



# MATERIAL SAFETY DATA SHEET

## 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCTS:** Rigid PVC Profile

**DESCRIPTION:** Rigid PVC – White, Beige, White/Blue, Cocoa, Terratone

**SUPPLIER:** VEKA, Inc.  
100 Veka Drive.  
Fombell, PA 16123

**EMERGENCY PHONE:** (724) 452-1000

**INFO. PHONE:** (724) 452-1000

**DATE OF APPROVAL:** 6/29/04

## 2 – COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	Color Code	CAS NUMBER	PERCENTAGE BY WEIGHT	OSHA PEL	ACGIH TLV
Polyvinyl Chloride Resin (PVC)	A	9002-86-2	< 90	N/A	N/A
Acrylic Copolymers	A	N/A	< 10	N/A	N/A
Calcium Carbonate	A	1317-65-3	< 5	15 mg/m <sup>3</sup> , total 5 mg/m <sup>3</sup> , resp.	10 mg/m <sup>3</sup> , total 3 mg/m <sup>3</sup> , resp.
Calcium Stearate	A	1592-23-0	< 3	N/A	N/A
Paraffin Wax	A	8002-74-2	< 3	N/A	2 mg/m <sup>3</sup> ceiling as fume
Titanium Dioxide (TiO <sub>2</sub> )	A	13463-67-7	< 12	15 mg/m <sup>3</sup> , total dust	10 mg/m <sup>3</sup> , total dust
Organotin (Sn) Complex	A	N/A	< 2	0.1 mg/m <sup>3</sup> as Sn	0.1 mg/m <sup>3</sup> as Sn
Nickel (Ni) / Manganese (Mn) Composition	B, C	71631-15-7	< 4	1 mg/m <sup>3</sup> as Ni 5 mg/m <sup>3</sup> as Mn 1 mg/m <sup>3</sup> Mn Fume	0.5 mg/m <sup>3</sup> as Ni 5 mg/m <sup>3</sup> as Mn 1 mg/m <sup>3</sup> Mn Fume
Titanium Oxide (TiO <sub>2</sub> ) / Antimony (Sb) / Nickel (Ni) Composition	B	8007-18-9	< 4	15 mg/m <sup>3</sup> TiO <sub>2</sub> 5 mg/m <sup>3</sup> TiO <sub>2</sub> Resp 0.5 mg/m <sup>3</sup> Sb	10 mg/m <sup>3</sup> TiO <sub>2</sub> 0.5 mg/m <sup>3</sup> Sb
Titanium Dioxide (TiO <sub>2</sub> ) / Manganese (Mn) / Antimony (Sb) Composition	B, C	68412-38-4	< 4	0.5 mg/m <sup>3</sup> Sb	0.5 mg/m <sup>3</sup> Sb
Titanium Oxide (TiO <sub>2</sub> ) / Antimony (Sb) / Composition	C, T	68186-90-3	<4	15 mg/m <sup>3</sup> TiO <sub>2</sub> 0.5 mg/m <sup>3</sup> Sb	10 mg/m <sup>3</sup> TiO <sub>2</sub> 0.5 mg/m <sup>3</sup> Sb
Chromium III Compound/Iron Oxide Composition	T	68909-79-5	<4	0.5 mg/m <sup>3</sup> as Cr	0.5 mg/m <sup>3</sup> as Cr

### Color Code

- NOTES:** 1) All exposure limits are 8-hour TWA's unless otherwise specified  
2) Abbreviations/Acronyms are defined in Section 16  
3) Composition information encompasses the range for this class of compounds.

A: All Colors  
B: Beige Profile  
C: Cocoa  
T: Terratone

**3 – HAZARDS IDENTIFICATION**

**GENERAL HAZARD STATEMENT:** This manufactured product is classified as an "Article" as defined under OSHA Hazard Communication criteria, and is thus exempt from the MSDS requirement. Colorants, stabilizers and processing additives are encapsulated in a polymer matrix, and the product does not release significant amounts of hazardous chemicals under normal end-use conditions. This document addresses potential processing emissions and decomposition products.

