



August 3, 2017

Type 63

Flexible, Polyvinylchloride Film

Manufactured By:



 7150 W. Erie St, Chandler, AZ 85226

 sales@zippertubing.com

 zippertubing.com

 (855) 289-1874



The following pages identify the Safety Data requirements for the materials comprising the Zippertubing end-item product stated above.

© This SDS document contains proprietary third party safety information and is provided for the sole purpose of conveying safe product handling and disposal information to the end user. The information shall not be duplicated, reproduced, or disclosed to parties other than the recipient without written authorization from The Zippertubing Company®. The information shall not be used to create products or processes similar to those designed, developed and marketed by The Zippertubing Company®. Any attempt to utilize this information to create products similar to those of The Zippertubing Company® shall be prosecuted to the fullest extent of the law.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier**

Product Name 63-20 PVC Film
Description PVC MATERIAL

Other means of identification

Product Code Mil-I-631D, Type F

Recommended use of the chemical and restrictions on use

Recommended use Production of polymeric products.
Uses advised against None known

Details of the supplier of the safety data sheet**Manufacturer**

The Zippertubing Co.
7150 W. Erie St
Chandler, AZ 85226

Emergency telephone number

480.285.3900

2. HAZARDS IDENTIFICATION**Classification****OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

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

Appearance - film

Physical State - Solid

Odor - No data available

Hazards not otherwise classified (HNOC)

None known

Unknown acute toxicity

Not Applicable

Other Information

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

The components of this product are embedded in an impervious polymer matrix and are therefore not biologically available. Any hazardous constituents are fixed in the polymer matrix and therefore present a negligible exposure risk under normal conditions of processing and handling. Additives contained in this product do not pose a risk to health unless they are liberated during processing (fumes from melting, dusts). Suitable Industrial Hygiene precautions should be implemented to prevent (respirable) dust and fume exposures. Exposure to (melting) fumes should be kept as low as possible, using suitable ventilation equipment. Dusts and fumes created from secondary processing may be irritating to respiratory tract and skin and should be considered as potentially hazardous. If user operations generate dust, fumes, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Chemical Name	CAS No	weight-%
AMORPHOUS SILICA	7631-86-9	<2
ANTIMONY COMPOUNDS	N010	<2
CARBON BLACK	1333-86-4	<2
Triphenyl Phosphate	115-86-6	<2

4. FIRST AID MEASURES**First Aid Measures**

Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if symptoms occur.
Skin Contact	Wash with soap and water.
Inhalation	None under normal use conditions.
Ingestion	Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Dry chemical, CO₂ or water spray.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products

Carbon monoxide. Carbon dioxide (CO₂). HCl. Trace Benzenes. Aliphatic hydrocarbons. Aromatic hydrocarbons.

Explosion data

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Protective equipment and precautions for firefighters

Use personal protective equipment as required. In the event of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Other Information Not Applicable.

Environmental Precautions

Environmental Precautions Do not allow into any sewer, on the ground or into any body of water.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed.

Incompatible Materials None known based on information supplied

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
AMORPHOUS SILICA	-	(vacated) TWA: 6 mg/m ³ <1% Crystalline silica TWA: 20 mppcf : (80)/(%) SiO ₂) mg/m ³ TWA	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³
ANTIMONY COMPOUNDS	TWA: 0.5 mg/m ³ Sb	TWA: 0.5 mg/m ³ Sb (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 50 mg/m ³ Sb TWA: 0.5 mg/m ³ Sb
CARBON BLACK	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Triphenyl Phosphate	TWA: 3 mg/m ³	TWA: 3 mg/m ³ (vacated) TWA: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 3 mg/m ³

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection No special technical protective measures are necessary.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Solid	Odor	No information available
Appearance	film	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks - Method</u>
pH	Not Applicable	
Melting point/freezing point	Not Applicable	
Boiling point / boiling range	Not Applicable	
Flash Point	Not Applicable	
Evaporation Rate	Not Applicable	
Flammability (solid, gas)	Not Applicable	
Flammability Limit in Air		
Upper Flammability Limit	Not Applicable	
Lower Flammability Limit	Not Applicable	
Vapor Pressure	Not Applicable	
Vapor Density	Not Applicable	
Specific Gravity	Not Applicable	
Water solubility	Negligible	
Solubility in other solvents	Not Applicable	
Partition coefficient	Not Applicable	
Autoignition Temperature	Not Applicable	
Decomposition temperature	Not Applicable	
Kinematic viscosity	Not Applicable	
Dynamic viscosity	Not Applicable	
Explosive properties	Not Applicable	
Oxidizing properties	Not Applicable	

10. STABILITY AND REACTIVITY**Reactivity**

No data available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Avoid overheating to minimize fume production.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide (CO₂), HCl, Trace Benzenes, Aliphatic hydrocarbons, Aromatic hydrocarbons

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	Avoid breathing vapors or mists.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
AMORPHOUS SILICA	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h

7631-86-9			
CARBON BLACK 1333-86-4	> 15400 mg/kg (Rat)	-	-
Triphenyl Phosphate 115-86-6	= 3500 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
AMORPHOUS SILICA 7631-86-9	-	-	Reasonably Anticipated	X
CARBON BLACK 1333-86-4	A3	Group 2B	-	X

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard Not Applicable.

