

# SAFETY DATA SHEET

United States

Section 1. Identification Product name

Catalogue Number	RPN226	
Other means of identification Product type	Not available. Solid.	9 O R P N 2 2 6
Relevant identified uses of the su Identified uses Industrial applications: Analytical Not applicable.	ubstance or mixture and uses advised chemistry. Research.	<u>against</u>
Supplier	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	Cytiva USA 100 Results Way Marlborough, MA 01752 1-800-526-3593
In case of emergency	ChemTrec US (available 24/7) 1-800-	424-9300
Section 2. Hazards ident	ification	
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.	
<u>GHS label elements</u> Signal word Hazard statements	No signal word. No known significant effects or critical h	nazards.
Precautionary statements Prevention	Not applicable.	
Response	Not applicable.	
Storage	Not applicable.	
Disposal	Not applicable.	
Hazards not otherwise	None known.	

classified



## Section 3. Composition/information on ingredients

Substance/mixture	Mixture
Other means of identification	Not available.
CAS number/other identifiers	
CAS number	Not applicable.

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

There are no 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	
Inhalation	for and remove any contact lenses. Get medical attention if irritation occurs. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical	
	attention if symptoms occur.	
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/effect	s, 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	5	
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	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.	
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. Fire-fighting measures		
Extinguishing media		
Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.	

Remark	Non-flammable but will burn on prolonged exposure to flame or high temperature.
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.
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.
Hazardous thermal decomposition products	No specific data.
Specific hazards arising from the chemical	No specific fire or explosion hazard.
Unsuitable extinguishing media	None known.
Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.



## 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 contai	nment and 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.

# Section 7. Handling and storage

Precautions for safe handling	
Protective measures	Put on appropriate personal protective equipment (see Section 8).
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.
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. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

Control parameters	
Occupational exposure limits None.	
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 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.

25006348-12

Page: 3/7 Validation date 22 November 2019

# Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	Solid. [Plastic mass.]
Color	Not available.
Odor	Odorless.
Odor threshold	Not available.
рН	Not applicable.
Melting point	Not available.
Boiling point	Not available.
Flash point	Not applicable.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-flammable but will burn on prolonged exposure to flame or high temperature.
Lower and upper explosive	Not available.
(flammable) limits	
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility	Insoluble in the following materials: cold water and hot water.
Solubility in water	Not available.
Partition coefficient: n-octanol/	Not available.
water	
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Not available.
Flow time (ISO 2431)	Not available.

### Aerosol product

## Section 10. Stability and reactivity

Reactivity Chemical stability Possibility of hazardous reactions	No specific test data related to reactivity available for this product or its ingredients. The product is stable. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	No specific data.
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 Not available.

Irritation/Corrosion Not available.

Sensitization Not available.

Mutagenicity Not available.

Carcinogenicity Not available.

Reproductive toxicity

Not available.

Teratogenicity Not available.

Specific target organ toxicity (single exposure)

25006348-12

#### Not available.

Not available.	
Specific target organ toxicity (r Not available.	epeated exposure)
Aspiration hazard Not available.	
Information on the likely routes of exposure	Routes of entry anticipated: Dermal. Routes of entry not anticipated: Oral, Inhalation.
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 physica	al, chemical and toxicological characteristics
Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	No specific data. No specific data.
Ingestion	•
-	nd 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	
Not available.	
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 Developmental effects	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Numerical measures of toxicity	
Acute toxicity estimates	
N/A	
Section 12. Ecological in	formation
<u>Toxicity</u> Not available.	
Persistence and degradability	
Not available.	
Bioaccumulative potential Not available.	
Mobility in soil	
Soil/water partition coefficient (K	Not available.
oc) Other adverse offects	No known aignifiaant offacta as asitizad baserda
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	
	contractor. Waste should r requirements of all authorit or landfill should only be co must be disposed of in a sa	surplus and non-recyclable products via a licensed waste disposal not be disposed of untreated to the sewer unless fully compliant with the ies with jurisdiction. Waste packaging should be recycled. Incineration onsidered when recycling is not feasible. This material and its container afe way. Empty containers or liners may retain some product residues. naterial and runoff and contact with soil, waterways, drains and sewers.
Section 14. Transport ir	nformation	
Product is not regulated as da		rt.
Section 15. Regulatory	information	
U.S. Federal regulations		Partial exemption: Not determined
Clean Air Act. Coation 440/h) II		
Clean Air Act Section 112(b) Ha	azardous Air Pollutants	Not listed
Clean Air Act Section 602 Class	s I Substances	Not listed
Clean Air Act Section 602 Class		Not listed
DEA List I Chemicals (Precurso	,	Not listed
DEA List II Chemicals (Essentia	al Chemicals)	Not listed
<u>SARA 302/304</u>		
Composition/information on i	ngredients	
No products were found.		
SARA 304 RQ	Not applicable.	
SARA 311/312 Classification		
Composition/information on i No products were found.	ngredients	
State regulations		
Massachusetts	This material is not listed.	
New York	This material is not listed.	
New Jersey	This material is not listed.	
Pennsylvania	This material is not listed.	
International regulations		
Chemical Weapon Convention Not listed.	<u>n List Schedules I, II &amp; III Che</u>	emicals
Montreal Protocol		
Not listed.		
Stockholm Convention on Pe	rsistent Organic Pollutants	
Not listed.		
Rotterdam Convention on Pri-	or Informed Consent (PIC)	
Not listed.		
UNECE Aarhus Protocol on POPs and Heavy Metals		
Not listed.		
Inventory list		
United States	Not determined.	
Europe	Not determined.	
Canada inventory	Not determined.	



# Section 16. Other information

#### National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### Procedure used to derive the classification

Not classified.   History   Date of printing 6/4/2020   Date of issue/Date of revision 11/22/2019   Date of previous issue 6/27/2018   Version 3   Sds_author@cytiva.com   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 = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations   References Not available.	Classi	fication Justification
Date of printing6/4/2020Date of issue/Date of revision11/22/2019Date of previous issue6/27/2018Version3sds_author@cytiva.comKey to abbreviationsATE = 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) N/A = Not available UN = United Nations	Not classified.	
Date of issue/Date of revision 11/22/2019   Date of previous issue 6/27/2018   Version 3   sds_author@cytiva.com   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 = Internetional Air Transport Association IBC = Internetional 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) N/A = Not available UN = United Nations	<u>History</u>	
Date of previous issue 6/27/2018   Version 3   sds_author@cytiva.com   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 = 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) N/A = Not available UN = United Nations	Date of printing	6/4/2020
Version 3   sds_author@cytiva.com   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 = 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)   N/A = Not available   UN = United Nations	Date of issue/Date of revision	11/22/2019
Key to abbreviations sds_author@cytiva.com   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) N/A = Not available UN = United Nations	Date of previous issue	6/27/2018
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 = Internediate Bulk Container IMDG = Internediate 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) N/A = Not available UN = United Nations	Version	3
BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate 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) N/A = Not available UN = United Nations		sds_author@cytiva.com
References Not available.	Key to abbreviations	BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = 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) N/A = Not available
	References	Not available.

Indicates information that has changed from previously issued version.

#### 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.

