



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: K&W® FiberLock® Head Gasket & Block Repair

Product Number (s): 401224-6, 401224-6AZ

Product Use: Seals leaks in engine block

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

CAUTION: Irritant.

Appearance & Odor: Beige fibrous liquid with a bland odor.

Potential Health Effects:

ACUTE EFFECTS:

EYE: Causes moderate irritation to the eyes.

SKIN: Causes mild to moderate irritation to the skin depending on duration of exposure.

INHALATION: Spray mist would be irritating to the respiratory system. Vapors are generally not harmful.

INGESTION: May cause irritation to the mouth, esophagus and stomach. May cause gastrointestinal discomfort.

CHRONIC EFFECTS: None known

TARGET ORGANS: For copper: liver, kidney and lungs

Medical Conditions Aggravated by Exposure: Unknown

See Section 11 for toxicology and carcinogenicity information on product ingredients.

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Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Water	7732-18-5	70 - 80
Sodium silicate	1344-09-8 / 7732-18-5	10 - 20
Glycol monobutyl ethers	9038-95-3 / 143-22-6 / 111-76-2	3 - 8
Copper flake	7440-50-8	< 1
Aluminum paste	7429-90-5	< 1
Kevlar®	26125-61-1	< 1

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: If swallowed, do NOT induce vomiting. Give victim a glass of water. Get medical attention immediately.

Note to Physicians: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is not flammable.

Flash Point: None (TCC)

Upper Explosive Limit: None

Autoignition Temperature: None

Lower Explosive Limit: None

Fire and Explosion Data:

Suitable Extinguishing Media: This material will not burn. Use extinguishing media appropriate for the surrounding fire.

Products of Combustion: NA

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into

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sewers or storm drains. This product is harmful to aquatic life.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Avoid contact with eyes, skin and clothing. Use gloves while handling material. Properly clean any spilled residue with a wet cloth. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Store in a closed container. Do not store near acids.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Water	NE	NE	NE	NE	NE		
Sodium silicate	NE	NE	NE	NE	NE		
Glycol monobutyl ethers	50	NE	20	NE	NE		ppm
Copper flake	0.1*	NE	0.1*	NE	NE		mg/m ³
Aluminum paste	15*	NE	0.1*	NE	NE		mg/m ³
Kevlar®	NE	NE	NE	NE	5	mfr	mg/m ³
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

mfr – Manufacturer's recommendation

* Exposure values apply to dust or respirable fraction. These values would not apply to the liquid mixture product. These would only apply to this product if it were dried to a powder or residue.

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

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Physical State: fibrous liquid

Color: beige

Odor: bland

Odor Threshold: ND

Specific Gravity: 1.07

Initial Boiling Point: 212°F

Freezing Point: ND

Vapor Pressure: ND

Vapor Density: ND (air = 1)

Evaporation Rate: slow

Solubility: ND

Coefficient of water/oil distribution: ND

pH: 11.2

Volatile Organic Compounds: wt %: 0.1 g/L: 1.1 lbs./gal: < 0.01

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: None

Incompatible Materials: Acids, ammonium salts

Hazardous Decomposition Products: Hydrogen

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Water	> 90 mL/kg	No data	No data
Sodium silicate	1960 mg/kg	> 4640 mg/kg	No data
Glycol monobutyl ethers	470 mg/kg	220 mg/kg	450 ppm/4H
Copper flake	No data	No data	No data
Aluminum paste	No data	No data	No data
Kevlar®	No data	No data	No data

Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Water	No	No	No	No	No
Sodium silicate	No	No	No	E & S (moderate) / R (mild)	Unknown
Glycol monobutyl ethers	No	No	No	E (moderate) / S (mild)	Unknown
Copper flake	No	No	No	E & S (mild) / R (moderate)	Unknown
Aluminum paste	No	No	No	E, S & R (mild)	Unknown
Kevlar®	No	No	No	E, S & R (mild)	No

E – Eye S – Skin R - Respiratory

Product Name: K&W® FiberLock® Head Gasket & Block Repair

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Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: copper – 96 Hr LC50 water flea: 10 µg/L
sodium silicate – 96 Hr LC50 water flea: 247 ppm
Persistence / Degradability: This material is not persistent in aquatic systems, but its high pH when undiluted is acutely harmful to aquatic life.
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33)
Empty containers may be recycled. Wastes should be collected and properly disposed. Do not dump into bodies of water, on the ground or in a septic system.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Not Regulated
ICAO/IATA (air): Not Regulated
IMO/IMDG (water): Not Regulated
Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Copper (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

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Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	No
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
Copper (< 1%), Glycol ethers (0.15%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communication Standard.

U.S. State Regulations:California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm:

Propylene oxide (< 4ppm)
Ethylene oxide (< 0.3ppm)

Consumer Products VOC Regulations: This product is not regulated.State Right to Know:

New Jersey: 7440-50-8, 7429-90-5, 111-76-2
Pennsylvania: 7440-50-8, 7429-90-5, 111-76-2
Massachusetts: 7440-50-8, 7429-90-5, 111-76-2
Rhode Island : 7440-50-8, 7429-90-5, 111-76-2

Canadian Regulations:Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulation and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: D1A, D1B, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

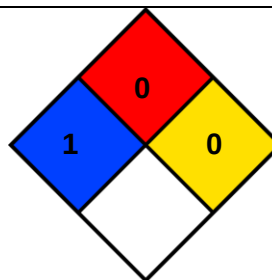
Section 16: Other Information

HMIS® (II)	
Health:	1

Flammability:	0
Reactivity:	0

Product Name: K&W® FiberLock® Head Gasket & Block Repair**Product Number (s): 401224-6, 401224-6AZ****PPE:****B**

Ratings range from 0 (no hazard) to 4 (severe hazard)

NFPA

Prepared By: Michelle Rudnick

CRC #: 479

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Changes since last revision: Part number added

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstract Service

CFR: Code of Federal Regulations

DOT: Department of Transportation

DSL: Domestic Substance List

g/L: grams per Liter

HMIS: Hazardous Materials Identification System

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization

lbs./gal: pounds per gallon

LC: Lethal Concentration

LD: Lethal Dose

NA: Not Applicable

ND: Not Determined

NIOSH: National Institute of Occupational Safety & Health

NFPA: National Fire Protection Association

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PMCC: Pensky-Martens Closed Cup

PPE: Personal Protection Equipment

ppm: Parts per Million

RoHS: Restriction of Hazardous Substances

STEL: Short Term Exposure Limit

TCC: Tag Closed Cup

TWA: Time Weighted Average

WHMIS: Workplace Hazardous Materials Information System