Numerical measures of toxicity - Product Information

No information available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

No information available.

Component	Algae/aquatic plants	Fish	Crustacea
AMORPHOUS SILICA 7631-86-9 (<2)	EC50: =440 mg/L (Pseudokirchneriella subcapitata, 72h)	LC50: =5000 mg/L (Brachydanio rerio, 96 h, static)	EC50: =7600 mg/L (48h)
Triphenyl Phosphate 115-86-6 (<2)	EC50: 0.6 - 4 mg/L (Pseudokirchneriella subcapitata, 96h)	LC50: 0.53 - 0.8 mg/L (Pimephales promelas, 96 h, static) LC50: 0.81 - 0.94 mg/L (Pimephales promelas, 96 h, flow-through)	EC50: 0.86 - 1.2 mg/L (48h)

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated
IATA Not regulated
IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	weight-%	SARA 313 - Threshold Values %
ANTIMONY COMPOUNDS	N010	<2	1.0
ELEMENTAL ANTIMONY IN ANTIMONY COMPOUNDS	MN010	<2	1.0

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

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
ANTIMONY TRIOXIDE	Carcinogen

Other Regulations

EU Regulation (EC) No. 1907/2006 (REACH)

As formulated, this product does not contain any SVHC

EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2011/65/EU) (RoHS)

As formulated, this compound complies with the EU RoHS Directive (2011/65/EU) (RoHS 2) and does not contain any restricted materials above threshold levels. The RoHS directive restricts the use of Lead, Cadmium, Chrome VI, Mercury, PBBs and all PBDE materials.

Conflict Minerals

As formulated, the raw materials used in this product do not intentionally contain any of the "Conflict Minerals". Conflict Minerals consist of Gold, Columbite-Tantalite (Tantalum), Casserite (Tin), and Wolframite (Tungsten) that originate from the Democratic Republic of Congo or adjoining countries.

16. OTHER INFORMATION

NFPA

Health Hazards 0

Flammability 1

Instability 0

Physical and Chemical
Properties -

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier**

Product Name MF 3;63-10 PVC Film
Description PVC MATERIAL

Other means of identification

Product Code 0857;Mil-I-631D, Type F

Recommended use of the chemical and restrictions on use

Recommended use Production of polymeric products.
Uses advised against None known

Details of the supplier of the safety data sheet**Manufacturer**

Teknor Ap;The Zippertubing Co.
 505 Centra7150 W. Erie St
 Pawtucket,Chandler, AZ 85226
 USA

SDS Cont

TeknorSD:

Emergency telephone number

USA: [+1] (480.285.3900

2. HAZARDS IDENTIFICATION**Classification****OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

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

Appearance - film

Physical State - Solid

Odor - No data available

Hazards not otherwise classified (HNOC)

None known

Unknown acute toxicity

Not Applicable

Other Information

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

The components of this product are embedded in an impervious polymer matrix and are therefore not biologically available. Any hazardous constituents are fixed in the polymer matrix and therefore present a negligible exposure risk under normal conditions of processing and handling. Additives contained in this product do not pose a risk to health unless they are liberated during processing (fumes from melting, dusts). Suitable Industrial Hygiene precautions should be implemented to prevent (respirable) dust and fume exposures. Exposure to (melting) fumes should be kept as low as possible, using suitable ventilation equipment. Dusts and fumes created from secondary processing may be irritating to respiratory tract and skin and should be considered as potentially hazardous. If user operations generate dust, fumes, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Chemical Name	CAS No	weight-%
AMORPHOUS SILICA	7631-86-9	<2
ANTIMONY COMPOUNDS	N010	<2
CARBON BLACK	1333-86-4	<2
Triphenyl Phosphate	115-86-6	<2

4. FIRST AID MEASURES**First Aid Measures**

Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if symptoms occur.
Skin Contact	Wash with soap and water.
Inhalation	None under normal use conditions.
Ingestion	Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Dry chemical, CO₂ or water spray.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products

Carbon monoxide. Carbon dioxide (CO₂). HCl. Trace Benzenes. Aliphatic hydrocarbons. Aromatic hydrocarbons.