Under certain conditions, (high temperatures) hazardous decomposition products may be emitted. Airborne dust may be generated by physical/mechanical means and certain handling procedures. The major component (PVC) is of low order toxicity. Some minor components must be viewed as toxic.

**EMERGENCY OVERVIEW:** Processing that generates significant quantities of airborne dust or thermal decomposition products should be performed in well-ventilated areas, and if appropriate, respiratory protection and other PPE should be utilized.

**HMS DESIGNATION:** HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 PPE B

**PRIMARY ROUTE OF ENTRY:** Inhalation of airborne dust or thermal decomposition products

**Acute Effects of Overexposure:**

**INHALATION:**

Exposures to high concentrations of airborne dust may result in respiratory irritation and other toxic effects. Thermal decomposition products are corrosive/toxic and are potent eye, nose, throat and respiratory irritants.

**EYE:**

Direct eye contact exposure to high concentrations of airborne dust may cause irritation and conjunctivitis.

**SKIN:**

Prolonged exposure to airborne dust may cause irritation or sensitization, possibly leading to dermatitis.

**INGESTION:**

Not an anticipated route of exposure. Harmful if swallowed. Ingestion of dust may cause nausea and/or vomiting. Other serious effects may occur if large amounts of product are swallowed.

**Chronic Effects of Overexposure:**

**EXCESSIVE AND REPEATED EXPOSURES TO AIRBORNE DUST MAY CAUSE:**

Allergic sensitization/dermatitis  
Respiratory irritation, inflammation and damage  
Eye inflammation, irritation of mucous membranes

**CARCINOGENICITY:**

The carcinogenicity of this product as a whole has not been tested. Extensive long-term usage of PVC resins has exhibited no documented carcinogenic effects. Specific components are categorized in Section 11 – *TOXICOLOGICAL INFORMATION*.

**SYNERGISTIC MATERIALS:**

None known

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:**

(Airborne Dust) Irritation of skin and eyes; respiratory irritation; dermatitis

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:**

Pre-existing allergies and respiratory disorders may be exacerbated by airborne dust.

**4 – FIRST AID MEASURES**

Airborne dust should be treated in accordance with accepted hygienic practices.

**INHALATION:** Extreme dust exposure may block respiratory passages. If overexposure occurs, immediately remove victim from the adverse environment to fresh air and seek medical attention. If breathing has stopped, certified individuals should perform CPR. Keep affected person warm and at rest.

**EYE:** Treat as an abrasive foreign material. Flush with large amounts of running water for several minutes.

**SKIN:** If dust gets on skin, wash contaminated area with soap and water. If a persistent rash or irritation occurs, seek medical attention. Launder contaminated clothing prior to re-use.

**INGESTION:** Ingestion of significant quantities is unlikely. Swallowing of large quantities of material may cause nausea. If vomiting occurs, keep head below hips to help prevent aspiration. Seek medical attention immediately.

**5 – FIRE FIGHTING MEASURES**

**FLASH POINT:** N/A

**FLAMMABLE LIMITS:** N/A

**AUTOIGNITION TEMPERATURE:** N/A

**GENERAL FIRE HAZARD:** N/A

**FLAMMABILITY CLASSIFICATION:** N/A

**EXTINGUISHING METHOD:** Water spray, CO<sub>2</sub>, or dry powder extinguisher

**FIRE FIGHTING EQUIPMENT:** As appropriate for surrounding material and toxic airborne gases. Respiratory protection against hydrogen chloride, carbon dioxide and oxygen deficiency. Positive pressure SCBA and structural firefighter's protective clothing should be used for fighting large fires.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** Not a significant fire or explosion hazard. Exposure to fire and high temperature will result in thermal decomposition and emission of hydrogen chloride and other toxic gases.

**EXPLOSION DATA:** Sensitivity/Mechanical Impact: N/A

Sensitivity/Static Discharge: N/A

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen chloride, carbon monoxide and other toxic gases may be evolved from fires involving this product.

**6 – ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED:** Avoid generation of airborne during clean-up, skin and eye contact, ingestion and inhalation of material should be avoided as much as possible.

Local exhaust or dilution ventilation is required if high concentrations of airborne dust are generated.

