

# MATERIAL SAFETY DATA SHEET

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## Section 1: Product & Company Identification

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**Product Name:** K&W® Permanent Metallic™ Block Seal

**Product Number (s):** 401016, 401016-6, 841016, 841016AZ

**Product Use:** seal leaks in engine block

**Manufacturer / Supplier Contact Information:**

In United States:

CRC Industries, Inc.  
885 Louis Drive  
Warminster, PA 18974  
[www.crcindustries.com](http://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](http://www.crc-canada.ca)  
1-905-670-2291

In Mexico:

CRC Industries Mexico  
Av. Benito Juárez 4055 G  
Colonia Orquídea  
San Luis Potosí, SLP CP 78394  
[www.crc-mexico.com](http://www.crc-mexico.com)  
52-444-824-1666

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

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## Section 2: Hazards Identification

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Emergency Overview

**CAUTION:** Irritant

As defined by OSHA's Hazard Communication Standard, this product is hazardous.  
Appearance & Odor: Reddish brown, lumpy liquid, practically odorless

**Potential Health Effects:**

**ACUTE EFFECTS:**

**EYE:** Causes moderate irritation to the eyes.

**SKIN:** Causes moderate irritation to the skin.

**INHALATION:** Spray mist would be irritating to the respiratory system.

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

**CHRONIC EFFECTS:** None known

**TARGET ORGANS:** None known

**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**

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<b>COMPONENT</b>	<b>CAS NUMBER</b>	<b>% by Wt.</b>
Water	7732-18-5	55 - 65
Sodium silicate	1344-09-8	30 - 40
Iron oxide	1309-37-1	< 1

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### **Section 4: First Aid Measures**

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**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. Get medical attention immediately.

*Note to Physicians:* None

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### **Section 5: Fire-Fighting Measures**

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**Flammable Properties:** As defined by OSHA, this product is nonflammable.

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.

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### **Section 6: Accidental Release Measures**

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**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 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.

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## Section 7: Handling and Storage

**Handling Procedures:** Avoid contact with eyes, skin and clothing. Keep container closed when not in use. 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. Containers should be tightly closed while in storage.

**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		
Iron oxide	10*	NE	5*	NE	NE		mg/m <sup>3</sup>
N.E. – Not Established      (c) – ceiling      (s) – skin      (v) – vacated							

\* 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

**Physical State:** liquid  
**Color:** reddish brown  
**Odor:** practically odorless  
**Odor Threshold:** ND  
**Specific Gravity:** 1.37  
**Initial Boiling Point:** 212°F  
**Freezing Point:** ND  
**Vapor Pressure:** ND  
**Vapor Density:** > 1 (air = 1)  
**Evaporation Rate:** slow

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Solubility: complete  
 Coefficient of water/oil distribution: ND  
 pH: 11.5  
 Volatile Organic Compounds: wt %: 0 g/L: 0 lbs./gal: 0

**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:**

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Water	> 90 mL/kg	No data	No data
Sodium silicate	1960 mg/kg	> 4640 mg/kg	No data
Iron oxide	> 10,000 mg/kg	No data	No data

**Chronic Toxicity:**

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Water	No	No	No	No	No
Sodium silicate	No	No	No	E (moderate) / S (moderate) / R (mild)	Unknown
Iron oxide	No	No	No	E (mild) / S (mild) / R (mild)	Unknown

E – Eye      S – Skin      R - Respiratory

**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: 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.

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Bioaccumulation / Accumulation: No information available  
Mobility in Environment: No information available

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## **Section 13: Disposal Considerations**

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

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

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## **Section 14: Transport Information**

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US DOT (ground): Not Regulated

ICAO/IATA (air): Not Regulated

IMO/IMDG (water): Not Regulated

Special Provisions: None

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## **Section 15: Regulatory Information**

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### **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: None

**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:**

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:  
None

#### **Clean Air Act:**

Section 112 Hazardous Air Pollutants (HAPs): None

### **U.S. State Regulations:**

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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: **None**

Consumer Products VOC Regulations: This product is not regulated.

State Right to Know:

New Jersey: 1309-37-1  
Pennsylvania: 1309-37-1  
Massachusetts: 1309-37-1  
Rhode Island : 1309-37-1

Canadian Regulations:

Controlled Products Regulations:

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

WHMIS Hazard Class: 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

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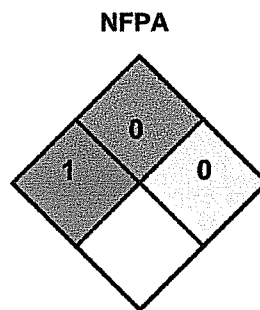
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## Section 16: Other Information

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HMIS® (II)	
Health:	1
Flammability:	0
Reactivity:	0
PPE:	B



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

Prepared By: Michelle Rudnick  
CRC #: 902A  
Revision Date: 05/18/2009

Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

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.

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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