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Material Safety Data Sheet (SDS)

OSHA Hazard Communication Standard 29 CFR 1910.1200. Prepared to GHS Rev. 3

PVC -196047-020 ***Rev. Date: 02/12/2019*** ***Issue Date: 06/30/2015***

SECTION 1 PRODUCT IDENTIFICATION

Product Name: PVC- 196047-020
Description: Thermoplastic for Extrusion or Injection Molding.

Contact Information / Manufacturer Identification

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SECTION 2 HAZARD IDENTIFICATION

PRECAUTIONARY INFORMATION

Proper procedures must be followed at all times when processing PVC compounds. Vapors and fumes released at elevated temperatures may result in exposure.

2.1 Health Hazards

OSHA Regulation Status

All ingredients are enclosed by the fused polymer and therefore are not considered by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry include eye and skin contact, ingestion and inhalation. Refer to Section 4 for First Aid Measures.

2.2 Physical Hazard

PVC compounds will not normally continue to burn after ignition without an external fire source. PVC evolves hydrogen chloride, carbon monoxide, and other gases when burned.

2.3 Label Elements

Hazard Pictograms

GHS02 GHS07 GHS08

Signal Word: Warning

2.4 Classification System

HMIS rating (US only): Health 1, Fire Hazard 1, Reactivity 0 scale 0 - 4
NFPA rating: Health 0, Flammability 0, Reactivity 0 scale 0 - 4

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Component	**CAS#**	**Wt.%**
Polyvinyl Chloride Resin	68648-82-8	20 – 80%

Compounded PVC is an inert material in its normal usage. All the components listed below are encapsulated in the fused PVC matrix. Typical composition for this compounds-application is listed below, not all components are used in all formulas.

Proprietary Additives

Component	**CAS#**	**Wt.%**	**Ingredients**
Plasticizer	Mixture	0 – 60	High Molecular weight esters
Inert Filler	Mixture	0 – 45	$CaCO_3$, talc,carbon black, clay
Heat Stabilizer	Mixture	1 - 3	Organometallic compounds of barium and/or calcium-zinc
Colorant	Mixture	0 – 5	Organic and inorganic colorants

SECTION 4 FIRST AID MEASURES

Eyes Flush with water. If irritation persists seek medical attention.

Skin No adverse effects anticipated under normal conditions. Flush with water to remove material from skin. Obtain medical attention if irritation is present and persists.

Inhalation No adverse effects anticipated under normal conditions if adequately ventilated. If exposure occurs, remove the exposed individual to fresh air. Obtain immediate medical attention if irritation persists.

Ingestion Do not induce vomiting. Seek medical attention

SECTION 5 FIRE FIGHTING MEASURES

Flash Ignition Temperature **>600^{o}F**

Autoignition Temperature **Not Applicable**

Fire Fighting Procedures / Fire Extinguishing Media

Water, carbon dioxide, foam and dry chemical.

Unusual Fire and Explosion Hazards

PVC evolves hydrogen chloride, carbon monoxide, and other gases when burned. Exposure to combustion products may be fatal and should be avoided. PVC Compounds will normally continue to burn after ignition without and external source. Do not allow fire fighting runoff water to enter natural streams. The water may contain HCL and other combustible products.

Fire-Fighting Equipment

Wear full bunker gear including a positive self contained breathing equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURE

Protect People:

Remove unnecessary personnel from the release area. Wear appropriate personal protective equipment during clean up.

Protect Environment

Contain material to prevent contamination of the soil, surface water or ground water.

Clean Up

Clean up uncontaminated material and recycle into process. Sweep or vacuum.

SECTION 7 HANDLING AND STORAGE

Advice on Safe Handling

Use proper personal protective equipment during handling. Minimize dust generation and accumulation. Use good housekeeping practices.

Protective Measure

Use methods to minimize generation of dust.

Wash thoroughly after handling. PVC resin processing may result in the release of low levels of vinyl chloride monomer. Use only in well-ventilated areas.

Storage

Store in a cool, well ventilated dry place away from direct sunlight, heat, and incompatible material. Store away from food and beverages. Keep container closed to prevent contamination.

SECTION 8 EXPOSURE CONTROLS /PERSONAL PROTECTION

All personal protective equipment should be selected in accordance with the hazard assessment required by 29CFR 1919.132.

Respiratory Protection

For most conditions, no respiratory protection should be needed. However, if dust is produced during handling a NIOSH approved air purifying filter respirator that meets the requirements of 29 CFR 1919.134 should be used. Full –face self contained breathing apparatus may be needed when dealing with vapors from combustion of product. Respirators must be selected accordingly with airborne levels.

Eyes Protection

Use safety glasses.

Skin Protection

Protective clothing and gloves for contact with molten plastic.

