

**SAFETY DATA SHEET****ORANGE 021C HM**

Version Number 1.4  
Revision Date 08/26/2023

Page 1 of 17  
Print Date 08/28/2023

**SAFETY DATA SHEET****ORANGE 021C HM****Section 1. Identification**

**GHS product identifier** : ORANGE 021C HM  
**Chemical name** : Mixture  
**CAS number** : Mixture  
**Other means of identification** : CC10112036  
**Product type** : solid

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

**Product use** : Industrial applications. Plastics.

**Supplier's details** : **AVIENT CORPORATION**  
33587 Walker Road, Avon Lake, OH 44012  
  
1 (440) 930-1000 or 1 (844) 4AVIENT

**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. Information provided on the health effects of this product is based on individual components. Some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. After handling, always wash hands thoroughly with soap and water.

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : CARCINOGENICITY - Category 1A

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Danger

**SAFETY DATA SHEET****ORANGE 021C HM**

Version Number 1.4  
Revision Date 08/26/2023

Page 2 of 17  
Print Date 08/28/2023

**Hazard statements** : May cause cancer.

**Precautionary statements**

**Prevention** : Not applicable.  
: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection.

**Response** : IF exposed or concerned: Get medical advice or attention.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : None known.

**Hazards not otherwise classified** : None known.  
Not available.

**Section 3. Composition/information on ingredients**

**Substance/mixture** : Mixture  
**Chemical name** : Mixture  
**Other means of identification** : CC10112036

**CAS number/other identifiers**

<b>Ingredient name</b>	<b>%</b>	<b>CAS number</b>
Cadmium sulfoselenide orange (Orange 20)	>= 10 - <= 25	12656-57-4
Molybdate orange (Lead chromate pigment)	>= 1 - <= 3	12656-85-8
Titanium dioxide	>= 1 - <= 3	13463-67-7

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**

**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 3 of 17  
 Print Date 08/28/2023

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**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.

## SAFETY DATA SHEET

### ORANGE 021C HM

Version Number 1.4  
Revision Date 08/26/2023

Page 4 of 17  
Print Date 08/28/2023

#### 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

#### Extinguishing media

- Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : No specific fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides
- Special protective actions for fire-fighters** : 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 self-contained 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

## SAFETY DATA SHEET

**ORANGE 021C HM**

Version Number 1.4  
Revision Date 08/26/2023

Page 5 of 17  
Print Date 08/28/2023

- unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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**

- Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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.

<h2>Section 7. Handling and storage</h2>
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**Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : 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.

**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 6 of 17  
 Print Date 08/28/2023

**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. Store in a well-ventilated place. 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
Cadmium sulfoselenide orange (Orange 20)	<b>ACGIH TLV (1994-09-01)</b> TWA 0.002 mg/m3 (measured as Cd) Form: Respirable fraction
Molybdate orange (Lead chromate pigment)	<b>ACGIH TLV (2018-03-20)</b> TWA 0.0002 mg/m3 (as Cr) Form: Inhalable fraction STEL 0.0005 mg/m3 (as Cr) Form: Inhalable fraction <b>NIOSH REL (2010-09-01)</b> TWA 0.0002 mg/m3 <b>OSHA PEL 1989 (1989-03-01)</b> CEIL 0.1 mg/m3 (as CrO3) <b>OSHA PEL 1989 (1989-03-01)</b> TWA 0.05 mg/m3 (calculated as Pb) <b>OSHA PEL 1989 (1989-03-01)</b> TWA 10 mg/m3 (as Mo) Form: Total dust <b>OSHA PEL (1993-06-30)</b> TWA 15 mg/m3 (as Mo) Form: Total dust <b>OSHA PEL (2006-11-27)</b> TWA 0.005 mg/m3 (as Cr) <b>OSHA PEL (1993-06-30)</b> TWA 0.05 mg/m3 (calculated as Pb) <b>OSHA PEL Z2 (2006-11-27)</b> CEIL 0.001 mg/m3
Titanium dioxide	<b>OSHA PEL 1989 (1989-03-01)</b> TWA 10 mg/m3 Form: Total dust <b>OSHA PEL (1993-06-30)</b> TWA 15 mg/m3 Form: Total dust <b>ACGIH TLV (2022-01-06)</b>

