

02/13/2017

Kit Components

Product code	Description
1875001	Porphyrine by Column Test, Reagent Kit
Components:	
1875002	Porphyrins by Column Test, REAG 1
1875101	Porphyrins by Column Test, DISP COL



Printing date 02/13/2017

Reviewed on 02/09/2017

1 Identification

· Product identifier

· Trade name: Porphyrins by Column Test, REAG 1

· Article number: 1875002

· Application of the substance / the mixture In-Vitro-laboratory reagent or component

Details of the supplier of the safety data sheet

· Manufacturer/Supplier

Bio-Rad Laboratories (Canada) Ltd.

2403 Guenette Street Montreal, Quebec H4R 2E9 Phone: (514) 334-4372

Freephone: 1 (800) 361-1808 Fax: (514) 334-0872

· Information department:

Technical Support:

E-mail: cdg canada salesmarketing@bio-rad.com

Emergency telephone number: GBK Gefahrgut Büro GmbH Tel.: 0049(0)6123-84463

2 Hazard(s) identification

· Classification of the substance or mixture

Skin Corrosion - Category 1B H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1 H318 Causes serious eye damage.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS05

- · Signal word Danger
- · Hazard-determining components of labeling:

Hydrochloric Acid 25 %

· Hazard statements

Causes severe skin burns and eye damage.

· Precautionary statements

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Hazard description:
- · WHMIS-symbols:

D2B - Toxic material causing other toxic effects

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Trade name: Porphyrins by Column Test, REAG 1

E - Corrosive material





- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

Hydrochloric Acid 25 %

10-13% w/w

Ocrrosive to Metals - Category 1, H290; Skin Corrosion - Category 1B, H314; Specific Target Organ Toxicity - Single Exposure - Category 3, H335

4 First-aid measures

- · Description of first aid measures
- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Hydrogen chloride (HCl)

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Trade name: Porphyrins by Column Test, REAG 1

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· Advice for firefighters

· Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

Information on basic physical and	cnemicui properties	
General Information Appearance:		
Form:	Fluid	
Color:	Yellowish	
Odor:	Pungent	
Odor threshold:	Not determined.	
pH-value at 20 °C:	<1	
Change in condition	U. datamaia - d	
Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 100 °C	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	

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Trade name: Porphyrins by Column Test, REAG 1

		(Contd. of page
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapor pressure at 20 °C:	23 hPa	
Density at 20 °C:	1,05 g/cm³	
Relative density	Not determined.	
· Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/w	ater): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions

Reacts with acids, alkalis and oxidizing agents.

Reacts with metals forming hydrogen.

- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: Hydrogen chloride (HCl)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: Strong caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

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Trade name: Porphyrins by Column Test, REAG 1

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· NTP (National Toxicology Program)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

. IIN Number

UIN-INUITUEI	
· DOT, TDG, IMDG, IATA	UN1789

· UN proper shipping name

DOT Hydrochloric acid solution
 TDG 1789 Hydrochloric acid solution
 IMDG, IATA HYDROCHLORIC ACID solution

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· Transport hazard class(es)

 $\cdot DOT$



· Class 8 Corrosive substances

· Lahel

· TDG, IMDG, IATA



· Class 8 Corrosive substances

· Label 8

· Packing group

· DOT, TDG, ÎMDG, IATA II

· Environmental hazards:

· Marine pollutant: No

· Special precautions for user Warning: Corrosive substances

Danger code (Kemler):
EMS Number:
Segregation groups
Stowage Category

80
F-A,S-B
Acids
E

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

 \cdot TDG

· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

 \cdot IMDG

· Limited quantities (LQ)

· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1789 HYDROCHLORIC ACID SOLUTION, 8, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

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Trade name: Porphyrins by Column Test, REAG 1

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· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

7732-18-5 water, distilled, conductivity or of similar purity

· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

7732-18-5 water, distilled, conductivity or of similar purity

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS05

· Signal word Danger

· Hazard-determining components of labeling:

Hydrochloric Acid 25 %

· Hazard statements

Causes severe skin burns and eye damage.

· Precautionary statements

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:

Bio-Rad Laboratories GmbH Heidemannstrasse 164 D-80939 Munich

· Contact:

Technical Support:

E-Mail: cts-ce@bio-rad.com

· Abbreviations and acronyms:

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

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Trade name: Porphyrins by Column Test, REAG 1

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DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

* * Data compared to the previous version altered.



Printing date 02/13/2017 Reviewed on 02/13/2017

1 Identification

- · Product identifier
- · Trade name: Porphyrins by Column Test, DISP COL
- · Article number: 1875101
- · Application of the substance / the mixture In-Vitro-laboratory reagent or component
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier

Bio-Rad Laboratories (Canada) Ltd.

2403 Guenette Street Montreal, Quebec H4R 2E9 Phone: (514) 334-4372 Freephone: 1 (800) 361-1808

Fax: (514) 334-0872

· Information department:

Technical Support:

E-mail: cdg canada salesmarketing@bio-rad.com

· Emergency telephone number: GBK Gefahrgut Büro GmbH Tel.: 0049(0)6123-84463

2 Hazard(s) identification

· Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

- · Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 0Fire = 0

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · **Description:** Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components: Void



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Trade name: Porphyrins by Column Test, DISP COL

(Contd. of page 1)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

(Contd. on page 3)



Printing date 02/13/2017 Reviewed on 02/13/2017

Trade name: Porphyrins by Column Test, DISP COL

(Contd. of page 2)

- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Goggles recommended during refilling.

Information on basic physical and General Information	chemical properties	
Appearance:		
Form:	Fluid	
Color:	Beige	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value at 20 °C:	5,5	
Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 100°C	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits: Lower:	Not determined.	

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Trade name: Porphyrins by Column Test, DISP COL

		(Contd. of page 3)
Upper:	Not determined.	
· Vapor pressure at 20 °C:	23 hPa	
· Density:	Not determined.	
· Relative density	Not determined.	
· Vapor density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
· Partition coefficient (n-octanol/w	ater): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· Carcinogenic categories

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.

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Trade name: Porphyrins by Column Test, DISP COL

(Contd. of page 4)

- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Disposal must be made according to official regulations.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

UN-Number	IZ + I	
DOT, TDG, ADN, IMDG, IATA	Void	
UN proper shipping name DOT, TDG, ADN, IMDG, IATA	Void	
Transport hazard class(es)		
DOT, TDG, ADN, IMDG, IATA Class	Void	
Packing group DOT, TDG, IMDG, IATA	Void	
Environmental hazards: Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	
UN "Model Regulation":	Void	

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredient is listed.

(Contd. on page 6)



Printing date 02/13/2017 Reviewed on 02/13/2017

Trade name: Porphyrins by Column Test, DISP COL

(Contd. of page 5)

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

7732-18-5 water, distilled, conductivity or of similar purity

· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients is listed.

- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS:

Bio-Rad Laboratories GmbH

Heidemannstrasse 164

D-80939 Munich

· Contact:

Technical Support:

E-Mail: cts-ce@bio-rad.com

· Abbreviations and acronyms:

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

* * Data compared to the previous version altered.

-CA