Appropriate PPE should be worn during clean-up if excessive airborne dust is generated. Transfer spilled material to appropriate containers for storage, recycle, or disposal. Comply with federal, state and local regulations regarding waste disposal. Recycling of unused material is recommended.

**7 – HANDLING AND STORAGE**

**HANDLING:** Use gloves when handling product. If airborne dust is generated, take necessary precautions to avoid inhalation of excessive dust, including ventilation and respiratory protection.

**STORAGE:** Store in ventilated area away from heat and ignition sources.

## 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Provide general dilution ventilation and/or local ventilation during processing that generates airborne dust. Avoid excessively high temperatures to avoid decomposition and formation of toxic gases.

**RESPIRATORY:** Product is non-volatile. Airborne dust may be generated during handling and mechanical processing. Vapor and aerosol emissions may occur at high temperatures. When engineering or administrative controls cannot maintain exposures below permissible limits, use an appropriate NIOSH/MSHA approved respirator. If respiratory protection is required, all appropriate requirements as set forth in 29 CFR 1910.134 (1998 revision) must be met. A competent health and safety professional should be consulted for respirator selection, fit testing and training. Use a NIOSH-approved positive-pressure, air-supplied respirator if exposure levels are unknown, or during any other circumstance where an air-purifying respirator would not be adequate.

**GLOVES:** Suitable for protection against skin contact during handling and processing. Protect hands from prolonged exposure to dust that may be generated during processing.

**EYE:** Safety glasses or goggles when there is a reasonable possibility of airborne dust.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Adequate footwear (safety shoes if necessary) and clothing that protects skin from prolonged or repeated contact. Change clothing if extensive dust contamination occurs. Launder contaminated clothing prior to re-use.

## 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** NA

**Vapor Pressure (mm Hg, @ 68°F):** N/A

**Vapor Density (AIR = 1):** N/A

**Melting Point:** Softens above 175°F

**Specific Gravity (H<sub>2</sub>O = 1):** Greater than 1.0

**Evaporation Rate:** N/A

**Solubility in Water:** Insoluble

**pH:** N/A

## 10 – STABILITY AND REACTIVITY

**STABILITY:** Stable under normal conditions. Decomposes at high temperature (fire conditions) to release toxic hydrogen chloride gas.

**CONDITIONS TO AVOID:** Avoid excessive heat. Product may distort or soften and fuse together at temperatures above 175°F and will undergo decomposition under fire/combustion conditions.

**INCOMPATIBLE MATERIALS:** Avoid contact with organic solvents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products (hydrogen chloride and other toxic substances) may be emitted at high temperatures/fire conditions.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11 – TOXICOLOGICAL INFORMATION

Toxicity characteristics of individual components are listed to serve as a guide for assessment of airborne dust associated with processing and potential thermal decomposition products that may occur at high temperature/combustion conditions.

**POLYVINYL CHLORIDE (PVC):** Polyvinyl chloride is a solid, rigid resin formed by co-reaction/polymerization of vinyl chloride monomer. PVC is manufactured under conditions that minimize the content of vinyl chloride monomer. Monomer content of PVC is typically less than ten parts per million, and is further reduced during extrusion processing. Vinyl chloride monomer is a cancer-suspect agent. Manufacture, handling and processing of vinyl chloride are specifically regulated by U.S. Department of Labor, Occupational Safety and Health Administration. Such regulations have been published as 29 CFR 1910.1017. It is important that handlers and processors of PVC resin be familiar with these regulations. None of the information presented in this material safety data

sheet should be construed to contradict or supercede these regulations. It must be recognized that PVC and vinyl chloride are distinctively different materials. Prolonged skin contact with PVC dust may cause dermatitis. Thermal decomposition under fire conditions will release hydrogen chloride, a corrosive, irritating, toxic gas.

**ORGANOTIN COMPLEX:** Exposure to excessive levels of Organotin compounds can result in skin, eye and respiratory irritation. Chronic inhalation or ingestion of tin compounds may result in damage to the liver, kidneys, urinary tract and central nervous system. Carcinogenicity: ACGIH has designated organic tin compounds as not classifiable as human or animal carcinogens due to insufficient data.

