



SAFETY DATA SHEET

1. Identification

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

2. Hazard(s) identification

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

Label elements



| | |
|--|--|
| Signal word | Warning |
| Hazard statement | Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects. |
| Precautionary statement | |
| Prevention | 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. |
| Response | 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. |
| Storage | Store away from incompatible materials. |
| Disposal | Dispose of contents/container in accordance with local/regional/national regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |

3. Composition/information on ingredients

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

| | |
|---|---|
| Inhalation | 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. |
| Skin contact | Remove contaminated clothing. Rinse skin with water/shower. 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. If ingestion of a large amount does occur, call a poison control center immediately. |
| 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 | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

| | |
|--|---|
| Suitable extinguishing media | Powder. Foam. 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. |
| 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 | This product is miscible in water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. |
| Environmental precautions | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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

| | |
|---|---|
| Precautions for safe handling | 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. |
| Conditions for safe storage, including any incompatibilities | 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 ³ | Respirable fraction. |
| | | 15 mg/m ³ | Total dust. |

US. ACGIH Threshold Limit Values

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

US. NIOSH: Pocket Guide to Chemical Hazards

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

| | |
|--|--|
| 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. Eye wash facilities and emergency shower must be available when handling this product. |
| 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: Nitrile. Neoprene. |
| 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. Air monitoring is needed to determine actual employee exposure levels. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | 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 | Reddish-brown. |
| Odor | Odorless. |
| Odor threshold | Not available. |
| pH | 11.3 |

| | |
|---|-----------------------------|
| 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 | 22.5 hPa estimated |
| Vapor density | > 1 (air = 1) |
| Relative density | 1.37 |
| Solubility (water) | Soluble. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | 400 °F (204.4 °C) estimated |
| Decomposition temperature | Not available. |
| Viscosity (kinematic) | Not available. |
| Percent volatile | 62.6 % 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 oxidizing agents. Acids. Ammonium salts. |
| Hazardous decomposition products | Hydrogen. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Suspected of causing cancer by inhalation. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes serious eye irritation. |
| Ingestion | 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 | | |
| Acute | | |
| Inhalation | | |
| LC50 | Rat | 84 mg/l, 4 hours estimated |
| Oral | | |
| LD50 | Rat | 4370 mg/kg estimated |

* 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 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 | Not likely, due to the form of the product. |
| IARC Monographs. Overall Evaluation of Carcinogenicity | |
| Not available. | |
| US. National Toxicology Program (NTP) Report on Carcinogens | |
| Not available. | |
| 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 exposure may cause chronic effects. |

12. Ecological information

| | | | |
|---|--|---|------------------------------------|
| Ecotoxicity | Harmful to aquatic life with long lasting effects. | | |
| Product | Species | | |
| Test Results | | | |
| Permanent Metallic™ Block Seal Head Gasket Repair | | | |
| Aquatic | | | |
| Crustacea | EC50 | Daphnia | 68.0314 mg/l, 48 hours estimated |
| Fish | LC50 | Fish | 6839.2515 mg/l, 96 hours estimated |
| Components | Species | | |
| Test Results | | | |
| 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 | No data is available on the degradability of this product. |
| Bioaccumulative potential | No data available. |
| 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 | 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. |
| 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

| | |
|------------|-----------------------------------|
| DOT | Not regulated as dangerous goods. |
|------------|-----------------------------------|

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

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

NFPA ratings



Disclaimer

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 (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.