

PRODUCT NAME: ABRO Thermometal
PRODUCT NUMBER/SIZE: TM-185

Rev Date: 12/3/2014

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: Metal Repair Sealant

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

Classification:

Carcinogenicity (Category 2) H351
Skin irritation (Category 3) H316
Eye Irritation Category 2B) H320

Label Pictogram(s):



Signal Word: Warning

Hazard Phrases: Suspected of causing cancer. Causes mild skin irritation. Causes eye irritation.

Precautionary Phrases: Obtain special instructions. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection. Wash hands thoroughly after handling.

Response: If exposed or concerned: Get medical advice/attention. IF eye irritation persists: Get medical advice/attention. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage / Disposal: Store locked up. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Other: Keep out of reach of children.

SECTION 3 Composition/Information on Ingredients

COMPONENTS	CAS Number	Percent by weight	Classification (GHS-US)
iron(III) oxide	1309-37-1	50 - 70	Not classified
DI - Water	7789-20-0	12.25 - 19.6	Not classified
sodium silicate, conc=41%, aqueous solution	1344-09-8	4.9 - 12.25	Not classified
silicon, crystalline	7440-21-3	< 1.08	Not classified
wollastonite,natural	13983-17-0	< 1	Not classified
carbon black	1333-86-4	< 0.864	Carc. 2, H351
chromium	7440-47-3	< 0.72	Not classified
manganese	7439-96-5	< 0.684	Not classified
sodium silicate, alkaline 1.6/2.6, 35%<=conc<=55%, aqueous solutions	1344-09-8	< 1	Not classified

SECTION 4 First Aid Measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer.

First-aid measures after inhalation: Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Not expected to present a significant hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

Symptoms/injuries after inhalation: Dizziness. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Irritation of the respiratory tract.

Symptoms/injuries after skin contact: May cause slight irritation. Itching. Red skin.

Symptoms/injuries after eye contact: Irritation of the eye tissue. May cause slight eye irritation.

Inflammation/damage of the eye tissue. Redness of the eye tissue.

Symptoms/injuries after ingestion: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5 Fire Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 **Accidental Release Measures**

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources.

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment: Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7 **Handling and Storage**

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions. Do not handle until all safety precautions have been read and understood.

Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Wash affected areas thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.

Storage conditions: Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Follow Label Directions.

**SECTION 8
Exposure Controls/Personal Protection**

8.1. Control parameters

Wollastonite,natural (13983-17-0)

USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³
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Iron (III) oxide (1309-37-1)

USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
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Carbon black (1333-86-4)

USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³
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Manganese (7439-96-5)

USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³
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Chromium (7440-47-3)

USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³
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8.2. Exposure controls

Appropriate engineering controls: Local exhaust ventilation, vent hoods.

Personal protective equipment: Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask.

Other information: Do not eat, drink or smoke during use.

**SECTION 9
Physical and Chemical Properties**

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Paste Like.
Color:	Black. Gray.
Odor:	Characteristic.
Odor threshold:	No data available
pH:	No data available
Relative evaporation rate (butyl acetate=1):	No data available
Melting point:	No data available
Freezing point:	No data available
Boiling point:	> 200 °C
Flash point:	> 200 °C
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available
Vapor pressure:	No data available
Relative vapor density at 20 °C:	No data available
Relative density:	1.3
Solubility:	Poorly soluble in water.
Log Pow:	No data available

Log Kow:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	No data available

9.2. Other information

No additional information available

SECTION 10 Stability and Reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. Carbon monoxide. Carbon dioxide.

SECTION 11 Toxicological Information

11.1. Information on toxicological effects

Acute toxicity: Not classified

Sodium silicate, alkaline 1.6/2.6, 35 %< =conc<=55%, aqueous solutions (1344-09-8)

LD50 oral rat > 2000 mg/kg (Rat)

Sodium silicate, conc=41%, aqueous solution (1344-09-8)

LD50 oral rat > 2000 mg/kg (Rat)

Iron (III) oxide (1309-37-1)

LD50 oral rat > 5000 mg/kg (Rat; Literature study)

Carbon black (1333-86-4)

LD50 oral rat > 8000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value)

LD50 dermal rabbit > 3000 mg/kg (Rabbit)

Manganese (7439-96-5)

LD50 oral rat 9000 mg/kg (Rat)

Silicon, crystalline (7440-21-3)

LD50 oral rat > 3160 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; >5000 mg/kg bodyweight; Rat; Weight of evidence)

LD50 dermal rabbit > 5000 mg/kg body weight (Rabbit; Weight of evidence)

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Wollastonite,natural (13983-17-0)

IARC group 3

Iron (III) oxide (1309-37-1)

IARC group 3

Carbon black (1333-86-4)

IARC group 2B

Chromium (7440-47-3)

IARC group 3

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Potential Adverse human health effects and symptoms: Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation: Dizziness. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Irritation of the respiratory tract.

Symptoms/injuries after skin contact: May cause slight irritation. Itching. Red skin.

Symptoms/injuries after eye contact: Irritation of the eye tissue. May cause slight eye irritation.

Inflammation/damage of the eye tissue. Redness of the eye tissue.