**CALCIUM STEARATE:** Not highly toxic by ingestion, however, swallowing of massive quantities may cause gastric disorder. Inhalation of excessive quantities of airborne calcium stearate dust may result in respiratory irritation, coughing, and breathing difficulty. Chronic/repeated inhalation of grossly excessive quantities may result in progressive pneumonitis. Pre-existing skin disorders, impaired respiratory function and pulmonary disease may be aggravated by exposure to all classes of airborne dust.

**PARAFFIN WAX:** Material is considered to be biologically inert and of relatively low toxicity by ingestion. Swallowing of massive quantities may cause gastric disorders and diarrhea. Excessive heating may cause fuming and finely divided airborne particulate. Inhalation of excessive quantities may cause respiratory disorders. High airborne dust concentrations may cause eye irritation.

**ANTIMONY:** High airborne dust concentrations can cause irritation to the eyes, mucous membranes and respiratory tract. Antimony has been associated with pneumoconiosis and damage to the cardiovascular system.

**CHROMIUM III:** Divalent and trivalent chromium compounds are reported as eye irritants and possible skin sensitizers. High airborne dust concentrations can cause respiratory discomfort and eye irritation due to abrasive action. Ingestion of large quantities may cause gastrointestinal disorders. Carcinogenicity: IARC and ACGIH have designated CrII and CrIII compounds as not classifiable as to carcinogenicity to humans.

**IRON OXIDE:** Iron is considered to be essentially non-toxic by ingestion, however, ingestion of massive quantities of iron may cause gastrointestinal disorders. Iron is a necessary nutrient for humans, animals, and vegetation. Inhalation of iron dust may cause benign pneumoconiosis with x-ray shadows indistinguishable from fibrotic pneumoconiosis. Carcinogenicity: Reports alleging iron as a human carcinogen have been generally rejected by OSHA and most of the industrial hygiene profession. ACGIH has designated iron as not classifiable as a human or animal carcinogen due to inadequate data

**CALCIUM CARBONATE:** This material is considered to be relatively non-toxic, and is regulated by OSHA as a "nuisance" dust. Inhalation of large quantities of airborne dust may result in blockage of breathing passages and irritation of mucous membranes. Eye irritation may result from abrasive action. Ingestion of large quantities may cause distress due to evolution of carbon dioxide upon contact with digestive acids.

**NICKEL:** - Nickel fumes are respiratory irritants and may cause pneumonitis. Exposure to nickel and its compounds may result in the development of a dermatitis known as "nickel itch" in sensitized individuals. The first symptom is usually itching, which occurs up to 7 days before skin eruption occurs. The primary skin eruption is erythematous (skin redness), or follicular, which may be followed by skin ulceration. Nickel sensitivity, once acquired, appears to persist indefinitely.

Carcinogenicity - Nickel and certain nickel compounds have been listed by NTP as being reasonably anticipated to be carcinogens. IARC has listed nickel compounds within group 1 (there is sufficient evidence for carcinogenicity in humans) and nickel within group 2B (agents which are possibly carcinogenic to humans). Nickel is not regulated as a carcinogen by OSHA (29 CFR 1910 Subpart Z). ACGIH designates elemental nickel as a category A5, not a suspected human carcinogen; and nickel components are designated as A1, confirmed carcinogen or A4, not classifiable.

**TITANIUM** - Elemental titanium and titanium dioxide are of a low order toxicity. Laboratory animals (rats) exposed to titanium dioxide via inhalation have developed small-localized dark-colored dust deposits in the lungs. Excessive exposure in humans may result in slight changes in the lungs.

**MANGANESE** – NIOSH has associated manganese with loss of strength/asthma, insomnia, mental confusion, dry throat, metal fume fever, coughing, chest tightness, rales, shortness of breath/dyspnea, flu-like fever, low-back pain, vomiting, malaise, kidney damage, fatigue, central nervous system disorders, respiratory system damage and blood disorders.

**ACRYLIC COPOLYMERS** – This class of polymers is utilized in acrylic paints and a broad range of plastic compositions. No specific toxic effects have been attributed to acrylic polymers. Airborne acrylic copolymer dust may irritate the eyes and respiratory tract.