# SAFETY DATA SHEET

## ORANGE 021C HM

Version Number 1.4  
 Revision Date 08/26/2023

Page 7 of 17  
 Print Date 08/28/2023

	TWA 0.2 mg/m3 Form: respirable fraction, nanoscale particles TWA 2.5 mg/m3 Form: respirable fraction, finescale particles
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- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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 involved and should be approved by a specialist before handling this

## SAFETY DATA SHEET

**ORANGE 021C HM**

Version Number 1.4  
Revision Date 08/26/2023

Page 8 of 17  
Print Date 08/28/2023

**Respiratory protection** : product.  
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

<b>Physical state</b>	: solid [Pellets.]
<b>Color</b>	: ORANGE
<b>Odor</b>	: Not available.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: Not applicable.
<b>Burning time</b>	: Not available.
<b>Burning rate</b>	: Not available.
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: <b>Lower:</b> Not applicable. <b>Upper:</b> Not applicable.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not applicable.
<b>Relative density</b>	: Not available.
<b>Solubility</b>	: Not available.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not available.
<b>SADT</b>	: Not available.
<b>Viscosity</b>	: <b>Dynamic:</b> Not available. <b>Kinematic:</b> Not applicable.

### Aerosol product



**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 9 of 17  
 Print Date 08/28/2023

- Heat of combustion** : Not available.
- Ignition distance** : Not available.
- Enclosed space ignition - Time equivalent** : Not available.
- Enclosed space ignition - Deflagration density** : Not available.
- Flame height** : Not available.
- Flame duration** : 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).
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Keep away from extreme heat and oxidizing agents.
- Incompatible materials** : Keep away from strong acids. Oxidizer.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicological information**

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium oxide (TiO2)				
	LC50 Inhalation Dusts and mists	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-

- Conclusion/Summary** : Mixture. Not fully tested.

Irritation/Corrosion

- Conclusion/Summary**
- Skin** : Mixture. Not fully tested.
- Eyes** : Mixture. Not fully tested.
- Respiratory** : Mixture. Not fully tested.

Sensitization

## SAFETY DATA SHEET

### ORANGE 021C HM

Version Number 1.4  
Revision Date 08/26/2023

Page 10 of 17  
Print Date 08/28/2023

**Conclusion/Summary**

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

**Mutagenicity**

**Conclusion/Summary** : Mixture.Not fully tested.

**Carcinogenicity**

**Conclusion/Summary** : Mixture.Not fully tested.

**Classification**

Product/ingredient name	OSHA	IARC	NTP
C.I. Pigment Orange 20	-	1	-
C.I. Pigment Red 104	+	12A	Known to be a human carcinogen.Reasonably anticipated to be a human carcinogen.
Titanium oxide (TiO2)	-	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 the likely routes of exposure** : Not available.

**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.

## SAFETY DATA SHEET

### ORANGE 021C HM

Version Number 1.4  
Revision Date 08/26/2023

Page 11 of 17  
Print Date 08/28/2023

#### 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 and also 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** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**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

N/A

**Other 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.

## Section 12. Ecological information

**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 12 of 17  
 Print Date 08/28/2023

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Titanium oxide (TiO2)			
	Acute LC50 > 1,000 Mg/l Marine water	Fish - Fundulus heteroclitus	96 h
	Acute LC50 3 Mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 h
	Acute LC50 6.5 Mg/l Fresh water	Daphnia - Daphnia pulex	48 h

