

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2**

### 1. Product and Company Identification

Product name: CX2 - Rotary pump blade material  
Synonyms: Vectra A130 Natural  
Item Numbers: A652-01-130, A371-01-132, A134-01-811, A652-01-131, A652-01-137

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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 and the environment.

Molten material can cause thermal burns on contact with skin or eyes. Carbon monoxide and carbon dioxide are given off on combustion.

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

Eye Effects: Not applicable to finished components. Dust/particles or thermal decomposition vapours may cause mechanical irritation.

Skin Effects: Non irritant (data for base resin). Dust/particles may cause mechanical irritation.

Ingestion/Oral Effects: Not applicable to finished components (pump blades). Base resin has low toxicity.

Inhalation Effects: Not applicable to finished components (pump blades). Hazardous and irritating vapours generated on overheating.

Other information: This is a polymeric material. Any hazardous constituents are wetted by the polymer system, and therefore, present no likelihood of exposure under normal conditions of use.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Gases/vapours evolved during overheating may affect people with chronic diseases of the respiratory system.

## MATERIAL SAFETY DATA SHEET

<b>PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2</b>
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NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	1	Health	0	0 = No Hazard 1 = Slight Hazard 2 = Moderate Hazard 3 = Serious Hazard 4 = Severe Hazard
Flammability	1	Flammability	1	
Instability	0	Reactivity	0	

### 3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Base resin in a wholly aromatic liquid crystal polyester	Variable	70679-92-4	Not applicable	Not applicable
Glass Fibre	5 - 60	Not assigned	Not applicable	Not applicable
Carbon Black	1 - 5	Not assigned	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:** In case of contact with the eyes, rinse with plenty of water. Seek medical advice.
- Skin:** Immediately cool area of skin affected by molten product with plenty of cold water. If material is stuck to skin, do not remove. Allow adhered material to come off naturally. Removal of adhered material may result in more tissue damage than if it is allowed to come off over time. Seek medical advice.
- Ingestion/Oral:** If swallowed, give the patient plenty of water to drink, and seek medical advice. DO NOT give anything to drink to an unconscious person.
- Inhalation:** If inhaled, provide fresh air. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical advice.
- Note to Physicians** This product is essentially inert and nontoxic. However, if it is heated at too high a temperature or if it is burned, gases may be released (see Sections 5 and 10 for off-gases). Patients who have been exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal, asphyxia (carbon dioxide replacing oxygen) is a possibility. As with any fire, irritant gases may have formed. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema.
- Other Information:** See Section 8 Exposure controls/personal protection.

## MATERIAL SAFETY DATA SHEET

<b>PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2</b>
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### 5. Fire Fighting Measures

Extinguishing Media:	Water, dry powder, carbon dioxide, foam.
Fire and Explosion Hazard:	The material does not burn unless a flame is applied. Hazardous combustion products: carbon monoxide (CO) and carbon dioxide (CO <sub>2</sub> ). There is a slight dust explosion hazard.
Special Protective Equipment for Fire Fighters:	Fire fighters should wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode and full turnout gear. Wear skin protection adequate to protect from thermal decomposition products.
Instructions for Fire Fighters	Keep personnel removed from and upwind of fire. Water should be used to keep fire-exposed containers cool.

For Flammability Properties - see Section 9.

### 6. Accidental Release Measures

Not applicable to the finished product. Any dust produced 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:	To minimize release of decomposition products, do not exceed recommended process temperatures. Do not smoke in areas where polymer dust is present. Appropriate measures should be taken to control the generation and accumulation of dust during conveying and processing operations.
Storage:	Store in clean, dry conditions. Store in sealed containers to maintain dryness of the material.

