

Jessica

From: Ian Gildenhuis <Ian.Gildenhuis@capetown.gov.za>
Sent: Friday, 01 March 2019 1:59 PM
To: demosd@xsinet.co.za; Ed Filby
Cc: 'Amy Xu'; jessica@ecoimpact.co.za; Derrick Nel
Subject: RE: SWARTLAND POLYSTYRENE EXTRUSION

Hi Demos

We consulted with Dr Vincent Gololo of National DEA on this matter. The trigger is the use in production “of organic chemicals not specified elsewhere “ – above the threshold of 100t/annum.

Dr Gololo confirmed that the activity as described thus triggers the listing notice.

Regards

Ian Gildenhuis
Head Specialised Environmental Health
City Health

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From: Demos Dracoulides [mailto:demosd@ddaenviro.co.za]
Sent: 01 March 2019 12:56 PM
To: Ed Filby; Ian Gildenhuis
Cc: 'Amy Xu'; jessica@ecoimpact.co.za; Derrick Nel
Subject: RE: SWARTLAND POLYSTYRENE EXTRUSION

Dear Eddie,

We have been contacted by Ecoimpact (Jessica Hansen) on behalf of Swartland for the proposed polystyrene extrusion plant in Atlantis to assist with the air quality and AEL application. The process flow and chemicals used can be seen below.

Process flow:

The mixing station feeds into the primary extruder where by screw the polystyrene and master batch gets mixed and the necessary gasses get blown in (Not all gasses are being used it depends on the size product that we will run).

The primary extruder feeds into the secondary extruder where the product starts cooling down and feeds through a die and a calibre where the board will start to foam. From here on the board will travel over a long distance to cool down before the polystyrene will be planed, edged and trimmed to size. After this the product will travel over conveyers and be stacked and ready for shipment.

In terms of all of the gasses/chemicals/substances to be stored and used on site, please see below:

Resin to be made up of:

1. Polystyrene / Crystal Polystyrene (in the form of small spherical beads) – The MSDS does not provide any detail as to the composition. Polystyrene is an organic compound with the chemical formula: $(C_8H_8)_n$. It is a synthetic aromatic hydrocarbon polymer made from the monomer styrene. Polystyrene can be solid or foamed. Polystyrene, a hard, transparent synthetic resin produced by the polymerization of styrene. 18048,00 kg/day
2. Talc for Styrene - Hydrous magnesium silicate 192,00 kg/day
3. Flame retardant - <45% Brominated SBSpolystyrene-polybutadiene- polystyrene/Benzene, ethenyl-, polymer with 1,3-butadiene, brominated & <10% Polvstvrene with 1,3-butadiene polymer & <5%Carbonato(2) hexadecahvdroxvbis(aluminium)hexamaqnesium 768,00 kg/day
4. Colour - Blend of organic and inorganic pigments dispersed in an ethylene methylacrylate copolymer. Polymeric masterbatch consists of ethylene copolymer, PE wax, Zinc stearate, Titanium Dioxide Pigment White 6, Carbon Black Pigment Black 7, Pigment Yellow 191, and Calcium carbonate. 96,00 kg/day
5. Process Aid – Zinc Oxide 96,00 kg/day

Blowing Agent to be made up of:

6. CO2 248,24 kg/day
7. Dimethyl ether(DME) aerosol grade 630,15 kg/day
8. 152a (gas) – Difluoroethane 267,34 kg/day
9. Ethanol - Ethyl alcohol of 99.99 % (volume) purity, denatured with 5 % (volume) ethyl acetate 343,72 kg/day

The process will use polystyrene beads and with adding some chemicals will extrude polystyrene boards. **There are no:**

1. Production of organic chemicals;
2. Production of organometallic compounds;
3. Polymerisation or co-polymerisation;
4. Manufacture, recovery or purification of or any ester of acrylic acid;
5. Use of toluene di-isocyanate or other di-isocyanate of comparable volatility; or recovery of pyridine.

As specified in the Category 6 below.

Therefore, the proposed activity **does not appear to** trigger Category 6 listed activity. Please kindly confirm.

Category 6: Organic Chemicals Industry

Description:	The production, or use in production of organ elsewhere including acetylene, acetic, maleic or acids, carbon disulphide, pyridine, formaldehyde, its derivatives, acrylonitrile, amines and synthetic. The production of organometallic compounds, or surface-active agents. The polymerisation or co-polymerisation of any substituted hydrocarbon (including vinyl chloride). The manufacture, recovery or purification of ac acrylic acid. The use of toluene di-isocyanate or other di-volatility; or recovery of pyridine.
Application:	All installations producing or using more than 100 the listed compounds.

Kind Regards,
Demos

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From: Jessica [mailto:jessica@ecoimpact.co.za]
Sent: Tuesday, February 19, 2019 9:13 AM
To: 'Amy Xu'; eddie.wiggins@Swartland.co.za
Cc: demosd@ddaenviro.co.za; Derrick Nel
Subject: RE: SWARTLAND POLYSTYRENE EXTRUSION

Good day Amy

This information needs to come from Swartland directly. As information may have changed and they are the technical experts. I need to be included as well as I will need this information for the EIA.

Here is the information I have at this stage:

Process flow:

I refer to the Technical drawing of Sunwell Global FEX150200XPS (Attached).

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All 9 MSDS's attached.

Please keep Derrick in the loop at all times as well.

Much appreciated.

Kind regards,

Jessica Hansen
Head of Training
ISO 50001 Energy Expert
Pri.Sci.Nat 400192/16



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From: Amy Xu <amy@ddaenviro.co.za>
Sent: Tuesday, 19 February 2019 8:41 AM
To: eddie.wiggins@Swartland.co.za; jessica@ecoimpact.co.za
Cc: demosd@ddaenviro.co.za
Subject: RE: SWARTLAND POLYSTYRENE EXTRUSION

Thanks Eddie. We will go through it and let you know.

@ Jessica, do you maybe have the process description ready? Also, we need to know the chemicals to be used in the process.

Kind Regards

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Unit 11, Prosperity Park, Computer Rd,
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From: Eddie Wiggins [<mailto:eddie.wiggins@Swartland.co.za>]
Sent: 18 February 2019 14:49
To: demosd@ddaenviro.co.za; jessica@ecoimpact.co.za
Cc: Derrick Nel
Subject: SWARTLAND POLYSTYRENE EXTRUSION

Hi all

Please see attached the different layouts – please ask anytime if you require any additional info /explanation of anything.

Best Regards/ Groete

Eddie Wiggins

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