Difficulty in breathing. Skin inritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on Toxicological Effects:

Acute Toxicity: Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. May cause an allergic skin reaction.

COMPONENTS	**Species**	**Test Results**
Bisphenol A (CAS 80-05-7)		
Acute		
Oral		
LD50	Mouse	2500 mg/kg
	Rat	3300 mg/kg
Diethylenetriamine (CAS 111-40-0)		
Acute		
Oral		
LD50	Rat	1080 mg/kg
Furfuryl alcohol (CAS 98-00-0)		
Acute		
Dermal		
LD50	Rabbit	400 mg/kg

Inhalation		
LC50	Rat	233 ppm, 4 Hours
Oral		
LD50	Mouse	160 mg/kg
	Rat	275 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.
Respiratory or skin sensitization:
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity: Suspected of causing cancer.

IARC Monographs.Overall Evaluation of Carcinogenicity

Talc (CAS 14807-96-6)	2B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity: Suspected of damaging fertility.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not an aspiration hazard.

Chronic effects: May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

SECTION 12
Ecological Information

Ecotoxicity: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

COMPONENTS		Species	Test Results
Barium Sulfate (CAS 7727-43-7)			
Aquatic Crustacea	EC50	Tubificid worm (Tubifex tubifex)	28.61 - 38.03 mg/l, 48 hours
Bisphenol A (CAS 80-05-7)			
Aquatic Crustacea	EC50	Water flea (Daphnia magna)	9.2 - 11.4 m/l, 48 hours

Fish	LC50	Fathead minnow (Pimephales promelas)	3.6 - 5.4 mg/l, 96 hours
Diethylenetriamine (CAS 111-40-0)			
Aquatic			
Fish	LC50	Guppy (Poecilia reticulata)	1014 mg/l, 96 hours
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential:

Partition coefficient n-octanol/ water (log Kow)	
Bisphenol A	3.32
Furfuryl alcohol	0.28

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13
Disposal Considerations

Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14
Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73178 and the IBC Code	Not established.

SECTION 15
Regulatory Information

U.S. Federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Barium Sulfate (CAS 7727-43-7)	Listed.
Bisphenol A (CAS 80-05-7)	Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard- Yes
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard – No

SARA 302 Extremely Hazardous Substance
Not listed.

SARA 311/312 Hazardous
No chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Bisphenol A	80-05-7	<1

Other Federal Regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Bisphenol A (CAS 80-05-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. California Controlled Substances.CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List

Barium Sulfate (CAS 7727-43-7)
Bisphenol A (CAS 80-05-7)
Calcium carbonate (CAS 1317-65-3)
Diethylenetriamine (CAS 111-40.0)
Furfuryl alcohol (CAS 98-00.0)
Magnesium carbonate (CAS 546-93-0)
Talc (CAS 14807-96-6)
Titanium dioxide (CAS 13463-67-7)
Triethylenetetramine (CAS 112-24-3)

US. New Jersey Worker and Community Right-to-Know Act

Barium Sulfate (CAS 7727-43-7)
Bisphenol A (CAS 80-05-7)
Calcium carbonate (CAS 1317-65-3)
Diethylenetriamine (CAS 111-40.0)
Furfuryl alcohol (CAS 98-00.0)
Magnesium carbonate (CAS 546-93-0)
Talc (CAS 14807-96-6)
Titanium dioxide (CAS 13463-67-7)
Triethylenetetramine (CAS 112-24-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Barium Sulfate (CAS 7727-43-7)
Bisphenol A (CAS 80-05-7)
Calcium carbonate (CAS 1317-65-3)
Diethylenetriamine (CAS 111-40.0)
Furfuryl alcohol (CAS 98-00.0)
Talc (CAS 14807-96-6)
Titanium dioxide (CAS 13463-67-7)
Triethylenetetramine (CAS 112-24-3)

US. Rhode Island RTK

Bisphenol A (CAS 80-05-7)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US -California Proposition 65 -CRT: Listed date/Carcinogenic substance

Titanium dioxide (CAS 13463-67-7) Listed: September 2, 2011

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes

Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16
Other Information

We believe all information given is accurate. It is offered in good faith but without guarantee. Since conditions of use are beyond our control, user assumes all responsibility and risk.