### 8. Exposure Controls/Personal Protection

#### Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Base resin with glass fibre and carbon black	Based on 8 hr TWA: 10 mg/m <sup>3</sup> (total particulates) 3 mg/m <sup>3</sup> (respirable) 1 f/cc <sup>(1)</sup> (glass fibre)	Based on 8 hr TWA: 15 mg/m <sup>3</sup> (total inert dust) 5 mg/m <sup>3</sup> (respirable)	Based on 8 hr TWA: <sup>(2)</sup> 15 mg/m <sup>3</sup> (total inert dust) <sup>(2)</sup> 10 mg/m <sup>3</sup> (total particulates)

- (1) Fibres longer than 5 µm with a diameter less than 3 µm - aspect ratio greater than 5:1.  
(2) Recommended lower limits.

## MATERIAL SAFETY DATA SHEET

<b>PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2</b>
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### Personal Protection:

Engineering Measures:	Provide local exhaust ventilation when processing material, or when dust/particles may be present.
Respiratory Protection:	Wear dust mask when processing material, or when dust/particles may be present. A NIOSH approved respirator is recommended if there is a possibility of dust generation above permissible exposure limits or that decomposition vapours may be generated.
Hand/Skin Protection:	Wear protective gloves when processing material, or when dust/particles may be present.
Eye/Face Protection:	Wear protective goggles/safety glasses/face shield when processing material, or when dust/particles may be present.
Hygiene Measures:	Observe normal standards of industrial hygiene. Do not eat, drink or smoke when handling material. Wash hands before eating, drinking or smoking.
Other/General Protection:	Wear suitable protective clothing with long sleeves and full-length leg protection whenever there is the possibility of contact with hot materials.

## 9. Physical and Chemical Properties

Appearance and Odour	Solid beige moulding. Slight characteristic odour.	Boiling point	No data available	°C/°F
pH (as supplied)	No data available	Melting Point	275 - 335 / 527 - 635	°C/°F
Solubility in Water	Insoluble	Auto Ignition	540 / 1004	°C/°F
Volatile Content by Volume	< 1.0 %	Flash Point	> 93 / 200	°C/°F
Specific Gravity	1.37 - 2.1			
Vapour Pressure (mbar)	< 1.333 x 10 <sup>-3</sup>	Vapour Pressure (Torr)	< 0.001	

## 10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Material/Conditions to Avoid:	Avoid contact with strong alkali solutions which will soften the material. Avoid prolonged exposure to temperatures above 340 °C (644 °F). Avoid exposure to flames with temperatures above 350 °C (662 °F).
Hazardous Decomposition:	Carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ) phenol, phenyl esters, acetic acid and aromatic compounds.
Hazardous Polymerisation:	Will not occur.

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2**

### 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: Oral: > 5 g/kg (rat) Dermal: >2 g/kg (rat) - data for base resin.

LC50 value: Not applicable.

Carbon Black: Inhalation of carbon black, a possible ingredient, has been shown to cause lung tumours in rats at high exposure concentrations. These concentrations appear to exceed the capacity of the lung to clear the carbon black particles, thus resulting in significant toxicity.

#### Carcinogenicity:

Continuous glass filaments generally have a diameter of 6 to 16  $\mu\text{m}$ . Fibres with this diameter are incapable of penetrating the lower respiratory tract and are thus not considered carcinogenic to humans. As these fibres are considered to be non-respirable, few animal studies or epidemiological studies have been conducted.

### 12. Ecological Information

#### Ecotoxicity:

No confirmed data.

#### Environmental Fate:

This material is considered to be non-biodegradable.

### 13. Disposal Considerations

Where possible, recycle the product and packaging. Dispose of the product and any packaging in accordance with all national and local regulations.

### 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

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2**

### 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 contains Glass Fibre and Carbon Black which are subject to the USA reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986, and of 40 CFR 372.

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: Product is a manufactured article not subject to WHMIS regulations.

Product is a manufactured item not subject to DSL listing.

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : ROTARY PUMP BLADE MATERIAL - CX2**

### 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).

Sources of information for this data sheet:

- Ticona "VECTRA A130D-2, VD3005, BLACK" Material Safety Data Sheet. MSDS Number: VE2015.  
Revision Number: 1. Version date: 20/10/2008.

### 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; **EH40 (UK)** - HSE Guidance Note EH40 Occupational exposure limits; **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:

Aug. 2010 - Data Sheet updated to reflect the latest supplier safety information.

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