



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Permanent Metallic™ Block Seal Head Gasket Repair</b>
<b>Other means of identification</b>	
<b>Product code</b>	401016
<b>Recommended use</b>	Seal leaks in engine block
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufactured or sold by:</b>	
<b>Company name</b>	CRC Industries, Inc.
<b>Address</b>	885 Louis Dr. Warminster, PA 18974 US
<b>Telephone</b>	
<b>General Information</b>	215-674-4300
<b>Technical Assistance</b>	800-521-3168
<b>Customer Service</b>	800-272-4620
<b>24-Hour Emergency (CHEMTREC)</b>	800-424-9300 (US) 703-527-3887 (International)
<b>Website</b>	www.crcindustries.com

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning
<b>Hazard statement</b>	Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use. Wash thoroughly after handling. Wear protective gloves and eye/face protection. Avoid release to the environment.
<b>Response</b>	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

### 3. Composition/information on ingredients

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#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	60 - 70
Sodium silicate		1344-09-8	30 - 40
Cellulose		9004-34-6	1 - 3
Aluminosilicate Refractory Ceramic Fibres		142844-00-6	< 1

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

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<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

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<b>Suitable extinguishing media</b>	Powder. Foam. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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.
<b>Methods and materials for containment and cleaning up</b>	This product is miscible in 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.
<b>Environmental precautions</b>	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.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Provide adequate ventilation. Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Use care in handling/storage. For product usage instructions, please see the product label.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a cool, dry place out of direct sunlight. Keep container tightly closed. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).

## 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
Cellulose (CAS 9004-34-6)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Cellulose (CAS 9004-34-6)	TWA	10 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Aluminosilicate Refractory Ceramic Fibres (CAS 142844-00-6)	TWA	3 fibers/cm <sup>3</sup>	Dust.
		3 fibers/cm <sup>3</sup>	Fiber.
		5 mg/m <sup>3</sup>	fibers, total dust
		5 mg/m <sup>3</sup>	Fiber, total
Cellulose (CAS 9004-34-6)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Total

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	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. Eye wash facilities and emergency shower must be available when handling this product.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear protective gloves such as: Nitrile. Neoprene.
<b>Other</b>	Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Reddish-brown.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	11.3

<b>Melting point/freezing point</b>	32 °F (0 °C) estimated
<b>Initial boiling point and boiling range</b>	212 °F (100 °C) estimated
<b>Flash point</b>	None (Tag Closed Cup)
<b>Evaporation rate</b>	Slow.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	22.5 hPa estimated
<b>Vapor density</b>	> 1 (air = 1)
<b>Relative density</b>	1.37
<b>Solubility (water)</b>	Soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	400 °F (204.4 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity (kinematic)</b>	Not available.
<b>Percent volatile</b>	62.6 % estimated

## 10. Stability and reactivity

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<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents. Acids. Ammonium salts.
<b>Hazardous decomposition products</b>	Hydrogen.

## 11. Toxicological information

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### Information on likely routes of exposure

<b>Inhalation</b>	Suspected of causing cancer by inhalation.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May cause irritation to the mouth, esophagus and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** Not available.

Product	Species	Test Results
Permanent Metallic™ Block Seal Head Gasket Repair		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	84 mg/l, 4 hours estimated
<b>Oral</b>		
LD50	Rat	4370 mg/kg estimated

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

**Skin corrosion/irritation** Causes skin irritation.

<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not likely, due to the form of the product.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Not available.	
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	
Not available.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged exposure may cause chronic effects.

## 12. Ecological information

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.		
<b>Product</b>	<b>Species</b>		
<b>Test Results</b>			
Permanent Metallic™ Block Seal Head Gasket Repair			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	68.0314 mg/l, 48 hours estimated
Fish	LC50	Fish	6839.2515 mg/l, 96 hours estimated
<b>Components</b>	<b>Species</b>		
<b>Test Results</b>			
Sodium silicate (CAS 1344-09-8)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	22.94 - 49.01 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	2320 mg/l, 96 hours
<i>Acute</i>			
Fish	LC50	Western mosquitofish (Gambusia affinis)	2320 mg/l, 96 hours

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

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal of waste from residues / unused products</b>	This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. 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 in accordance with all applicable regulations.
<b>Hazardous waste code</b>	Not regulated.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
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**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**15. Regulatory information**

**US 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)**

Aluminosilicate Refractory Ceramic Fibres (CAS 142844-00-6) 0.1 % One-Time Export Notification only.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**CERCLA Hazardous Substances: Reportable quantity**

Not listed.

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.

**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.

**Food and Drug Administration (FDA)** Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Section 311/312 Hazard categories**  
 Immediate Hazard - Yes  
 Delayed Hazard - No  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**US state regulations**

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Aluminosilicate Refractory Ceramic Fibres (CAS 142844-00-6)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

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

Cellulose (CAS 9004-34-6)

Aluminosilicate Refractory Ceramic Fibres (CAS 142844-00-6)

**US. Massachusetts RTK - Substance List**

Cellulose (CAS 9004-34-6)

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

Aluminium oxide (CAS 1344-28-1)

Cellulose (CAS 9004-34-6)

**US. Rhode Island RTK**

None.

## US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### Volatile organic compounds (VOC) regulations

#### EPA

**VOC content (40 CFR 51.100(s))** 0 %

**Consumer products (40 CFR 59, Subpt. C)** Not regulated

#### State

**Consumer products** Not regulated

**VOC content (CA)** 0 %

**VOC content (OTC)** 0 %

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
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)	No
New Zealand	New Zealand Inventory	No
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).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	06-01-2015
<b>Revision date</b>	07-14-2015
<b>Prepared by</b>	Allison Cho
<b>Version #</b>	03
<b>Further information</b>	CRC # 902A
<b>HMIS® ratings</b>	Health: 1 Flammability: 0 Physical hazard: 0 Personal protection: B
<b>NFPA ratings</b>	Health: 1 Flammability: 0 Instability: 0

#### NFPA ratings



#### Disclaimer

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