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

ABBREVIATIONS:

NG="NOT GIVEN"	BT="BETWEEN"
<="LESS THAN"	>="GREATER THAN"
ND = Not Determined	NA = Not Applicable

NFPA Ratings: Health: 2
Flammability: 0
Instability: 0

PRODUCT NAME: **ABRO Epoxy Steel Industrial Strength (Resin)**

PRODUCT NUMBER/SIZE: **ES-506** **Revision Date: 03/17/2015**

SECTION 1
Identification of the Substance and of the Company/Undertaking

MANUFACTURER'S NAME: **ABRO INDUSTRIES, INC.**

ADDRESS: **3580 Blackthorn Court**
South Bend, IN 46628
USA

PRODUCT DESCRIPTION: **Adhesive**

COMPANY PHONE: **574-232-8289**

EMERGENCY 24-HR TELEPHONE: **Chemtrec: US/Canada 1-800-424-9300**
International +1-703-527-3887

SECTION 2
Hazards Identification

Health	**0**
Flammability	**0**
Physical Hazard	**0**
Personal Protection	**B**

OSHA/HCS Status: Not classified.

Classification:

Physical hazards: Not classified.
Health hazards: Not classified.
Environmental hazards: Not classified.

Signal Word: **None**

Hazard Phrases: The mixture does not meet the criteria for classification.

Precautionary Phrases: Observe good industrial hygiene practices.

Response: Wash hands after handling.

Storage / Disposal: Store away from incompatible materials. Dispose of waste and residues in accordance with local authority requirements.

SECTION 3
Composition/Information on Ingredients

COMPONENTS	CAS Number	Percent by weight
Calcium Carbonate	1317-65-3	40 - < 50 %
Iron Oxide	1309-37-1	10 - < 20 %
Magnesium Carbonate	546-93-0	5 - < 10 %
Other components below reportable levels		30 - < 40%

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4
First Aid Measures

First Aid Measures

Eye Contact	Rinse with water. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin Contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most Important Signs & Symptoms/Effects, acute and delayed	Coughing.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5
Fire Fighting Measures

Suitable Extinguishing Media:	Water fog. Foam. Dry chemical powder. Carbon dioxide (C02).
Unsuitable Extinguishing Media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific Hazards Arising From the Chemical:	During fire, gases hazardous to health may be formed.

Special Protective Equipment and Precautions for Fire-Fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-Fighting Equipment/Instructions:	Move containers from fire area if you can do so without risk.
Specific Methods:	Use standard firefighting procedures and consider the hazards of other involved materials.
General Fire Hazards:	No unusual fire or explosion hazards noted.

SECTION 6
Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up:	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Avoid discharge into drains, water courses or onto the ground.

SECTION 7
Handling and Storage

Precautions for Safe Handling

Precautions for safe handling:	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8
Exposure Controls/Personal Protection

Occupational Exposure Limits:

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium Carbonate (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

Iron Oxide (CAS 1309-37-1)	PEL	10 mg/m3	Fume.
Magnesium Carbonate (CAS 546-93-0)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Iron Oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.

US. NIOSH:Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium Carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Iron Oxide (CAS 1309-37-1)	TWA	5 mg/m3	Dust and fume.
Magnesium Carbonate (CAS 546-93-0)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/Face Protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection:

Hand Protection: For prolonged or repeated skin contact use suitable protective gloves.

Other: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal Hazards: Wear appropriate thermal protective clothing, when necessary.

General Hygiene Considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9
Physical and Chemical Properties

Appearance:

Physical State: Liquid.

Form: Liquid.

Color: Not Available.

Odor: Not Available.

