

# DN3A/DUNE/B3EG3

Version Number 1.9 Page 1 of 16 Revision Date 12/23/2021 Print Date 12/24/2021

# SAFETY DATA SHEET

## DN3A/DUNE/B3EG3

# **Section 1. Identification**

**GHS product identifier** : DN3A/DUNE/B3EG3

Chemical name: MixtureCAS number: MixtureOther means of identification: CC10139445

**Product type** : solid

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

**Product use** : Industrial applications.

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. 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.

**Hazard statements** : No known significant effects or critical hazards.



# DN3A/DUNE/B3EG3

Version Number 1.9 Page 2 of 16
Revision Date 12/23/2021 Print Date 12/24/2021

#### **Precautionary statements**

Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.
Supplemental label elements : None known.
Hazards not otherwise classified : None known.

Not available.

# Section 3. Composition/information on ingredients

Substance/mixture: MixtureChemical name: MixtureOther means of identification: CC10139445

#### **CAS** number/other identifiers

Ingredient name	<b>%</b>	CAS number
Titanium dioxide	>= 10 - <= 25	13463-67-7
2,4,8,10-Tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis[2,4-	>= 1 - <= 3	26741-53-7
bis(1,1-dimethylethyl)phenoxy]-	>=1-<=3	20741-33-7
Silica, amorphous	>= 1 - <= 3	7631-86-9
Carbon black	> 0 - <= 0.3	1333-86-4

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

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

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

# Section 4. First aid measures

# Description of necessary first aid measures

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses.



# DN3A/DUNE/B3EG3

Version Number 1.9 Page 3 of 16 Revision Date 12/23/2021 Print Date 12/24/2021

Get medical attention if irritation occurs.

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

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

surveillance for 48 hours.

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

clothing and shoes. Get medical attention if symptoms occur.

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

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

medical personnel. Get medical attention if symptoms occur.

## Most important symptoms/effects, acute and delayed

#### Potential acute health effects

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

## Over-exposure signs/symptoms

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

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

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

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

medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

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

suitable training.

See toxicological information (Section 11)

# Section 5. Fire-fighting measures

#### Extinguishing media



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 4 of 16 Print Date 12/24/2021

Suitable extinguishing media Unsuitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or  $CO_2$ .

: None known.

Specific hazards arising from the chemical

: No specific fire or explosion hazard.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides

Special protective actions for firefighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any

personal risk or without suitable training.

Special protective equipment for fire-fighters

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

in positive pressure mode.

# Section 6. Accidental release measures

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

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

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

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

of any information in Section 8 on suitable and unsuitable materials.

See also the information in "For non-emergency personnel".

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

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

or air).

#### Methods and materials for containment and cleaning up

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



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 5 of 16 Print Date 12/24/2021

contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

## Precautions for safe handling

Protective measures Advice on general occupational hygiene

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

Conditions for safe storage, including any incompatibilities

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

# Section 8. Exposure controls/personal protection

# **Control parameters**

#### Occupational exposure limits

Ingredient name	Exposure limits
Titanium dioxide	OSHA PEL 1989 (1989-03-01) TWA 10 mg/m3 Form: Total dust OSHA PEL (1993-06-30) TWA 15 mg/m3 Form: Total dust ACGIH TLV (1996-05-18) TWA 10 mg/m3
2,4,8,10-Tetraoxa-3,9- diphosphaspiro[5.5]undecane, 3,9- bis[2,4-bis(1,1-dimethylethyl)phenoxy]-	None.
Silica, amorphous	NIOSH REL (1994-06-01) TWA 6 mg/m3
Carbon black	OSHA PEL 1989 (1989-03-01)



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 6 of 16 Print Date 12/24/2021

TWA 3.5 mg/m3

OSHA PEL (1993-06-30)

TWA 3.5 mg/m3

NIOSH REL (1994-06-01)

TWA 3.5 mg/m3

NIOSH REL (1994-06-01) TWA 0.1 mgPAH/m<sup>3</sup> ACGIH TLV (2010-12-06)

TWA 3 mg/m3 Form: Inhalable fraction

**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.



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 7 of 16 Print Date 12/24/2021

**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 **TAN** Faint odor. Odor **Odor threshold** Not available. pН Not available. **Melting point** Not available. **Boiling point** Not available. Flash point Not available. **Burning time** Not available. **Burning rate** Not available. **Evaporation rate** 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-** Not available.

octanol/water

Flammability (solid, gas)

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

Viscosity : Dynamic: Not available.

