

FLEX PVC ORB

Version Number 1.3 Revision Date 03/13/2020 Page 1 of 16 Print Date 03/14/2020

SAFETY DATA SHEET

FLEX PVC ORB

Section 1. Identification

GHS product identifier : FLEX PVC ORB

Chemical name: MixtureCAS number: MixtureOther means of identification: CC10241075

Product type : solid

Relevant identified uses of the substance or mixture and uses advised against

Product use : Industrial applications. Plastics.

Supplier's details : POLYONE CORPORATION

33587 Walker Road, Avon Lake, OH 44012

1 (440) 930-1000 or 1 (866) POLYONE

Emergency telephone number

(with hours of operation)

CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or

accident).

Section 2. Hazards identification

This mixture has not been evaluated as a whole for health effects. All ingredients are bound in a PVC polymer matrix and potential for hazardous exposure as shipped is minimal. PVC resin is manufactured from Vinyl Chloride Monomer (VCM). PVC resin manufacturers take special efforts to strip residual VCM from their resins. Residual VCM in the resin is typically below 8.5 ppm. However, VCM is a known carcinogen. The end-user (fabricator) should take necessary precautions (mechanical ventilation, local exhaust, respiratory protection, etc.) to protect employees from exposure to any vapors or dusts that may be released during heating or fabrication. See Sections 8 and 11 for special precautions. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard

Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and

other users of this product.

Classification of the substance or

mixture

: Not classified.

GHS label elements



FLEX PVC ORB

 Version Number 1.3
 Page 2 of 16

 Revision Date 03/13/2020
 Print Date 03/14/2020

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Not applicable.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

Not available.

Section 3. Composition/information on ingredients

Substance/mixture: MixtureChemical name: MixtureOther means of identification: CC10241075

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	5 - 10	13463-67-7
Carbon black	1 - 3	1333-86-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures



FLEX PVC ORB

Version Number 1.3 Page 3 of 16 Revision Date 03/13/2020 Print Date 03/14/2020

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the

upper and lower eyelids. Check for and remove any contact lenses.

Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable

for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical

surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated

clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at

rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by

medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: No known significant effects or critical hazards.Inhalation: No known significant effects or critical hazards.Skin contact: No known significant effects or critical hazards.Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: No specific data.Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms

may be delayed. The exposed person may need to be kept under

medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without

suitable training.

See toxicological information (Section 11)



FLEX PVC ORB

Version Number 1.3 Revision Date 03/13/2020 Page 4 of 16 Print Date 03/14/2020

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media

In case of fire, use water spray (fog), foam, dry chemical or CO_2 .

None known.

Specific hazards arising from the chemical

: No specific fire or explosion hazard.

Hazardous thermal decomposition products

May emit Hydrogen Chloride (HCl).

Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides sulfur oxides

halogenated compounds metal oxide/oxides

Special protective actions for firefighters : Promptly isolate the scene by removing all persons from the vicinity

of the incident if there is a fire. No action shall be taken involving any

personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and selfcontained breathing apparatus (SCBA) with a full face-piece operated

in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without

suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note

of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil,

waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil

or air).

Methods and materials for containment and cleaning up



FLEX PVC ORB

 Version Number 1.3
 Page 5 of 16

 Revision Date 03/13/2020
 Print Date 03/14/2020

Small spill : Move containers from spill area. Vacuum or sweep up material and

place in a designated, labeled waste container. Dispose of via a

licensed waste disposal contractor.

Large spill : Move containers from spill area. Prevent entry into sewers, water

courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency

contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures Advice on general occupational

hygiene

Put on appropriate personal protective equipment (see Section 8).

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium dioxide	OSHA PEL 1989 (1989-03-01) TWA 10 mg/m3 Form: Total dust OSHA PEL (1993-06-30) TWA 15 mg/m3 Form: Total dust ACGIH TLV (1996-05-18) TWA 10 mg/m3



FLEX PVC ORB

Version Number 1.3 Revision Date 03/13/2020 Page 6 of 16 Print Date 03/14/2020

TWA 3.5 mg/m3 OSHA PEL (1993-06-30) TWA 3.5 mg/m3 NIOSH REL (1994-06-01) TWA 3.5 mg/m3 NIOSH REL (1994-06-01)	
•	
NIOSH REL (1994-06-01)	
TWA 3.5 mg/m3	
NIOSH REL (1994-06-01)	
TWA 0.1 mgPAH/m ³	
ACGIH TLV (2010-12-06)	
TWA 3 mg/m3 Form: Inhalable fraction	
	OSHA PEL (1993-06-30) TWA 3.5 mg/m3 NIOSH REL (1994-06-01) TWA 3.5 mg/m3 NIOSH REL (1994-06-01) TWA 0.1 mgPAH/m ³ ACGIH TLV (2010-12-06)

