# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

**Revision date:** 09-11-2026 **Revision Number:** 1

## 1. Identification

**Product identifier**

**Product Name** RIO RFU ROYAL

**Other means of identification**

**Product Code** FO20046706

Material number(s) FO20046706PW;FO20046706Z1;FO20046706Z5

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended use** For industrial use only

**Restrictions on use** None.

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

**Supplier Address**
Avient Corporation
33587 Walker Road, Avon Lake, OH 44012

**E-mail address** regulatoryservices@avient.com

**Emergency telephone number**

**Company Phone Number** 1 (440) 930-1000
or 1 (844) 4 AVIENT

**24 Hour Emergency Phone Number** CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident)

**Emergency Telephone** No information available

## 2. Hazard(s) identification

**Classification of the substance or mixture**

This product is not considered hazardous by the US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200).

**Hazards not otherwise classified (HNOC)**
Not applicable.

**Label elements**
No label elements required

**Hazard statements**
No hazard statements required

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**
No information available.

**Other information**
No information available.

## 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name | CAS No. | Weight-% | Trade secret / Unique identifier |
|---|---|---|---|
| Titanium dioxide | 13463-67-7 | 1 - 3% | * |

## 4. First-aid measures

**Description of first aid measures**

**Inhalation** Move victim to fresh air. Get medical attention immediately if symptoms occur.

**Eye contact** In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice and attention.

**Skin contact** Do not try to remove solidified material from the skin. Wash skin with soap and water. Take off contaminated clothing and wash before reuse. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Rinse mouth. Do NOT induce vomiting. Get medical attention if symptoms occur.

**Self-protection of the first aider** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. First aider: Pay attention to self-protection.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Effects of Exposure** None.

**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, water spray or regular foam.

**Unsuitable extinguishing media** Do not use water jetstream.

**Specific hazards arising from the chemical** No information available.

**Hazardous combustion products** Decomposition products can include and are not limited to:. Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Ammonia. Hydrogen chloride. Metal oxides.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Evacuate personnel to safe areas. Special danger of slipping by leaking/spilling product. See section 8 for more information.

**For emergency responders** Use personal protection recommended in Section 8.

**Methods and material for containment and cleaning up**

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

**Methods for cleaning up** Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. Handling and storage

**Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation. Avoid contact with skin and eyes.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place. Keep cool. Protect from sunlight. Protect from moisture.

## 8. Exposure controls/personal protection

**Control Parameters**

**Exposure Limits**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH |
|---|---|---|---|
| Titanium dioxide (13463-67-7) | TWA: 0.2 mg/m³ nanoscale respirable particulate matter TWA: 2.5 mg/m³ finescale | TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust | TWA: 2.4 mg/m³; CIB 63 fine TWA: 0.3 mg/m³; CIB 63 ultrafine, including engineered |

| | | | |
|---|---|---|---|
| | respirable particulate matter | | nanoscale<br>IDLH: 5000 mg/m³ |

**Note** See section 16 for terms and abbreviations.

**Other information on limit values** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Biological occupational exposure limits** This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

**Appropriate engineering controls**

**Engineering controls** Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

**Individual protection measures, such as personal protective equipment**

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

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained.

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Appearance** | Paste |
| **Physical state** | Liquid |
| **Color** | blue |
| **Odor (includes odor threshold)** | Slight |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **Melting point / freezing point** | No data available | None known |
| **Boiling point (or initial boiling point or boiling range)** | No data available | None known |
| **Flammability** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability or explosive limits** | No data available | |
| **Lower flammability or explosive limits** | No data available | |
| **Flash point** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | No data available | None known |
| **SADT (°C)** | No data available | None known |
| **pH** | No data available | None known |
| **pH (as aqueous solution)** | No data available | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |
| **Solubility** | No data available | None known |
| **Water solubility** | No data available | None known |
| **Partition coefficient n-octanol/water (log value)** | No data available | None known |
| **Vapor pressure (includes evaporation rate)** | No data available | None known |
| **Evaporation rate** | No data available | None known |

| | | |
|---|---|---|
| **Density and/or relative density** | No data available | None known |
| **Bulk density** | No data available | |
| **Liquid Density** | No data available | |
| **Relative vapor density** | No data available | None known |
| **Particle characteristics** | | None known |
| **Particle Size** | No data available | |
| **Particle Size Distribution** | No data available | |

**Other information**

## 10. Stability and reactivity

**Reactivity** No information available.

**Chemical stability** Stable under recommended storage conditions.

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** Keep away from open flames, hot surfaces and sources of ignition. static discharge (electrostatic discharge). Storage near to reactive materials. Dust formation. Protect from moisture.

**Incompatible materials** Incompatible with strong oxidizers and with strong acids and bases (decomposes to form formaldehyde). At melt temperatures, acetal resins are incompatible with halogenated polymers such as vinyl (PVC) and any elastomers containing any halogenated polymers. At processing conditions, these materials are mutually destructive and involve rapid degradation. Even small amounts of such contaminants can cause sudden and spontaneous formaldehyde gas formation. Workplace fume well above threshold levels are a likely result. Unsafe pressurization of equipment such as extruder or mold can also result. Thoroughly purge and mechanically clean processing equipment to avoid even trace quantities of halogenated materials from coming in contact with the acetal. Prevent contamination of virgin or rework resin.

**Hazardous decomposition products** None under normal use conditions.

## 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 likely routes of exposure**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** No information available.