## 12 – ECOLOGICAL INFORMATION

Some constituents may be ecologically toxic. PVC is not readily biodegradable. Extensive usage of PVC profiles has not resulted in major ecological concerns.

## 13 - DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** Waste should be disposed, processed, or recycled in accordance with federal, state and local regulations. Recycling of waste material is recommended. Incineration is not recommended unless provisions are made to contain emissions of hydrogen chloride and other decomposition products.

## 14 – TRANSPORT INFORMATION

**HAZARDOUS MATERIALS DESCRIPTION/PROPER SHIPPING NAME:** N/A

**HAZARD CLASS:** N/A

**LABEL REQUIRED:** N/A

**PACKING GROUP:** N/A

## 15 - REGULATORY INFORMATION

**SARA TITLE III HAZARD CATEGORIZATION:** Product is not categorized as an immediate (acute) health hazard or a delayed (chronic) health hazard as defined by 40 CFR 370.

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHSs):** No components are listed as extremely hazardous substances.

**SARA TITLE III SECTION 313 REPORTABLE SUBSTANCES:** Nickel, Manganese, Antimony, Chromium III

**CERCLA HAZARDOUS SUBSTANCES:** Nickel,

## 16 – OTHER INFORMATION

### ABBREVIATIONS/ACRONYMS:

Following are some abbreviations and acronyms that may appear on MSDSs.

ACGIH	- American Conference of Governmental Industrial Hygienists	NIOSH	- National Institute for Occupational Safety and Health
AL	- Action Level	NTP	- National Toxicology Program
C	- Ceiling Concentration	OSHA	- Occupational Safety and Health Administration
CAS	- Chemical Abstracts Service	PEL	- Permissible Exposure Limit
CFR	- Code of Federal Regulations	PNOR	- Particulate Not Otherwise Regulated
CPR	- Cardiopulmonary Resuscitation	PNOC	- Particulate Not Otherwise Classified
EST	- Eastern Standard Time	POTW	- Publicly Owned Treatment Works
HMIS	- Hazardous Materials Identification System	PPE	- Personal Protective Equipment
IARC	- International Agency for Research on Cancer	ppm	- parts per million
mg/m <sup>3</sup>	- milligrams per cubic meter of air	resp	- respirable
mppcf	- million particles per cubic foot	SCBA	- Self-contained Breathing Apparatus
MSDS	- Material Safety Data Sheet	STEL	- Short-term Exposure Limit
MSHA	- Mine Safety and Health Administration	TLV	- Threshold Limit Value
N/A	- Not Applicable	TWA	- Time-weighted Average
NFPA	- National Fire Protection Association	µg/m <sup>3</sup>	- Micrograms per cubic meter of air
NIA	- No Information Available	<	- Less than
NIF	- No Information Found	>	- Greater than

### DISCLAIMER:

Details presented in this MSDS were derived from literature sources and regulatory documents believed to be accurate and authoritative. The purpose of this MSDS is to serve as a general guide to users of this product. It is the user's responsibility to comply with all federal, state and local regulations. The user must satisfy requirements of the OSHA Hazard Communication

Standard 29 CFR 1910.1200 and any other applicable occupational health and environmental regulations. This MSDS is not intended as a total regulatory compliance document, nor should it be construed as a license or a recommendation to violate any law or infringe on any patent. The user (not the supplier) is uniquely positioned to know the conditions of use, and assumes responsibility for process safety and health. Comprehensive Safety Compliance, Inc. (CSC; Occupational Health and Safety Consultant) and VEKA, Inc. shall not be liable for user errors associated with the use of this product. CSC, Inc. and VEKA, Inc. make no warranty, expressed or implied, regarding the use by others of this product, and shall not be liable for incidental or consequential damages in connection with this product.

<b>PREPARED BY:</b> David R. Williams, CIH Comprehensive Safety Compliance, Inc. (CSC) (412) 826-5480 x237 Occupation Health and Safety Consultant	<b>REVISION NO.:</b> 1	<b>APPROVAL DATE:</b> 6/29/2004
<b>MFR. CONTACT:</b> VEKA, Inc. 100 Veka Drive Fombell, PA 16123	<b>SUPERSEDES MSDS DATED:</b> 5/21/2004	