Appropriate engineering controls

Good general ventilation should be sufficient to control worker

exposure to airborne contaminants.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks



FLEX PVC ORB

Version Number 1.3 Page 7 of 16 Revision Date 03/13/2020 Print Date 03/14/2020

involved and should be approved by a specialist before handling this

product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that

meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper

fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

solid [Pellets.] Physical state Color **BROWN** Odor Not available. Not available. **Odor threshold** Not available. рH **Melting point** Not available. **Boiling point** Not available. Flash point Not available. **Burning time** Not available. **Burning rate** Not available. **Evaporation rate** Not available. Flammability (solid, gas) Not available.

Lower and upper explosive : Lower: Not available. (flammable) limits : Upper: Not available.

Vapor pressure : Not available.
Vapor density : Not available.
Relative density : Not available.
Solubility : Not available.
Solubility in water : Not available.
Partition coefficient: n- : Not available.

octanol/water

Auto-ignition temperature: Not available.Decomposition temperature: Not available.SADT: Not available.

Viscosity : Dynamic: Not available.

Kinematic: Not available.

Aerosol product

Heat of combustion : Not available.

Ignition distance : Not available. **Enclosed space ignition - Time** : Not available.

equivalent



FLEX PVC ORB

Version Number 1.3 Page 8 of 16 Revision Date 03/13/2020 Print Date 03/14/2020

Enclosed space ignition -

Deflagration density

Not available.

Flame height Flame duration

Not available. Not available.

Section 10. Stability and reactivity

Reactivity No specific test data related to reactivity available for this product or

its ingredients.

Chemical stability Stable under recommended storage and handling conditions (see

Section 7).

Under normal conditions of storage and use, hazardous reactions will Possibility of hazardous reactions

not occur.

Conditions to avoid Keep away from extreme heat and oxidizing agents.

Incompatible materials Avoid contact with acetal homopolymers and acetyl homopolymers

during processing.

Hazardous decomposition Under normal conditions of storage and use, hazardous decomposition products

products should not be produced.

Section 11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure			
Carbon black							
	LD50 Oral	LD50 Oral Rat 15,400 mg/kg -					
Remarks - Inhalation:	No applicable toxicity data						
Remarks - Dermal:	No applicable toxicity data						
Titanium dioxide							
Remarks - Oral:	No applicable toxicity data						
	LC50 Inhalation Rat - Male 6.82 Mg/l 4 h						
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-			

Mixture.Not fully tested. Conclusion/Summary

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium dioxide	Skin - Mild	Human		72 hrs	-



FLEX PVC ORB

 Version Number 1.3
 Page 9 of 16

 Revision Date 03/13/2020
 Print Date 03/14/2020

irritant

Conclusion/Summary

Skin: Mixture.Not fully tested.Eyes: Mixture.Not fully tested.Respiratory: Mixture.Not fully tested.

Sensitization

Conclusion/Summary

SkinMixture.Not fully tested.RespiratoryMixture.Not fully tested.

Mutagenicity

Conclusion/Summary : Mixture.Not fully tested.

Carcinogenicity

Conclusion/Summary : Mixture.Not fully tested.

Classification

Product/ingredient name	OSHA	IARC	NTP
Carbon black	-	2B	-
Titanium dioxide	-	2B	-

Reproductive toxicity

Conclusion/Summary : Mixture.Not fully tested.

Teratogenicity

Conclusion/Summary : Mixture.Not fully tested.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of

Not available.

exposure



FLEX PVC ORB

 Version Number 1.3
 Page 10 of 16

 Revision Date 03/13/2020
 Print Date 03/14/2020

Potential acute health effects

Eye contact: No known significant effects or critical hazards.Inhalation: No known significant effects or critical hazards.Skin contact: No known significant effects or critical hazards.Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data.Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Mixture. Not fully tested.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.
No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.



