



SAFETY DATA SHEET

1. Identification

Product identifier	K&W® FiberLock™ Head Gasket & Block Repair	
Other means of identification		
Product code	No. 75224 (Item# 1006368)	
Recommended use	Seals leaks in engine block	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufactured or sold by:		
Company name	CRC Canada Co.	
Address	2-1246 Lorimar Dr. Mississauga, Ontario L5S 1R2 Canada	
Telephone	905-670-2291	
Website	www.crc-canada.ca	
E-mail	Support.CA@crcindustries.com	
Emergency phone number	24-Hour Emergency (CHEMTREC)	800-424-9300 (Canada) 703-527-3887 (International)

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Label elements



Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response	IF ON SKIN: Wash with plenty of water. 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. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
water		7732-18-5	80 - 100
sodium silicate		1344-09-8	3 - 7
aluminosilicate refractory ceramic fibers		142844-00-6	0.5 - 1.5
cellulose		9004-34-6	0.5 - 1.5
aluminium		7429-90-5	0.1 - 1
copper		7440-50-8	0.1 - 1

The exact percentage (concentration) of composition has been withheld as a trade secret.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
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.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
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 firefighters	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.

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 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	Prevent product from entering drains. 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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
aluminium (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
cellulose (CAS 9004-34-6)	TWA	10 mg/m ³	
copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0.2 mg/m ³	Fume.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
aluminium (CAS 7429-90-5)	TWA	5 mg/m ³	Pyrophoric powder.
		10 mg/m ³	Dust.
aluminosilicate refractory ceramic fibers (CAS 142844-00-6)	TWA	0.2 fibers/cm ³	Fiber.
		5 mg/m ³	Fiber, total
		5 mg/m ³	Total particulate.
cellulose (CAS 9004-34-6)	TWA	10 mg/m ³	
copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0.2 mg/m ³	Fume.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
aluminium (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable.
aluminosilicate refractory ceramic fibers (CAS 142844-00-6)	TWA	0.2 fibers/cm ³	Fiber.
		5 mg/m ³	Inhalable fibers.
cellulose (CAS 9004-34-6)	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Total dust.
copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0.2 mg/m ³	Fume.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
aluminium (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
aluminosilicate refractory ceramic fibers (CAS 142844-00-6)	TWA	5 mg/m ³	Inhalable fraction.
cellulose (CAS 9004-34-6)	TWA	10 mg/m ³	
copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0.2 mg/m ³	Fume.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
aluminium (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
aluminosilicate refractory ceramic fibers (CAS 142844-00-6)	TWA	0.5 fibers/ml	Respirable fibers.
		5 mg/m ³	Inhalable fraction.
cellulose (CAS 9004-34-6)	TWA	10 mg/m ³	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and fume.
		0.2 mg/m3	Fume.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
aluminium (CAS 7429-90-5)	TWA	5 mg/m3	Welding fume.
		10 mg/m3	
aluminosilicate refractory ceramic fibers (CAS 142844-00-6)	TWA	1 fibers/cm3n	Fiber.
		10 mg/m3	
cellulose (CAS 9004-34-6)	TWA	10 mg/m3	Total dust.
copper (CAS 7440-50-8)	TWA	1 mg/m3	Total dust.
		0.2 mg/m3	Dust and mist.
			Fume.

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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear protective gloves such as: Neoprene. Nitrile.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

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.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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****Physical state**

Liquid.

Form

Liquid.

Color

Beige.

Odor

Bland.

Odor threshold

Not available.

pH

11.2

Melting point/freezing point

32 °F (0 °C) estimated

Initial boiling point and boiling range

212 °F (100 °C) estimated

Flash point

None (Tag Closed Cup)

Evaporation rate

Slow.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits**Flammability limit - lower (%)**

Not available.

Flammability limit - upper (%)

Not available.

Vapor pressure

21.3 hPa estimated

Vapor density

Not available.

Relative density	1.07
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	400 °F (204.4 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Percent volatile	84.9 % estimated

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	Strong acids. Strong bases. Strong oxidizing agents. Reducing agents. Sodium azide. Acetylene. Magnesium. Hydrofluoric acid.
Hazardous decomposition products	Aldehydes. Alcohols. Ethers. Hydrocarbons. Ketones. Organic acids. Nitrogen oxides (NOx). Sodium nitrite. Sodium oxides. Hydrogen.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Health injuries are not known or expected under normal use.

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 known.

Components	Species	Test Results
sodium silicate (CAS 1344-09-8)		
<u>Acute</u>		
Oral		
<i>Solid</i>		
LD50	Rat	1500 - 3200 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

Canada - Alberta OELs: Irritant

aluminium (CAS 7429-90-5)	Irritant
aluminosilicate refractory ceramic fibers (CAS 142844-00-6)	Irritant
cellulose (CAS 9004-34-6)	Irritant

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 Suspected of causing cancer.

ACGIH Carcinogens

aluminium (CAS 7429-90-5) A4 Not classifiable as a human carcinogen.
aluminosilicate refractory ceramic fibers (CAS 142844-00-6) A2 Suspected human carcinogen.

Canada - Alberta OELs: Carcinogen category

aluminosilicate refractory ceramic fibers (CAS 142844-00-6) Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

aluminium (CAS 7429-90-5) Not classifiable as a human carcinogen.
aluminosilicate refractory ceramic fibers (CAS 142844-00-6) Suspected human carcinogen.

Canada - Quebec OELs: Carcinogen category

aluminosilicate refractory ceramic fibers (CAS 142844-00-6) Detected carcinogenic effect in animals.

IARC Monographs. Overall Evaluation of Carcinogenicity

poly(p-phenylenediamine terephthalamide) (CAS 26125-61-1) 3 Not classifiable as to carcinogenicity to humans.

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. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
aluminium (CAS 7429-90-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.16 mg/l, 96 hours
copper (CAS 7440-50-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.036 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.0319 - 0.0544 mg/l, 96 hours
sodium silicate (CAS 1344-09-8)			
Aquatic			
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.

Persistence and degradability

Bioaccumulative potential

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.

13. Disposal considerations

Disposal of waste from residues / unused products Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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 Not regulated.

Contaminated packaging

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**TDG**

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 73/78 and the IBC Code Not established.

15. Regulatory information**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

aluminium (CAS 7429-90-5)

copper (CAS 7440-50-8)

Precursor Control Regulations

Not regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

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)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
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

Country(s) or region	Inventory name	On inventory (yes/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

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