

**PRODUCT NAME : GRC CARTRIDGES -  
C150Y/C150R/C150JV/C150W/CM10Y**

**1. Product and Company Identification**

**Product Name:** GRC cartridge  
**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  
**Type C150W:** A223-04-184, A223-04-186  
**Type CM10Y:** A223-04-103, A223-04-103

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**2. Composition/Information on Ingredients**

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
A proprietary basic oxide mixture in granular form, sealed within a stainless steel welded vessel	Granules - 60 Stainless steel - 40	Not allocated for either material	Not applicable	Not applicable

\*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, 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".

**3. Hazards Identification**

**EMERGENCY OVERVIEW**

This product when properly handled according to good working and hygienic practices is not dangerous to human health and the environment

For short and long term exposure effects see Section 11 Toxicological data.

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Eye Effects: None in normal use.  
 Skin Effects: None in normal use.  
 Ingestion/ Oral Effects: None in normal use.  
 Inhalation Effects: None in normal use.  
 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

**4. First Aid Measures**

**Eyes:** No effects requiring first aid are expected during normal use.  
**Skin:** No effects requiring first aid are expected during normal use.  
**Ingestion/Oral:** No effects requiring first aid are expected during normal use.  
**Inhalation:** No effects requiring first aid are expected during normal use.  
**Other Information:** None.

**5. Fire Fighting Measures**

Extinguishing Media: Cartridge does not contain combustible substances.  
 Fire and Explosion Hazard: None.  
 Special Protective Equipment for Fire Fighters: Not applicable  
 For Flammability Properties - see Section 9

**6. Accidental Release Measures**

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

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**7. Handling and Storage**

Handling: there are no special chemical handling requirements because active ingredients are sealed within the cartridge. The weight of C150 type cartridges requires 2 persons to safely lift them (or the use of suitable mechanical lifting aids).

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: None.

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.

**9. Physical and Chemical Properties**

Appearance and Odour	Stainless steel cylinder. No odour.	Boiling Point	Granules-2860/5150	°C/°F
PH (as supplied)	Granules-12.2-12.4	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

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**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 3 Hazards Identification.

**Animal Data:**

LD50 value: Not applicable

LC50 value: Not applicable

**Carcinogenicity:**

No known carcinogenic effects.

**12. Ecological Information**

No information available.

**13. Disposal Considerations**

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

**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 the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : No

Risk Phrases : Not applicable

Safety Phrases : Not applicable

Symbols : None

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**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).

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

**Canadian Regulatory Information**

Product is a manufactured item not subject to DSL listing.

WHMIS Classification: Not Applicable

**16. Other Information**

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

The information in this data sheet refers to an unused GRC cartridge as supplied by BOC Edwards. Refer to the relevant working instructions on handling of used GRC cartridges.

**Glossary :** CAS, Chemical Abstracts Service; NFPA, National Fire Protection Association; HMIS, Hazardous Material Information Service; LD, Lethal Dose; LC, Lethal Concentration; ACGIH, American Conference of Governmental Industrial Hygienists; TLV, threshold limit value; OSHA, Occupational Safety and Health Administration, US department of Labour; PEL, Permissible exposure limit; EH40 (UK), HSE Guidance Note EH40 Occupational exposure limits; PPM, parts per million; TWA, Time-Weighted Average; STEL, Short Term Exposure Limit; Canadian TDG, Canadian Transportation of Dangerous Goods; US DOT, US Department of Transportation. HSDB, Hazardous Substances Data Bank; RTECS, Registry of Toxic Effects of Chemical Substances; CHEMID, Chemical Identification; DSL, Domestic Substances List ; TSCA, Toxic Substances Control Act Public Law 94-469: CERCLA, Comprehensive Environmental Response, Compensation and Liability Act; EPCRA, Emergency Planning and Community Right-to-Know Act; CAA, Clean Air Act; US, SARA (Title III), Superfund Amendments and Reauthorization Act.; SARA 313, Superfund Amendments and Reauthorization Act, Section 313; EHS, Extremely Hazardous Substance; WHMIS, Workplace Hazardous Materials Information System.

**Revisions**

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturer's data, the accuracy of this information is the responsibility of the manufacturer. BOC Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon this data sheet.