Odor Threshold:	Not Available.
pH:	Not Available.
Melting Point/Freezing Point:	1049 °F (565 °C) estimated
Initial Boiling Point and Boiling Range:	Not Available.
Flash Point:	Not Available.
Evaporation Rate:	Not Available.
Flammability (Solid, Gas):	Not Applicable.
Upper/Lower Flammability or Explosive Limits:	
Flammability Limit – Lower (%)	Not Available.
Flammability Limit – Upper (%)	Not Available.
Explosive Limit – Lower (%)	Not Available.
Explosive Limit – Upper (%)	Not Available.
Vapor Pressure:	0.000009 hPa estimated
Vapor Density:	Not Available.
Relative Density:	Not Available.
Solubility(ies):	
Solubility (water):	Not Available.
Partition Coefficient: (N-Octanol/Water)	Not Available.
Auto-Ignition Temperature:	Not Available.
Decomposition Temperature:	Not Available.
Viscosity:	Not Available.
Other Information:	
Density:	14.98 lbs/gal
Percent Volatile:	0.001 % estimated
Specific gravity:	1.8 estimated
VOC:	0.001 % estimated

SECTION 10
Stability and Reactivity

Reactivity:	The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Contact with incompatible materials.
Incompatible Materials:	Fluorine.
Hazardous Decomposition Products:	No hazardous decomposition products are known.

SECTION 11
Toxicological Information

Information on the likely routes of exposure:

Eye Contact:	Direct contact with eyes may cause temporary irritation.
Inhalation:	Prolonged inhalation may be harmful.
Skin Contact:	No adverse effects due to skin contact are expected.
Ingestion:	Expected to be low ingestion hazard.

Symptoms Related To The Physical, Chemical And Toxicological Characteristics:

Coughing.

Information on Toxicological Effects:

Acute Toxicity: Not available.

Skin corrosion/irritation:	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation:	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization:	Not a respiratory sensitizer.
Skin sensitization:	This product is not expected to cause skin sensitization.
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity:	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs.Overall Evaluation of Carcinogenicity

Iron Oxide (CAS 1309-37-1) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity:	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity – single exposure:	Not classified.
Specific target organ toxicity – repeated exposure:	Not classified.
Aspiration hazard:	Not an aspiration hazard.
Chronic effects:	Prolonged inhalation may be harmful.

SECTION 12
Ecological Information

Ecotoxicity:	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability:	No data is available on the degradability of this product.
Bioaccumulative potential:	No date available.
Mobility in soil:	No data available.
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13
Disposal Considerations

Disposal Instructions:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations:	Dispose in accordance with all applicable regulations.

Hazardous waste code:	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products:	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14
Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73178 and the IBC Code	Not established.

SECTION 15
Regulatory Information

U.S. Federal regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard- No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard – No

SARA 302 Extremely Hazardous Substance

Not listed.

SARA 311/312 Hazardous

No chemical

SARA 313 (TRI reporting)
Not regulated.

Other Federal Regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. California Controlled Substances.CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
Calcium carbonate (CAS 1317-65-3)
Iron Oxide (CAS 1309-37-1)
Magnesium carbonate (CAS 546-93-0)

US. New Jersey Worker and Community Right-to-Know Act
Calcium carbonate (CAS 1317-65-3)
Iron Oxide (CAS 1309-37-1)
Magnesium carbonate (CAS 546-93-0)

US. Pennsylvania Worker and Community Right-to-Know Law
Calcium carbonate (CAS 1317-65-3)
Iron Oxide (CAS 1309-37-1)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer.

US -California Proposition 65 -CRT: Listed date/Carcinogenic substance
Carbon Black (CAS 1333-86-4) Listed: February 21, 2003

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes

Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16
Other Information

We believe all information given is accurate. It is offered in good faith but without guarantee. Since conditions of use are beyond our control, user assumes all responsibility and risk.

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

ABBREVIATIONS:

NG="NOT GIVEN"	BT="BETWEEN"
<="LESS THAN"	>="GREATER THAN"
ND = Not Determined	NA = Not Applicable

NFPA Ratings: Health: 0
Flammability: 0
Instability: 0