Engineering Control

Provide general and local exhaust ventilation to control air borne particles. Local exhaust ventilation should comply with OSHA regulations and the American Conference of Industrial Hygienist, Industrial Ventilation – A Manual of Recommended Practice.

SECTION 8 EXPOSURE CONTROLS /PERSONAL PROTECTION

(continued)

Exposure Guidelines

No exposure limits have been established for PVC. It is recommended that exposure be kept below the limits for particulate not otherwise classified according to the Center for Disease Control and Prevention:

OSHA-PEL : 15 mg/ m^3 8 hr-TWA (Total Dust)

5 mg/m^3 8 hr-TWA (Respirable)

PEL: Permissible Exposure Limit

TWA: Time-Weighted Average Concentration

Under normal processing conditions, no occupational exposure to vinyl chloride monomer exceeding the established limits for this material are anticipated.

The OSHA-PEL for vinyl chloride is 1 ppm over an 8hr-TWA. The OSHA-STEL for vinyl chloride is 5 ppm for any 15-minute period.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Pellets of different sizes, hardness, and colors
ODOR	No distinct odor
BOILING POINT	Solid, NA
MELTING POINT	Varies
SOLUBILITY	None
SPECIFIC GRAVITY (WATER=1.0)	1.37
VAPOR DENSITY (AIR=1.0)`	Not Applicable
VAPOR PRESSURE	Not Applicable
PH	Not Applicable
VOC	Less than 5 parts per million

SECTION 10 STABILITY AND REACTIVITY

STABILITY

Stable under normal conditions.

POLYMERIZATION

Hazardous polymerization does not occur.

CONDITIONS TO AVOID

Instantaneous temperatures above 240^{o}C (464^{o}F). Prolonged heating combined with shear during processing can generate hazardous decomposition products.

SECTION 10 STABILITY AND REACTIVITY

(continued)

HAZARDOUS DECOMPOSITION PRODUCTS

Overheating may cause thermal degradation of PVC compound. Fumes and vapor (including CO, CO_2 and HCl) may be produced as result of thermal degradation. These emissions are possible to occur during normal operating conditions and may accumulate if ventilation is insufficient.

INCOMPATIBLE MATERIALS

Do not allow this product to contact acetal or acetal copolymer within the processing machine. At processing conditions the two materials are mutually destructive.

SECTION 11 TOXICOLOGICAL INFORMATION

This information on PVC compounds is extracted from HSDB and NTP databases.

ANIMAL TOXICITY

Oral:	Rat, TD_{LO}	210 gm/kg
Inhalation	Mouse, LC_{50}	140 mg/m³

TD_{LO}= Lowest toxic dose in a given species by a given route of exposure.

LC_{50} = Concentration that is lethal to 50% of a given species by a given route of exposure.

Rodents exposed to PVC by dietary or inhalation routes for 6-24 months have shown no significant toxicological effects.

While PVC is generally considered an inert polymer, exposure to PVC dust has been reported to cause lung changes in animals and humans, including decreased respiratory capacity and inflammation. However, exposure approaching the nuisance dust exposure limits are not anticipated to pose a significant health risk.

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT

Aquatic: No data available

Biodegradation: Not subject to biodegradation

Due caution should be exercised to prevent accidental release of this material to the environment.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT INFORMATION

Do not dump into any sewer, on the ground, or into body of water. Any disposal practice must be in compliance with local, state and federal laws and regulations.

SECTION 14 TRANSPORT CONSIDERATION

This product is not regulated under the following regulations:

- United States Department of Transportation , DOT
- United States Coast Guard Regulations
- International Maritime Organization (IMO) regulations
- International Civil Aviation Organization (ICAO) regulations
- International Air Reports Association (IATA) regulations
- European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) regulations
- European Agreement Concerning the International Carriage of Dangerous Goods by Rail (RID) regulations
- Australian Dangerous Good (ADG) regulations

SECTION 15 REGULATORY INFORMATION

OSHA SARA Title III

All Section are Not Applicable for the product.

CERCLA

Section 102(a) Hazardous Substances (40 CFR 302.4)

- Not Applicable

PROPOSITION 65

This product **does not** contains substances known to the state of California to cause cancer and/or reproduction toxicity.

CANADIAN REGULATION

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33 and this SDS contains all information required by this regulation.

WHMIS Classification **Not a Controlled Product**

SECTION 16 OTHER INFORMATION

The information and data herein are believed to be accurate and have been compiled from **sources** believed to be reliable**. Polyflex Division of Flex Technologies makes no warranty of any kind, expressed or implied, concerning the accuracy of completeness of the information herein.** Polyflex will not be liable for claims relating to any party's use or reliance on information of data contained herein. This information relates to the material designate and may not be valid for such material used in combination with any other materials and /or process.

Acronyms used on this Document.

HMIS: Hazardous Material Identification System

NFPA: National Fire Protection Association