Symptoms/injuries after ingestion: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

SECTION 12 Ecological Information

12.1. Toxicity

Sodium silicate, alkaline 1.6/2.6, 35 %< =conc<=55%, aqueous solutions (1344-09-8)

LC50 fish 1 2320 mg/l (96 h; Gambusia affinis; Pure substance)

EC50 Daphnia 1 216 mg/l (96 h; Daphnia magna; Pure substance)

LC50 fish 2 210 mg/l (96 h; Brachydanio rerio; Pure substance)

EC50 Daphnia 2 632 mg/l (96 h; Lymnaea sp.; Pure substance)

Sodium silicate, conc=41%, aqueous solution (1344-09-8)

LC50 fish 1 2320 mg/l (96 h; Gambusia affinis; Pure substance)

EC50 Daphnia 1 216 mg/l (96 h; Daphnia magna; Pure substance)

LC50 fish 2 3185 mg/l (96 h; Brachydanio rerio; Pure substance)

EC50 Daphnia 2 247 mg/l (100 h; Daphnia magna; Pure substance)

TLM fish 1 2320 ppm (96 h; Gambusia affinis; Pure substance)

Iron (III) oxide (1309-37-1)

LC50 fish 1 > 1000 mg/l (48 h; Leuciscus idus; Nominal concentration)

Carbon black (1333-86-4)

LC50 fish 1 > 1000 mg/l (96 h; Brachydanio rerio)

EC50 Daphnia 1 > 5600 mg/l (24 h; Daphnia magna)

12.2. Persistence and degradability

ABRO Thermometal

Persistence and degradability: Not established.

Sodium silicate, alkaline 1.6/2.6, 35 %< =conc<=55%, aqueous solutions (1344-09-8)

Persistence and degradability Biodegradability: not applicable. No (test) data on mobility of the components available.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Wollastonite,natural (13983-17-0)

Persistence and degradability Biodegradability: not applicable.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Sodium silicate, conc=41%, aqueous solution (1344-09-8)

Persistence and degradability Biodegradability: not applicable. No (test) data on mobility of the components available.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Iron (III) oxide (1309-37-1)

Persistence and degradability Biodegradability: not applicable. Adsorbs into the soil.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Carbon black (1333-86-4)

Persistence and degradability Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Manganese (7439-96-5)

Persistence and degradability Biodegradability: not applicable. Adsorbs into the soil.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Silicon, crystalline (7440-21-3)

Persistence and degradability: Not established.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

Chromium (7440-47-3)

Persistence and degradability Biodegradability: not applicable. Biodegradability in soil: not applicable.

Adsorbs into the soil.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

BOD (% of ThOD) Not applicable

12.3. Bioaccumulative potential

ABRO Thermometal

Bioaccumulative potential: Not established.

Sodium silicate, alkaline 1.6/2.6, 35 %< =conc<=55%, aqueous solutions (1344-09-8)

Bioaccumulative potential No bioaccumulation data available.

Wollastonite,natural (13983-17-0)

Bioaccumulative potential No bioaccumulation data available.

Sodium silicate, conc=41%, aqueous solution (1344-09-8)

Bioaccumulative potential: Not bioaccumulative.

Iron (III) oxide (1309-37-1)

Bioaccumulative potential No bioaccumulation data available.

Carbon black (1333-86-4)

Bioaccumulative potential: Not bioaccumulative.

Manganese (7439-96-5)

BCF fish 1	81 (Pisces)
BCF other aquatic organisms 1	300000 (Mollusca)
BCF other aquatic organisms 2	125000 (Crustacea)
Bioaccumulative potential:	Not established.

Silicon, crystalline (7440-21-3)

Bioaccumulative potential: Not established.

Chromium (7440-47-3)

BCF fish 1	0.0048 (Pisces; Dry weight)
BCF other aquatic organisms 1	0.443 (Lamellibranchiata; Dry weight)
Bioaccumulative potential	Bioaccumable.

12.4. Mobility in soil

Carbon black (1333-86-4)

Ecology – soil: Not toxic to plants. Not toxic to animals.

Silicon, crystalline (7440-21-3)

Surface tension 0.74 N/m (1410 °C)

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13
Disposal Considerations

13.1. Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Ecology - waste materials: Avoid release to the environment.

SECTION 14
Transport Information

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

U.S. DOT	UN/ID Number:	Not regulated
	Proper shipping name:	
	Hazard class:	
	Packing Group:	
	Exceptions:	
	Environmental Hazards:	
	Transport in Bulk:	
	Special Precautions:	

IMO/IMDG	UN/ID Number:	Not regulated
	Proper shipping name:	
	Hazard class:	
	Packing Group:	

Exceptions:
Environmental Hazards:
Transport in Bulk:
Special Precautions:

ICAO/IATA UN/ID Number: Not regulated
Proper shipping name:
Hazard Class:
Packing Group:
Exceptions:
Environmental Hazards:
Transport in Bulk:
Special Precautions:

Canada (TDG) UN/ID Number: Not regulated
Proper shipping name:
Hazard class:
Packing Group:
Exceptions:
Environmental Hazards:
Transport in Bulk:
Special Precautions:

Europe (ADR) UN/ID Number: Not regulated
Proper Shipping Name:
Tunnel Restriction Code:

SECTION 15 Regulatory Information

15.1. US Federal regulations

ABRO Thermometal

SARA Section 311/312 Hazard Classes Immediate (acute) health hazard
Delayed (chronic) health hazard

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R41

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16 Other Information

Other information: None.

Full text of H-phrases: see section 16:

----- Carc. 2 Carcinogenicity Category 2

----- H351 Suspected of causing cancer

NFPA health hazard: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard: 1 - Must be preheated before ignition can occur.

NFPA reactivity: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability: 1 Slight Hazard

Physical: 0 Minimal Hazard

Personal Protection: B

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"

<="LESS THAN"

ND = Not Determined

BT="BETWEEN"

>="GREATER THAN"

NA = Not Applicable