

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - GE21

1. Product and Company Identification

Product name: GE21 Large Vacuum Pump Rotor Blades
Synonyms: G-Etronax EP 215 S
Item Numbers: A204-02-632; A346-01-134; A366-01-134; A204-02-636; A204-02-634; A347-01-134;
A367-01-134

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2. Hazards Identification

EMERGENCY OVERVIEW

This material, when properly handled according to good working and hygienic practices, is not dangerous to human health. However avoid skin abrasion. Dust from machining may constitute minor health risks.
For short and long term exposure effects, refer to Section 11 Toxicological Information.

Eye Effects: Glass fibre dust produced when machining is a contact irritant.
Skin Effects: Glass fibre dust produced when machining is a contact irritant.
Ingestion/Oral Effects: Not applicable.
Inhalation Effects: Inhalation of large amounts of machining dust may cause acute respiratory problems such as asthma. Prolonged or frequent exposure may cause chronic respiratory problems when not prevented by personal protective measures and/or engineering controls such as local extraction. Tobacco smoke may enhance the effects of inhalation of machining dust. When machining the laminate, small amounts of Bisphenol A can be released which may cause sensitisation (allergy).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

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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

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Cured epoxy resin on glass fibre substrate	Nominal 100 (no data available for the relative proportion of resin and glass fibre)	Not allocated	Not applicable	Not applicable
Bisphenol A	Minute amount	80-05-7	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:	If dust enters the eyes, rinse with plenty of water or normal saline solution. Seek medical attention if discomfort persists.
Skin:	Fibrous glass can irritate the skin, making it more sensitive to chemicals. Remove clothes contaminated with dust and fibres. First rinse the skin with plenty of water and then wash the skin gently with soap and water.
Ingestion/Oral:	Not relevant to the finished component.
Inhalation:	If dust is inhaled, provide fresh air. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.
Other Information:	None.

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5. Firefighting Measures

- Extinguishing Media: Water preferred, foam may be used.
- Fire and Explosion Hazard: Hazardous decomposition products: carbon monoxide, phenols and formaldehyde.
- Special Protective Equipment for Firefighters: Firefighters should wear a Self-Contained Breathing Apparatus (SCBA) which meets appropriate standards operated in positive pressure mode and full turn out gear.

For Flammability Properties - refer to Section 9.

6. Accidental Release Measures

Not applicable to the finished product. Dust produced during machining should be removed at frequent intervals by vacuum using industrial vacuum cleaners fitted with suitable filters, to prevent the accumulation of dust. When vacuuming is not possible, dust must be dampened and collected whilst still damp.

7. Handling and Storage

- Handling: No special requirements for normal use, but refer to Section 8 for handling when machining.
- Storage: Store in clean dry conditions. Avoid direct sunlight and extreme temperatures.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Dust from machining.	5 mg/m ³ (inhalable glass fibres)	15 mg/m ³ (total) 5 mg/m ³ (respirable)	No data available

Personal Protection:

- Engineering Measures: Provide local exhaust extraction when processing material. Do not recycle ventilated air.
- Respiratory Protection: If the local exhaust ventilation is insufficient when machining: Use an approved mask with a particle filter type P2. The filter has a limited lifetime and must be changed. Read the instruction.
- Hand/Skin Protection: Not normally required but may prevent skin abrasion during machining.
- Eye/Face Protection: Wear safety goggles when machining material, to protect eyes from dust and flying chips.
- Hygiene Measures: Observe normal standards of industrial hygiene. DO NOT eat, drink or smoke when handling material. Wash hands before eating.
- Other/General Protection: None.

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9. Physical and Chemical Properties

Appearance and Odour	Yellow-green solid. Odourless	Boiling Point	Not applicable	°C/°F
pH (as supplied)	Not applicable	Freezing Point	Not applicable	°C/°F
Solubility in Water	Not soluble	Auto Ignition	>200/392	°C/°F
Volatile Content by Volume	Not applicable	Flash Point	>200/392	°C/°F
Specific Gravity	1.7-1.9			
Vapour Pressure (mbar)	Not applicable	Vapour Pressure (Torr)	Not applicable	

10. Stability and Reactivity

Stability: Chemically inert.

Material/Conditions to Avoid: No known material incompatibility. May build up static electricity during handling, depending upon the atmospheric conditions.

Hazardous Decomposition: Will decompose as a function of temperature and time at temperatures above 180 °C.

Hazardous Polymerisation: No data available.

11. Toxicological Information

For a comprehensive description of 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.

Sensitisation

Bisphenol A released by machining may cause sensitisation (allergy).

Animal data:

LD50 value: No data available.

LC50 value: No data available.

Carcinogenicity:

Glass fibre filaments are not classifiable as to their carcinogenic effects on humans by the IARC (Group 3). The size of the continuous filament glass fibres used in this product is in excess of the respirable range (3 µm or less). The diameter of the filaments is typically 5-14 µm (typically 12 µm). Machining of these fibres does not reduce their diameter, and thus does not increase their potential respirability.

12. Ecological Information

No information available.

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13. Disposal Considerations

Dispose of according to national and local regulations for inert waste. Recommended means of disposal are incineration or landfill.

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: Not applicable.

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 classified.

All ingredients in this product are included in the Canadian DSL.

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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).

Source of information for this data sheet:

- Electro-Isola Material Safety Data Sheet for G-Etronax EP215 S - Edition 4, Issue date: 6th February 2006.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; ANSI - American National Standards Institute; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; Chemtrec - Chemical Transportation Emergency Center (US); 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; SCBA - Self-Contained Breathing Apparatus; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-Weighted Average; US DOT - US Department of Transportation; WHMIS - Workplace Hazardous Materials Information System.

Revisions:

Nov. 2008 - Data Sheet updated to reflect the latest supplier safety information.

June 2010 - Data Sheet updated to reflect current regulatory information.

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