**Kinematic:** Not available.

Not available.

#### Aerosol product

**Heat of combustion** : Not available.

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

equivalent

**Enclosed space ignition -** Not available.

**Deflagration density** 



# DN3A/DUNE/B3EG3

Version Number 1.9 Page 8 of 16 Revision Date 12/23/2021 Print Date 12/24/2021

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** : Under normal conditions of storage and use, hazardous decomposition

products should not be produced.

# Section 11. Toxicological information

#### **Information on toxicological effects**

**Acute toxicity** 

products

Product/ingredient name	Result	Species	Dose	Exposure	
Titanium oxide (TiO2)					
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h	
	Dusts and mists				
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-	
2,4,8,10-Tetraoxa-3,9-diphosph	2,4,8,10-Tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis[2,4-bis(1,1-dimethylethyl)phenoxy]-				
	LD50 Oral	Rat	5,580 mg/kg	-	
Carbon black					
	LD50 Oral	Rat	15,400 mg/kg	=	

Conclusion/Summary : Mixture. Not fully tested.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,4,8,10-Tetraoxa-3,9-	Skin - Severe irritant	Rabbit	-		-
diphosphaspiro[5.5]undecan					
e, 3,9-bis[2,4-bis(1,1-					
dimethylethyl)phenoxy]-					
Silica	Eyes - Mild irritant	Rabbit	-	24 hrs	-

#### Conclusion/Summary



# DN3A/DUNE/B3EG3

Version Number 1.9 Page 9 of 16 Revision Date 12/23/2021 Print Date 12/24/2021

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

**Sensitization** 

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
Titanium oxide (TiO2)	-	2B	-
Silica	-	3	-
Carbon black	_	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** :

Not available.

exposure

Potential acute health effects



# DN3A/DUNE/B3EG3

 Version Number 1.9
 Page 10 of 16

 Revision Date 12/23/2021
 Print Date 12/24/2021

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

# Symptoms related to the physical, chemical and toxicological characteristics

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

#### Delayed and immediate effects 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:No known significant effects or critical hazards.Mutagenicity:No known significant effects or critical hazards.Teratogenicity:No known significant effects or critical hazards.Developmental effects:No known significant effects or critical hazards.Fertility effects:No known significant effects or critical hazards.

#### 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.



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 11 of 16 Print Date 12/24/2021

# Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
Titanium oxide (TiO2)			
	Acute LC50 > 1,000 Mg/l	Fish - Fundulus heteroclitus	96 h
	Marine water		
	Acute LC50 3 Mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 h
	Acute LC50 6.5 Mg/l Fresh	Daphnia - Daphnia pulex	48 h
	water		
Carbon black			
	Acute EC50 37.563 Mg/l Fresh	Daphnia - Daphnia magna	48 h
	water		
DN3A/DUNE/B3EG3			
Remarks - Acute - Aquatic	Chemicals are not readily available as they are bound within the polymer matrix.		
invertebrates.:	-	_	

**Conclusion/Summary** 

Chemicals are not readily available as they are bound within the

polymer matrix.

Persistence and degradability

Conclusion/Summary

: Chemicals are not readily available as they are bound within the

polymer matrix.

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

polymer matrix.

**Bioaccumulative potential** 

Not available.

Mobility in soil

Soil/water partition coefficient

(KOC)

Not available.

