

## MATERIAL SAFETY DATA SHEET

### PRODUCT NAME : GRC C150Y/R/JV/W and CM10Y CARTRIDGES (Unused)

#### 1. Product and Company Identification

Product name: GRC C150Y/R/JV/W and CM10Y Cartridges, Unused  
Synonyms: None  
Item Numbers: Type C150Y: A223-04-105, A223-04-106, A223-04-107, A223-04-108  
Type C150R: A223-04-120, A223-04-121, A223-04-122  
Type C150JV: A223-04-188, A223-04-189, A223-04-306  
Type C150W: A223-04-184, A223-04-185, A223-04-186  
Type CM10Y: A223-04-103, A223-04-103

The information in this data sheet refers to an unused GRC cartridge as supplied by Edwards. Refer to the relevant GRC product manual for information on the handling, disposal, etc. of used GRC cartridges.

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#### General enquiries

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Toll Free: 1-800-848-9800

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Chemtrec: 1-800-424-9300

#### 2. Hazards Identification

##### EMERGENCY OVERVIEW

The cartridges, when properly handled according to good working and hygienic practices, are not dangerous to human health and the environment.

For short and long term exposure effects, refer to Section 11 Toxicological Information.

Eye Effects: None in normal use. Contact with catalytic granules/dust may cause severe eye irritation and damage the eyes.\*

Skin Effects: None in normal use. Contact with catalytic granules/dust may cause severe skin irritation and damage the skin.\*

Ingestion/Oral Effects: None in normal use. Ingestion of catalytic granules/dust may cause severe irritation and damage to the mouth, throat and digestive tract.\*

Inhalation Effects: None in normal use. Inhalation of catalytic granules/dust may cause severe respiratory irritation and damage the respiratory tract.\*

\* Contact with granules can only occur if the cartridge is damaged or opened. The granules are basic in nature.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

| NFPA Hazard codes |   | HMIS Hazard codes |   | Rating System       |
|-------------------|---|-------------------|---|---------------------|
| Health            | 0 | Health            | 0 | 0 = No Hazard       |
| Flammability      | 0 | Flammability      | 0 | 1 = Slight Hazard   |
| Instability       | 0 | Reactivity        | 0 | 2 = Moderate Hazard |
|                   |   |                   |   | 3 = Serious Hazard  |
|                   |   |                   |   | 4 = Severe Hazard   |

### 3. Composition/Information on Ingredients

Each cartridge comprises a proprietary basic oxide mixture in granular form, sealed within a stainless steel welded vessel.

| Ingredient      | % Weight | CAS No        | Hazard class*  | Risk phrase*   |
|-----------------|----------|---------------|----------------|----------------|
| Granules        | 60       | Not allocated | Not applicable | Not applicable |
| Stainless steel | 40       | Not allocated | Not applicable | Not applicable |

\*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

### 4. First Aid Measures

|                    |  |
|--------------------|--|
| Eyes:              | No effects requiring first aid are expected during normal use. In case of contact with granules/ dust, flush the eyes with plenty of water. If irritation arises, seek medical attention.  |
| Skin:              | No effects requiring first aid are expected during normal use. In case of contact with granules/ dust, wash the skin with plenty of water. If irritation arises, seek medical attention.   |
| Ingestion/Oral:    | No effects requiring first aid are expected during normal use. In case of ingestion of granules/ dust, wash out the mouth with plenty of water and immediately seek medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.                                    |
| Inhalation:        | No effects requiring first aid are expected during normal use. In case of inhalation of granules/ dust, remove the patient to fresh air. If breathing problems arise, a suitably qualified individual should administer oxygen or artificial respiration as necessary; seek immediate medical attention. |
| Other Information: | None.  |

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### 5. Firefighting Measures

Extinguishing Media: Not applicable (Cartridge does not contain combustible substances).

Fire and Explosion Hazard: None.

Special Protective Equipment for Firefighters: Not applicable.

For Flammability Properties - refer to Section 9.

### 6. Accidental Release Measures

Accidental spillage is not possible because active ingredients are sealed within a welded stainless steel container.

### 7. Handling and Storage

Handling: There are no special chemical handling requirements because active ingredients are sealed within the cartridge.  
The C150 type cartridge is heavy and requires 2 persons (or a suitable mechanical lifting aid) to lift it safely. The CM10Y cartridge is not heavy and can be safely lifted by 1 person.

Storage: Store in a dry, well ventilated space.

### 8. Exposure Controls/Personal Protection

#### Exposure Limits:

| Ingredient | ACGIH - TLV    | OSHA - PEL     | Occupational Exposure Limits EH40 (UK) |
|------------|----------------|----------------|--|
| None       | Not applicable | Not applicable | Not applicable                         |

#### Personal Protection:

Engineering Measures: A suitable mechanical lifting aid is necessary to safely lift a cartridge.

