### THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 1 of 15 Print Date 04/11/2018

# SAFETY DATA SHEET

### THERMO FISHER ROYAL BLUE PP

Section 1. Identification	on	
GHS product identifier	:	THERMO FISHER ROYAL BLUE PP
Chemical name CAS number	:	Mixture Mixture
Other means of identification Product type	:	CC10258930 solid
Relevant identified uses of the subs	stance	e 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. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, 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	:	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		
Signal word	:	No signal word.
		1/15

# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 2 of 15 Print Date 04/11/2018

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.

# Section 3. Composition/information on ingredients

:

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	CC10258930

### CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	1 - 5	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

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



# THERMO FISHER ROYAL BLUE PP

Version Number 1.0	Page 3 of 15
Revision Date 03/22/2017	Print Date 04/11/2018

		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.
<u>Most important symptoms/effects, ac</u> Potential acute health effects	<u>cute a</u>	und delayed
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.
<b>T I I</b> <i>I</i>		

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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)

# Section 5. Firefighting measures

### Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.



# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 4 of 15 Print Date 04/11/2018

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 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 For emergency responders	:	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. 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 containme	nt ar	nd cleaning up
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.

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# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017

### Page 5 of 15 Print Date 04/11/2018

# 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)
	PEL: Permissible Exposure Level 10 mg/m3 Form: Total dust
	OSHA PEL (1993-06-30)
	PEL: Permissible Exposure Level 15 mg/m3 Form: Total dust
	NIOSH REL (1994-06-01)
	ACGIH TLV (1996-05-18)
	TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 10 mg/m3
	remissible Exposure Level to highlis
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
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# THERMO FISHER ROYAL BLUE PP

Version Number 1.0	Page 6 of 15
Revision Date 03/22/2017	Print Date 04/11/2018

		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 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**

Physical state	:	solid [Pellets.]
Color	:	BLUE
Odor	:	Faint odor.
Odor threshold	:	Not available.
рН	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.

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# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 7 of 15 Print Date 04/11/2018

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	:	insoluble in water.
Partition coefficient: n- octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Dynamic: Not available.
·		Kinematic: 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

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



# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017

### Page 8 of 15 Print Date 04/11/2018

Titanium dioxide

	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
Conclusion/Summary	: Mixtu	re.Not fully tested.		

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium dioxide	Skin - Mild irritant	Human		72 hrs	-
Conclusion/Summary	Innant				
Skin	: N	Aixture.Not fu	illy tested		
Eyes		Aixture.Not fu			
Respiratory		Mixture.Not fu			
Sensitization					
Conclusion/Summary					
Skin		Mixture.Not fu			
Respiratory	: N	Mixture.Not fu	ally tested.		
<b>Mutagenicity</b>					
Conclusion/Summary	: 1	Mixture.Not fu	ally tested.		
<b>Carcinogenicity</b>					
Conclusion/Summary	: 1	Aixture.Not fu	ally tested.		
<u>Reproductive toxicity</u>					
Conclusion/Summary	: 1	Aixture.Not fu	ally tested.		
<u>Teratogenicity</u>					
Conclusion/Summary	: 1	Aixture.Not fu	ally tested.		
Specific target organ toxici Not available.	ty (single expos	ure)			
<u>Specific target organ toxici</u> Not available.	ty (repeated exp	<u>oosure)</u>			
Aspiration hazard Not available.					



# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 9 of 15 Print Date 04/11/2018

Information on 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.
Symptoms related to the physical,	chemi	cal 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.
<b>Developmental effects</b>	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.
Numerical measures of toxicity		

### Acute toxicity estimates

<u>One</u>

# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 10 of 15 Print Date 04/11/2018

Not available.

# Section 12. Ecological information

**Toxicity** 

Product/ingredient name	Result	Species	Exposure
Titanium dioxide			
	Acute LC50 > 1,000,000 μg/l	Fish - Fish	96 h
	Marine water		
	Acute LC50 > 1,000 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 13 mg/l Fresh water	Aquatic invertebrates.	48 h
	Acute EC50 15 high Presh water	Daphnia	40 11
	Acute LC50 6.5 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 3 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 15.9 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 3.6 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 11 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 13.4 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute EC50 27.8 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 35.306 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
THERMO FISHER ROYAL		Dapinna	
Remarks - Acute - Aquatic	Chemicals are not readily available a	as they are bound within the	a polymer matrix
invertebrates.:	Chemicals are not readily available a	is uncy are bound within th	e porymer maura.
Conclusion/Summary	Chamicals are not readil	ly available as they are bou	und within the
Conclusion/Summary	: Chemicals are not readil polymer matrix.	iy available as they are bou	
Persistence and degradabilit	y		

Conclusion/Summary

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

:

# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 11 of 15 Print Date 04/11/2018

Conclusion/Summary

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

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Titanium dioxide		-	low

#### Mobility in soil

Soil/water partition coefficient	:	Not available.
(KOC)		
Other adverse effects	:	No known significant 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 Classification	:	Not regulated for transportation.
ICAO/IATA	:	Not classified as dangerous goods under transport regulations.
IMO/IMDG (maritime)	:	Not classified as dangerous goods under transport regulations.

# Section 15. Regulatory information

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# THERMO FISHER ROYAL BLUE PP

Version Number 1.0	Page 12 of 15
Revision Date 03/22/2017	Print Date 04/11/2018

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(a)2 - Proposed significant new use rules: Not listed United States - TSCA 5(c) - 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): Not listed United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed United States - TSCA 8(d) - Health and safety studies: Not listed United States - TSCA 8(d) - Health and safety studies: Not listed United States - TSCA 8(d) - Health and safety studies: Not listed 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)	:	Not 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

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# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017

Page 13 of 15 Print Date 04/11/2018

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

not applicable

SARA 311/312

Classification

Not applicable.

:

#### **Composition/information on ingredients**

Name	%	Classification
Titanium dioxide	1 - 5	СН

### SARA 313

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:
	Titanium dioxide
Pennsylvania	: The following components are listed:
	Titanium dioxide

### California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

United States inventory (TSCA 8b)	:	All components are listed or exempted.
Canada inventory	:	All components are listed or exempted.
International regulations		
International lists	:	<ul> <li>Australia inventory (AICS): All components are listed or exempted.</li> <li>Malaysia Inventory (EHS Register): Not determined.</li> <li>EINECS: All components are listed or exempted.</li> <li>Japan inventory: All components are listed or exempted.</li> <li>China inventory (IECSC): All components are listed or exempted.</li> <li>Korea inventory: All components are listed or exempted.</li> <li>New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.</li> <li>Philippines inventory (PICCS): All components are listed or exempted.</li> <li>Taiwan Chemical Substances Inventory (TCSI): Not determined.</li> </ul>
<b>Chemical Weapons Convention</b>	:	Not listed
		13/15

## THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 14 of 15 Print Date 04/11/2018

List Schedule I Chemicals Chemical Weapons Convention : Not listed List Schedule II Chemicals Chemical Weapons Convention : Not listed List Schedule III Chemicals

## Section 16. Other information

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

Health	*	1
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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

History

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Date of printing	:	04/11/2018
Date of issue/Date of revision	:	03/22/2017
Date of previous issue	:	00/00/0000
Version	:	1.0
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 abovenamed 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

<u>One</u>

# THERMO FISHER ROYAL BLUE PP

Version Number 1.0 Revision Date 03/22/2017 Page 15 of 15 Print Date 04/11/2018

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.