**Acute toxicity** Based on available data, the classification criteria are not met.

**Numerical measures of toxicity**

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

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitization** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|
| Titanium dioxide (13463-67-7) | A3 | Group 2B | - | X |

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

**Mobility in soil** No information available.

**Other adverse effects** No information available.

## 13. Disposal considerations

**Disposal methods**

| | |
|---|---|
| **Waste from residues/unused products** | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| **Contaminated packaging** | Do not reuse empty containers. |

## 14. Transport information

| | |
|---|---|
| **DOT** | Not regulated |
| **TDG** | Not regulated |
| **MEX** | Not regulated |
| **ICAO (air)** | Not regulated |
| **IATA** | Not regulated |
| **IMDG** | Not regulated |

## 15. Regulatory information

**International Regulations**

**The Rotterdam Convention** Not applicable

**International Inventories**

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Not determined |
| **ENCS** | Not determined |
| **IECSC** | Not determined |
| **KECL** | Not determined |
| **PICCS** | Not determined |
| **AIIC** | Not determined |
| **NZIoC** | Not determined |
| **TCSI** | Complies |

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CAA (Clean Air Act)**
This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**
This product contains CaProp 65 substances above 0.1%!

| Chemical name | California Proposition 65 |
|---|---|
| Titanium dioxide (13463-67-7) | Carcinogen |

**U.S. State Right-to-Know Regulations**

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| Titanium dioxide (13463-67-7) | - | X | X |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## 16. Other information

| | | | | |
|---|---|---|---|---|
| **NFPA** | **Health hazards** 0 | **Flammability** 0 | **Instability** 0 | **Special hazards** - |
| **HMIS** | **Health hazards** 0 | **Flammability** 0 | **Physical hazards** 0 | **Personal protection** - |

**Key or legend to abbreviations and acronyms used in the safety data sheet**
*List may include phrases which are not applicable to this product*

| | |
|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| ADN | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe) |
| AIIC | Australian Inventory of Industrial Chemicals |
| ATE | Acute Toxicity Estimate |
| ASTM | American Society for the Testing of Materials |
| bar | Biological Reference Values for Chemical Compounds in the Work Area |
| BAT | Biological tolerance values for occupational exposure |
| BEL | Biological exposure limits |
| bw | Body weight |
| Ceiling | Maximum limit value |
| CMR | Carcinogen, Mutagen or Reproductive Toxicant |
| DOT | Department of Transportation (United States) |
| DSL | Domestic Substances List (Canada) |
| ECEL | Existing Chemical Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ENCS | Existing and New Chemical Substances (Japan) |
| EPA | U.S. Environmental Protection Agency |
| GHS | Globally Harmonized System |
| HMIS | Hazardous Materials Identification System |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IBC | International Code for the Construction and Equipment of Ships carrying Dangerous |

| | |
|---|---|
| | Chemicals in Bulk |
| ICAO | International Civil Aviation Organization |
| IECSC | Inventory of Existing Chemical Substances in China |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| ISO | International Organization for Standardization |
| KECI | Korean Existing Chemicals Inventory |
| LC50 | Lethal Concentration to 50% of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| MARPOL | International Convention for the Prevention of Pollution from Ships |
| NDSL | Non-Domestic Substances List (Canada) |
| NFPA | National Fire Protection Association |
| NIOSH | National Institute for Occupational Safety and Health |
| n.o.s. | Not Otherwise Specified |
| NOAEC | No Observed Adverse Effect Concentration |
| NOAEL | No Observed Adverse Effect Level |
| NOELR | No Observable Effect Loading Rate |
| NTP | National Toxicology Program (United States) |
| NZIoC | New Zealand Inventory of Chemicals |
| OECD | Organization for Economic Cooperation and Development |
| OEL | Occupational exposure limits |
| OSHA | Occupational Safety and Health Administration of the US Department of Labor |
| PBT | Persistent, Bioaccumulative and Toxic substance |
| PICCS | Philippines Inventory of Chemicals and Chemical Substances |
| PMT | Persistent, Mobile and Toxic |
| PPE | Personal protective equipment |
| QSAR | Quantitative Structure Activity Relationship |
| RID | Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe) |
| SADT | Self-Accelerating Decomposition Temperature |
| SAR | Structure-activity relationship |
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety Data Sheet |
| SL | Surface Limit |
| STEL | Short Term Exposure Limit |
| STOT RE | Specific target organ toxicity - Repeated exposure |
| STOT SE | Specific target organ toxicity - Single exposure |
| TCSI | Taiwan Chemical Substance Inventory |
| TDG | Transport of Dangerous Goods (Canada) |
| TSCA | Toxic Substances Control Act (United States) |
| TWA | Time-Weighted Average |
| UN | United Nations |
| VOC | Volatile organic compounds |
| vPvB | Very Persistent and Very Bioaccumulative |
| vPvM | Very Persistent and Very Mobile |
| As | Allergenic substance |
| DS | Dermal Sensitizer |
| Ot | Ototoxicant |
| pOt | Ototoxicant - potential to cause hearing disorders |
| PS | Photosensitizer |
| RS | Respiratory Sensitizer |
| S | Sensitizer |
| poS | Sensitizer - capable of causing occupational asthma |
| Sa | Simple asphyxiant |
| Sd | Skin designation |
| pSd | Skin designation - potential for cutaneous absorption |
| Sdv | Skin designation - vacated |
| Sk | Skin notation |
| dSk | Skin notation - danger of cutaneous absorption |

| | |
|---|---|
| pSk | Skin notation - potential for cutaneous absorption |

**Key literature references and sources for data used to compile the SDS**
U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
U.S. Environmental Protection Agency
U.S. EPA Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
U.S. Hazardous Substance Data Bank (HSDB)
International Uniform Chemical Information Database (IUCLID)
Japan National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
U.S. National Institute for Occupational Safety and Health (NIOSH)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

**Revision date** 09-11-2026
**Revision Note** No information available.

**Disclaimer**

**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.**

**End of Safety Data Sheet**