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

# Section 13. Disposal considerations



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 12 of 16 Print Date 12/24/2021

#### **Disposal methods**

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

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

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

# Section 14. Transport information

U.S.DOT 49CFR Ground/Air/Water : Not regulated for transportation.

International Air ICAO/IATA

: Not classified as dangerous goods under transport regulations.

International Water

IMO/IMDG

: Not classified as dangerous goods under transport regulations.

# Section 15. Regulatory information

U.S. Federal regulations : United States - TSCA 12(b) - Chemical export notification: None

of the components are listed.

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

listed

United States - TSCA 5(a)2 - Proposed significant new use rules:

Not listed

United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021

Page 13 of 16 Print Date 12/24/2021

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 4(a) - Final Test Rules: Not listed

United States - EPA Clean water act (CWA) section 307 - Priority

pollutants: Listed Rutile, antimony chromium buff Zinc ferrite brown spinel (C.I. Pigment Yellow 119)

Nickel

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

Not listed

Not listed

Listed

Clean Air Act Section 112(b)

Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I

**Substances** 

Clean Air Act Section 602 Class II

**Substances** 

**DEA List I Chemicals (Precursor** 

**Chemicals**)

**DEA List II Chemicals (Essential** 

Not listed

Chemicals)

Not listed

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

not applicable

**SARA 311/312** 

Not applicable. Classification

## **Composition/information on ingredients**

No products were found.

Name	%	Classification
Titanium oxide (TiO2)	>= 10 - <= 25	CARCINOGENICITY - Category 2



# DN3A/DUNE/B3EG3

Version Number 1.9 Revision Date 12/23/2021 Page 14 of 16 Print Date 12/24/2021

2,4,8,10-Tetraoxa-3,9-	>= 1 - <= 3	SKIN IRRITATION - Category 2
diphosphaspiro[5.5]undecan		EYE IRRITATION - Category 2A
e, 3,9-bis[2,4-bis(1,1-dimethylethyl)phenoxy]-		
Silica	>= 1 - <= 3	EYE IRRITATION - Category 2B
Sincu	7-1 <-3	ETE Hadrinion Category 25
Carbon black	> 0 - <= 0.3	CARCINOGENICITY - Category 2

#### Form R - Reporting requirements

Product name	CAS number	%
Rutile, antimony chromium buff	68186-90-3	>= 5 - <= 10
Zinc ferrite brown spinel (C.I. Pigment Yellow 119)	68187-51-9	>= 1 - <= 3

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.

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

Rutile, antimony chromium buff

Zinc ferrite brown spinel (C.I. Pigment Yellow 119)

Carbon black

Pennsylvania : The following components are listed:

Titanium dioxide

Rutile, antimony chromium buff

Silica, amorphous

Zinc ferrite brown spinel (C.I. Pigment Yellow 119)

Carbon black

# California Prop. 65

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



# DN3A/DUNE/B3EG3

Version Number 1.9 Page 15 of 16 Revision Date 12/23/2021 Print Date 12/24/2021

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

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

**Canada inventory** : All components are listed or exempted.

#### **International regulations**

#### **Inventory list**

Australia: All components are listed or exempted.Canada: All components are listed or exempted.China: All components are listed or exempted.

**Europe inventory** : At least one component is not listed in EINECS but all such

components are listed in ELINCS.

Please contact your supplier for information on the inventory status of

this material.

JapanAll components are listed or exempted.New ZealandAll components are listed or exempted.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Turkev : Not determined.

**United States** : All components are active or exempted.

# Section 16. Other information

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

Health	/	0
Flammability		0
Physical hazards		0

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

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



# DN3A/DUNE/B3EG3

 Version Number 1.9
 Page 16 of 16

 Revision Date 12/23/2021
 Print Date 12/24/2021

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

**History** 

Date of printing: 12/24/2021Date of issue/Date of revision: 12/23/2021Date of previous issue: 08/15/2018

Version : 1.9

**Key to abbreviations**: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of

Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

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

pollution)

UN = United Nations

**References** : Not available.

#### Notice to reader

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