FLEX PVC ORB

Version Number 1.3 Revision Date 03/13/2020 Page 11 of 16 Print Date 03/14/2020

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure		
Carbon black					
Remarks - Acute - Fish:	No applicable toxicity data				
	Acute EC50 37.563 Mg/l Fresh	Aquatic invertebrates.	48 h		
	water	Daphnia			
Remarks - Acute - Aquatic	Acute				
invertebrates.:					
Remarks - Acute - Aquatic	No applicable toxicity data				
plants:					
Remarks - Chronic - Fish:	No applicable toxicity data				
Remarks - Chronic -	No applicable toxicity data				
Aquatic invertebrates.:					
Titanium dioxide					
	Acute LC50 > 1,000 Mg/l Marine	Fish - Fish	96 h		
	water				
Remarks - Acute - Fish:	Acute				
	Acute LC50 3 Mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h		
Remarks - Acute - Aquatic	Acute				
invertebrates.:					
	Acute LC50 6.5 Mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h		
Remarks - Acute - Aquatic	Acute				
invertebrates.:					
Remarks - Acute - Aquatic	No applicable toxicity data				
plants:					
Remarks - Chronic - Fish:	No applicable toxicity data				
Remarks - Chronic -	No applicable toxicity data				
Aquatic invertebrates.:	-				
FLEX PVC ORB					
Remarks - Acute - Aquatic	Chemicals are not readily available a	as they are bound within the	e polymer matrix.		
invertebrates.:					
Conclusion/Cummons	C1 ' 1 ' 1'	ly available as they are boy	1 '41' 41		

Conclusion/Summary

: Chemicals are not readily available as they are bound within the polymer matrix.

Persistence and degradability

Conclusion/Summary: Chemicals are not readily available as they are bound within the



FLEX PVC ORB

Version Number 1.3 Page 12 of 16 Revision Date 03/13/2020 Print Date 03/14/2020

polymer matrix.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient

(KOC)

Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Not listed

Section 14. Transport information

U.S.DOT 49CFR : Not regulated for transportation.

Ground/Air/Water

: Consult mode specific transport rules

International Air ICAO/IATA

International Water : Consult mode specific transport rules



FLEX PVC ORB

Version Number 1.3 Revision Date 03/13/2020 Page 13 of 16 Print Date 03/14/2020

IMO/IMDG

Section 15. Regulatory information

U.S. Federal regulations

United States - TSCA 12(b) - Chemical export notification: None of the components are listed.

United States - TSCA 4(a) - Final Test Rules: Not listed United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(f) - Priority risk review: Not listed United States - TSCA 5(a)2 - Final significant new use rules: Not listed

United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed

United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined

United States - TSCA 8(a) - Preliminary assessment report (PAIR): Listed Cyclohexene, 4-ethenyl-

Tert-Butanol

Bismuth vanadium oxide (BiVO4)

United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed

United States - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Acrylonitrile

Vinyl chloride monomer Phthalocyanine green

United States - EPA Clean water act (CWA) section 311 -

Hazardous substances: Listed

United States - EPA Clean air act (CAA) section 112 - Accidental

release prevention - Flammable substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental

release prevention - Toxic substances: Not listed

United States - Department of commerce - Precursor chemical:

Not listed

Clean Air Act Section 112(b) : Listed



FLEX PVC ORB

Version Number 1.3 Page 14 of 16 Revision Date 03/13/2020 Print Date 03/14/2020

Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I : Not listed

Substances

Clean Air Act Section 602 Class II : Not listed

Substances

DEA List I Chemicals (Precursor: Not listed

Chemicals)

DEA List II Chemicals (Essential: Not listed

Chemicals)

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

Name	%	Classification
Carbon black	>= 1 - <= 3	CARCINOGENICITY - Category 2
Titanium dioxide	>= 5 - <= 10	CARCINOGENICITY - Category 2

Not applicable.

State regulations

Massachusetts: None of the components are listed.New York: None of the components are listed.New Jersey: The following components are listed:Ethene, chloro-, homopolymer

Titanium dioxide Carbon black

Pennsylvania : The following components are listed:

Carbon black

Titanium dioxide

California Prop. 65



FLEX PVC ORB

 Version Number 1.3
 Page 15 of 16

 Revision Date 03/13/2020
 Print Date 03/14/2020

WARNING: This product can expose you to chemicals including Carbon black, Titanium dioxide, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Carbon black	-	-
Titanium dioxide	-	-

United States inventory (TSCA 8b) : All components are active or exempted.

Canada inventory : All components are listed or exempted.

International regulations

Inventory list

Australia : Not determined.

Canada: All components are listed or exempted.China: All components are listed or exempted.Europe inventory: All components are listed or exempted.

Japan : Not determined.

New Zealand: All components are listed or exempted.Philippines: All components are listed or exempted.Republic of Korea: All components are listed or exempted.

Taiwan : Not determined.
Turkey : Not determined.

United States : All components are active or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on



FLEX PVC ORB

Version Number 1.3 Page 16 of 16 Revision Date 03/13/2020 Print Date 03/14/2020

HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

History

Date of printing: 03/14/2020Date of issue/Date of revision: 03/13/2020Date of previous issue: 07/11/2018

Version : 1.3

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of

Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine

pollution)

UN = United Nations

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.