Respiratory Protection: None needed during normal use \*.

Hand/Skin Protection: None needed during normal use \*.

Eye/Face Protection: None needed during normal use \*.

Hygiene Measures: Practice good workplace hygiene. Do not eat or smoke when handling. Wash hands after use and before eating.

Other/General Protection: \* If a cartridge is to be cut open, basic respiratory protection, eye protection and impervious gloves should be used.

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### 9. Physical and Chemical Properties

|                            |  |                        |                    |       |
|----------------------------|--|------------------------|--------------------|-------|
| Appearance and Odour       | Stainless steel cylinder. No odour     | Boiling Point          | Granules-2860/5150 | °C/°F |
| pH (as supplied)           | Granules-12.2 to 12.4                  | Freezing Point         | Granules-2614/4707 | °C/°F |
| Solubility in Water        | Basic oxide granules- almost insoluble | Auto Ignition          | Not applicable     | °C/°F |
| Volatile Content by Volume | Not applicable                         | Flash Point            | Not applicable     | °C/°F |
| Specific Gravity           | No data available                      |                        |                    |       |
| Vapour Pressure (mbar)     | Not applicable                         | Vapour Pressure (Torr) | Not applicable     |       |

### 10. Stability and Reactivity

|                               |                        |
|-------------------------------|------------------------|
| Stability:                    | Stable.                |
| Material/Conditions to Avoid: | Moist /wet conditions. |
| Hazardous Decomposition:      | None.                  |
| Hazardous Polymerisation:     | No data available.     |

### 11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 2 Hazards Identification.

#### Animal data:

|             |                 |
|-------------|-----------------|
| LD50 value: | Not applicable. |
| LC50 value: | Not applicable. |

#### Carcinogenicity:

No known carcinogenic effects - TBC.

### 12. Ecological Information

No information available.

### 13. Disposal Considerations

Used cartridges are non hazardous. They are suitable for landfill or recycling. Contact your local Edwards office for specific advice for your territory.

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### 14. Transport Information

This product is not classified as dangerous under transport regulations.

| PARAMETER             | EUROPEAN       | CANADIAN TDG   | UNITED STATES DOT |
|-----------------------|----------------|----------------|-------------------|
| Proper Shipping Name  | Not applicable | Not applicable | Not applicable    |
| Hazard Class          | Not applicable | Not applicable | Not applicable    |
| Identification Number | Not applicable | Not applicable | Not applicable    |
| Shipping Label        | Not applicable | Not applicable | Not applicable    |

### 15. Regulatory Information

#### European Regulatory Information

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

Risk Phrases: Not applicable.

Safety Phrases: Not applicable.

Symbols: None.

#### United States Regulatory Information

Product is a manufactured article not subject to TSCA listing.

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product constitutes an "article" and, as such is exempt from SARA 313 REPORTING REQUIREMENTS (40 CFR Part 372.38, Paragraph B).

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

#### Canadian Regulatory Information

WHMIS Classification: Not applicable.

Product is a manufactured item not subject to DSL listing.

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### 16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

#### Glossary:

**ACGIH** - American Conference of Governmental Industrial Hygienists; **ANSI** - American National Standards Institute; **Canadian TDG** - Canadian Transportation of Dangerous Goods; **CAS** - Chemical Abstracts Service; **CFR** - Code of Federal Regulations; **Chemtrec** - Chemical Transportation Emergency Center (US); **CHIP** - Chemical (Hazard Information and Packing); **DSL** - Domestic Substances List; **EEC** - European Economic Community; **EH40 (UK)** - HSE Guidance Note EH40 Occupational Exposure Limits; **EPCRA** - Emergency Planning and Community Right-to-Know Act; **EU** - European Union; **HMIS** - Hazardous Material Information Service; **LC** - Lethal Concentration; **LD** - Lethal Dose; **NFPA** - National Fire Protection Association; **OSHA** - Occupational Safety and Health Administration, US Department of Labour; **PEL** - Permissible Exposure Limit; **SARA (Title III)** - Superfund Amendments and Reauthorization Act; **SARA 313** - Superfund Amendments and Reauthorization Act, Section 313; **TLV** - Threshold Limit Value; **TSCA** - Toxic Substances Control Act Public Law 94-469; **US DOT** - US Department of Transportation; **WHMIS** - Workplace Hazardous Materials Information System.

#### Revisions:

April 2010 - Data Sheet updated to reflect the latest supplier safety information and the latest regulatory information.

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