SAFETY DATA SHEET

Creation Date 27-May-2015 **Revision Date** 29-May-2017 **Version** 3

1. IDENTIFICATION

Product Name Veil (mineral filled+acrylic+melamine formaldehyde)

Synonyms VL A125EX-CH02, VL A135EX-CX13, VL A180EX-CX04, VL 180EX-CX51, VL A145EX-CX17

Product Code OCCM00005

Recommended Use Industrial

Manufacturer Address Owens Corning Composite Materials, LLC
One Owens Corning Parkway
Toledo, Ohio 43659

Company Phone Number 1-800-GET-PINK or 1-800-438-7465
24 Hour Emergency Phone Number Chemtrec 1-800-424-9300
Emergency Telephone 1-419-248-5330 (after 5 pm ET and weekends)

E-mail address productcompliance@owenscorning.com
Company Website http://www.owenscorning.com/

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).
This product is considered an article. 29 CFR 1910.1200(c) definition of an article is as follows: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees

WHMIS Regulatory Status This product is not considered hazardous by the Canadian Hazardous Products Regulation SOR/2015-17
Continuous Filament Glass Fiber (CFGF) Products are manufactured articles. The definition of manufactured article given by the Canadian Hazardous Products Act R.S.C., 1985, c. H-3 is: any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product

Label elements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Hazards not otherwise classified (HNOC) Not applicable

Other Information As manufactured continuous filament glass fibers are non-respirable. May cause temporary skin and mucous membranes itching due to mechanical abrasion effect of fibers. Under normal conditions of use, these products may release dust and non-respirable fibers (Particles Not Otherwise Regulated). Under severe process conditions (e.g. shredding, crushing), these products may release very small amount of respirable particulate, some of which may be fiber-like in terms of l/d ratio (so-called "shards"). See Section 8 for Exposure Limit Data

Unknown acute toxicity • 2% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components
Continuous filament glass fiber 20 - 60 %
Aluminum hydroxide 40 - 70 %
Cured polyvinyl alcohol binder 5 - 20 %
Cured melamine formaldehyde resin 0.2 - 5 %
Cured acrylic polymer 0.1 - 5 %

Chemical Name	CAS No.	Weight-%	Trade Secret
Aluminum hydroxide	21645-51-2	40 - 70	*
Continuous filament glass fiber, non-respirable	65997-17-3	20 - 60	*
Citric acid	77-92-9	0 - 0.5	*
Formaldehyde	50-00-0	0 - 0.01	*

• *The exact percentage (concentration) of composition has been withheld as a trade secret or for covering a group of substantially similar products

Comments The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product

4. FIRST AID MEASURES

Description of First Aid Measures

Eye contact
• DO NOT rub or scratch eyes
• Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
• If eye irritation persists: Get medical advice/attention

Skin contact
• DO NOT rub or scratch affected area
• DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers
• Wash skin with soap and water
• Use a wash cloth to help remove fibers
• If fibers are seen penetrating from the skin, the fibers can be removed by applying and removing adhesive tape so that the fibers adhere to the tape and are pulled out of the skin

Inhalation
• Move victim to fresh air
• If symptoms persist, call a physician

Ingestion
• Accidental ingestion of this material is unlikely
• Rinse mouth with water and drink water to remove fibers from the throat
• If symptoms persist, call a physician

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties
- Not flammable. Only the organic part of the product is combustible and could release small quantities of undetermined hazardous compounds in case of major and prolonged heat or fire

Suitable extinguishing media
- Use CO2, dry chemical, or foam
- Water spray or fog

Unsuitable extinguishing media
- None

Specific hazards arising from the chemical
- No information available

Explosion data

Sensitivity to Mechanical Impact
- None

Sensitivity to Static Discharge
- None

Protective equipment and precautions for firefighters
- As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
- Avoid contact with eyes and skin

Environmental precautions
- See Section 12 for ecotoxicology additional information

Methods and material for containment and cleaning up

Methods for containment
- Prevent further leakage or spillage if safe to do so

Methods for cleaning up
- Use personal protective equipment as required
- Avoid creating dust
- Take up mechanically, placing in appropriate containers for disposal
- Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination

7. HANDLING AND STORAGE

Precautions for safe handling
- Prevent and/or minimize dust formation

Conditions for safe storage, including any incompatibilities

Storage Conditions
- Store in a manner which will minimize dust generation and accumulation
- Keep product in packaging until use to minimize potential dust generation

Incompatible materials
- None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines As manufactured continuous filament glass fibers are not respirable. Under normal conditions of use, these products may release dust and non-respirable fibers (Particles Not

Otherwise Regulated). Under severe process conditions (e.g. shredding, crushing), they may release very small amount of respirable particulate, some of which may be glass shards (see section 11). .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
Aluminum hydroxide 21645-51-2	TWA: 1 mg/m³ respirable particulate matter	-	-
Continuous filament glass fiber, non-respirable 65997-17-3	TWA: 1 fiber/cm3 respirable fibers: length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination TWA: 5 mg/m³ inhalable particulate matter	-	-
Formaldehyde 50-00-0	Ceiling: 0.3 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm unless specified in 1910.1048 (vacated) STEL: 10 ppm 30 min unless specified in 1910.1048 (vacated) Ceiling: 5 ppm unless specified in 1910.1048 STEL: 2 ppm see 29 CFR 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

NIOSH REL Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Controls Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits
Local exhaust ventilation should be provided at areas of cutting, milling or other similar processing to remove airborne dust and fibers

Individual protection measures, such as personal protective equipment

Eye/face protection • Wear safety glasses with side shields (or goggles)