**Conclusion/Summary** : Not available.

**Persistence and degradability**

**Conclusion/Summary** : Not available.

**Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
C.I. Pigment Red 104	-	3,600.00	high

**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. Care should be taken when handling

# SAFETY DATA SHEET

## ORANGE 021C HM

Version Number 1.4  
 Revision Date 08/26/2023

Page 13 of 17  
 Print Date 08/28/2023

emptied containers that have not been cleaned or rinsed out. 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 Ground/Air/Water : Not regulated for transportation.
- International Air ICAO/IATA : Consult mode specific transport rules
- International Water IMO/IMDG : Consult mode specific transport rules

### Section 15. Regulatory information

- U.S. Federal regulations :
  - United States - TSCA 12(b) - Chemical export notification:** The following components are listed: **Cadmium sulfoselenide orange (Orange 20)**  
**Molybdate orange (Lead chromate pigment)**
  - 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:** Listed  
**Molybdate orange (Lead chromate pigment)**
  - 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 precursor:** Not listed
  - United States - TSCA 8(a) - Chemical Data Reporting (CDR):** Not determined

**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 14 of 17  
 Print Date 08/28/2023

**United States - TSCA 8(a) - Preliminary assessment report (PAIR):** Listed Furan, tetrahydro-

**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 Cadmium sulfoselenide orange (Orange 20)  
 Molybdate orange (Lead chromate pigment)

**United States - EPA Clean water act (CWA) section 311 - Hazardous substances:** Not 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) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed

**US. EPA CERCLA Hazardous Substances (40 CFR 302)**

not applicable

**SARA 311/312**

**Classification** : CARCINOGENICITY - Category 1A

**Composition/information on ingredients**

Name	%	Classification
C.I. Pigment Orange 20	>= 10 - <= 25	CARCINOGENICITY - Category 1A
C.I. Pigment Red 104	>= 1 - <= 3	CARCINOGENICITY - Category 1B
Titanium oxide (TiO2)	>= 1 - <= 3	CARCINOGENICITY - Category 2

**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 15 of 17  
 Print Date 08/28/2023

**SARA 313**

**Form R - Reporting requirements**

Product name	CAS number	%
Cadmium sulfoselenide orange (Orange 20)	12656-57-4	>= 10 - < 30
Molybdate orange (Lead chromate pigment)	12656-85-8	>= 1 - < 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

**Massachusetts**

- : The following components are listed:  
 Barium sulfate  
 Titanium dioxide

**New York**

- : None of the components are listed.

**New Jersey**

- : The following components are listed:  
 Barium sulfate  
 Cadmium sulfoselenide orange (Orange 20)  
 Molybdate orange (Lead chromate pigment)  
 Titanium dioxide

**Pennsylvania**

- : The following components are listed:  
 Barium sulfate  
  
 Cadmium sulfoselenide orange (Orange 20)  
  
 Molybdate orange (Lead chromate pigment)  
  
 Titanium dioxide

**California Prop. 65**

**⚠ WARNING:** This product can expose you to chemicals including Molybdate orange (Lead chromate pigment), which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Molybdate orange (Lead chromate pigment)	Yes.	Yes.
Titanium dioxide	-	-

**SAFETY DATA SHEET**

**ORANGE 021C HM**

Version Number 1.4  
 Revision Date 08/26/2023

Page 16 of 17  
 Print Date 08/28/2023

**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.
- Eurasian Economic Union** : **Russian Federation inventory:** Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined.  
**Japan inventory (ISHL):** 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** : All components are listed or exempted. All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : Not determined.

**Section 16. Other information**

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

<b>Health</b>	*	0
<b>Flammability</b>		0
<b>Physical hazards</b>		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 HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.**

**History**

- Date of printing** : 08/28/2023
- Date of issue/Date of revision** : 08/26/2023
- Date of previous issue** : 05/31/2018
- Version** : 1.4
- Key to abbreviations** : ATE = Acute Toxicity Estimate



## SAFETY DATA SHEET

### ORANGE 021C HM

Version Number 1.4  
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Page 17 of 17  
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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  
: Not available.

#### References

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