Explosion data

Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Protective equipment and precautions for firefighters

Use personal protective equipment as required. In the event of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Other Information Not Applicable.

Environmental Precautions

Environmental Precautions Do not allow into any sewer, on the ground or into any body of water.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed.

Incompatible Materials None known based on information supplied

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
AMORPHOUS SILICA	-	(vacated) TWA: 6 mg/m ³ <1% Crystalline silica TWA: 20 mppcf : (80)/(%) SiO ₂) mg/m ³ TWA	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³
ANTIMONY COMPOUNDS	TWA: 0.5 mg/m ³ Sb	TWA: 0.5 mg/m ³ Sb (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 50 mg/m ³ Sb TWA: 0.5 mg/m ³ Sb
CARBON BLACK	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Triphenyl Phosphate	TWA: 3 mg/m ³	TWA: 3 mg/m ³ (vacated) TWA: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 3 mg/m ³

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection No special technical protective measures are necessary.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Solid	Odor	No information available
Appearance	film	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks - Method</u>
pH	Not Applicable	
Melting point/freezing point	Not Applicable	
Boiling point / boiling range	Not Applicable	
Flash Point	Not Applicable	
Evaporation Rate	Not Applicable	
Flammability (solid, gas)	Not Applicable	
Flammability Limit in Air		
Upper Flammability Limit	Not Applicable	
Lower Flammability Limit	Not Applicable	
Vapor Pressure	Not Applicable	
Vapor Density	Not Applicable	
Specific Gravity	Not Applicable	
Water solubility	Negligible	
Solubility in other solvents	Not Applicable	
Partition coefficient	Not Applicable	
Autoignition Temperature	Not Applicable	
Decomposition temperature	Not Applicable	
Kinematic viscosity	Not Applicable	
Dynamic viscosity	Not Applicable	
Explosive properties	Not Applicable	
Oxidizing properties	Not Applicable	

10. STABILITY AND REACTIVITY**Reactivity**

No data available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Avoid overheating to minimize fume production.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide (CO₂), HCl, Trace Benzenes, Aliphatic hydrocarbons, Aromatic hydrocarbons

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	Avoid breathing vapors or mists.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
AMORPHOUS SILICA	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h

7631-86-9			
CARBON BLACK 1333-86-4	> 15400 mg/kg (Rat)	-	-
Triphenyl Phosphate 115-86-6	= 3500 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
CARBON BLACK 1333-86-4	A3	Group 2B	-	X

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard Not Applicable.

Numerical measures of toxicity - Product Information

No information available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

No information available.

Component	Algae/aquatic plants	Fish	Crustacea
AMORPHOUS SILICA 7631-86-9 (<2)	EC50: =440 mg/L (Pseudokirchneriella subcapitata, 72h)	LC50: =5000 mg/L (Brachydanio rerio, 96 h, static)	EC50: =7600 mg/L (48h)
Triphenyl Phosphate 115-86-6 (<2)	EC50: 0.6 - 4 mg/L (Pseudokirchneriella subcapitata, 96h)	LC50: 0.81 - 0.94 mg/L (Pimephales promelas, 96 h, flow-through) LC50: 0.53 - 0.8 mg/L (Pimephales promelas, 96 h, static)	EC50: 0.86 - 1.2 mg/L (48h)

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated

15. REGULATORY INFORMATION**International Inventories**

TSCA Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	weight-%	SARA 313 - Threshold Values %
ANTIMONY COMPOUNDS	N010	<2	1.0
ELEMENTAL ANTIMONY IN ANTIMONY COMPOUNDS	MN010	<2	1.0

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

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
ANTIMONY TRIOXIDE	Carcinogen

Other Regulations**EU Regulation (EC) No. 1907/2006 (REACH)**

As formulated, this product does not contain any SVHC

EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2011/65/EU) (RoHS)

As formulated, this compound complies with the EU RoHS Directive (2011/65/EU) (RoHS 2) and does not contain any restricted materials above threshold levels. The RoHS directive restricts the use of Lead, Cadmium, Chrome VI, Mercury, PBBs and all PBDE materials.

Conflict Minerals

As formulated, the raw materials used in this product do not intentionally contain any of the "Conflict Minerals". Conflict Minerals consist of Gold, Columbite-Tantalite (Tantalum), Casserite (Tin), and Wolframite (Tungsten) that originate from the Democratic Republic of Congo or adjoining countries.

16. OTHER INFORMATION

NFPA

Health Hazards 0

Flammability 1

Instability 0

Physical and Chemical Properties -