Skin and body protection • Wear protective gloves
• Wear long-sleeved shirt and long pants

Respiratory protection • If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

General Hygiene Considerations • Wash hands before breaks and immediately after handling products
• Remove and wash contaminated clothing before re-use

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C Solid - fiber with diameter larger than 6 micron
Appearance Glass fiber veil
Odor Organic
Color White
pH value not applicable
Melting point / freezing point not applicable
Boiling point / boiling range not applicable
Flash point not applicable
Evaporation rate Not applicable
Vapor pressure @20 °C (kPa) not applicable mm Hg @ 20°C

Density VALUE not applicable

Water solubility	No information available
Autoignition temperature	No information available not applicable
Explosive properties	Not an explosive
Oxidizing properties	Not an oxidizer
Specific Gravity	not applicable
Softening point	> 800°C
Density VALUE	not applicable

10. STABILITY AND REACTIVITY

Reactivity • No known reactivity

Chemical stability • Stable under recommended storage conditions

Possibility of Hazardous Reactions • None under normal processing

Conditions to avoid • None known

Incompatible materials • None known

Hazardous Decomposition Products • Thermal decomposition can lead to release undetermined compounds in small quantities

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

• Continuous filament glass fibers are not respirable according to the World Health Organization (WHO) definition. Respirable fibers have a diameter (d) smaller than 3µm, a length (l) larger than 5µm and a l/d-ratio larger than or equal to 3. Fibers with diameters greater than 3 microns, which is the case for continuous filament glass fiber, do not reach the lower respiratory tract and, therefore have no possibility of causing serious pulmonary disease. Continuous filament glass fibers do not possess cleavage planes which would allow them to split length-wise into fibers with smaller diameters, rather they break across the fiber, resulting in fibers which are of the same diameter as the original fiber with a shorter length and a small amount of dust. Microscopic examination of dust from highly chopped and pulverised glass demonstrated the presence of small amounts of respirable dust particles. Among these respirable particles, some were fiber-like in terms of l/d ratio (so-called “shards”). It can be clearly observed however that they are not regular shaped fibers but irregular shaped particles with fiber-like dimensions. To the best of our knowledge, the exposure levels of these fiber-like dust particles measured at our manufacturing plants are of the order of magnitude between 50 to 1000 below existing applicable limits

• The International Agency for Research on Cancer (IARC) in June, 1987, and in October, 2001 (see IARC Monographs on the Evaluation of Carcinogenic risks to humans – Man-made Vitreous Fibers – Volume 81), categorized continuous filament fiber glass as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human as well as animal studies was evaluated by IARC as insufficient to classify continuous filament fiber glass as a confirmed, probable or even possible cancer causing material

Component Information

Chemical Name	Oral LD50	LD50/dermal/rat - NO UNITS (Wizards mg/kg)	Inhalation LC50
Aluminum hydroxide 21645-51-2	> 5000 mg/kg (Rat)	-	-
Polyvinyl alcohol 9002-89-5	= 23854 mg/kg (Rat)	-	-
Citric acid 77-92-9	= 3 g/kg (Rat)	-	-

Formaldehyde 50-00-0	= 100 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h
Polyoxyethylene stearyl ether 9005-00-9	= 1900 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization None known.
Germ cell mutagenicity None known.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
Continuous filament glass fiber, non-respirable 65997-17-3	-	Group 3	-	-
Polyvinyl alcohol 9002-89-5	-	Group 3	-	-
Formaldehyde 50-00-0	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 3 - Not classifiable as a human carcinogen
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity This product does not contain any known or suspected reproductive hazards.
STOT - single exposure No known effects under normal use conditions.
STOT - repeated exposure None under normal use conditions.
Target Organ Effects No known effects under normal use conditions.
Aspiration hazard Not applicable.

12. ECOLOGICAL INFORMATION

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Citric acid 77-92-9	-	1516: 96 h Lepomis macrochirus mg/L LC50 static	-
Formaldehyde 50-00-0	-	22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 1510: 96 h Lepomis macrochirus µg/L LC50 static 41: 96 h Brachydanio rerio mg/L LC50 static 100 - 136: 96 h Oncorhynchus mykiss mg/L LC50 static 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through	2: 48 h Daphnia magna mg/L LC50 11.3 - 18: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability • No information available

Bioaccumulation • No information available

Chemical Name	Partition coefficient
Citric acid	-1.72

77-92-9	
Formaldehyde 50-00-0	0.35

Other adverse effects • No information available

13. DISPOSAL CONSIDERATIONS

Disposal of wastes • Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated packaging • Do not reuse container

US EPA Waste Number • No EPA Waste Number are applicable
• U122

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

Continuous filament glass fiber products are articles. Articles are exempted from registration or listing under chemicals inventories like TSCA (USA), DSL/NDSL (CAN), REACH (EU), ENCS (JP), IECSC (CN), KECL (KR), PICCS (PH), AICS (AUS).

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Aluminum hydroxide 21645-51-2	X	X		X		X	X	X	X	X
Continuous filament glass fiber, non-respirable 65997-17-3	X	X		X		X	X	X	X	X
Citric acid 77-92-9	X	X		X		X	X	X	X	X
Formaldehyde 50-00-0	X	X		X		X	X	X	X	X

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde 50-00-0	100 lb	-	-	X

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Formaldehyde 50-00-0	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Formaldehyde 50-00-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Formaldehyde 50-00-0	X	X	X

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Prepared By FCs
Creation Date 27-May-2015

Revision Date	29-May-2017
Revision Note	Review of Section 2

Disclaimer

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use

End of Safety Data Sheet