

**Kit Components**

Product code	Description
<b>CAY749-VxxAAE</b>	<b>CA71HA Reagent Set for hardness</b>

## Components:

51515586B	Reagent HA-B1 for hardness
71256683B	Reagent HA-B2 for hardness

## 1 Identification

### Product identifier

**Trade name:** Reagent HA-B1

**Synonym:** *for hardness*

**Article number:** 51515586B

**Application of the substance / the mixture** *Laboratory chemicals*

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

*Endress+Hauser  
Conducta GmbH+Co. KG  
Dieselstraße 24  
D-70839 Gerlingen*

#### Further information obtainable from:

*Phone: +49 (0)7156 209-10117  
E-Mail: MSDS.PCC@endress.com*

**Emergency telephone number:** +1 604 682 5050

## 2 Hazard identification

### Classification of the substance or mixture

*The product is not classified, according to the Globally Harmonised System (GHS).*

### Label elements

**GHS label elements** *Void*

**Hazard pictograms** *Void*

**Signal word** *Void*

**Hazard statements** *Void*

### Other hazards


*The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.*

## \* 3 Composition/Information on ingredients

### Chemical characterisation: Mixtures

**Description:** *Mixture of substances listed below with nonhazardous additions.*

#### Dangerous components:

CAS: 497-19-8	sodium carbonate	 Eye Irritation - Category 2A, H319	1-2.5% *
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**Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

## 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.*

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**Trade name: Reagent HA-B1**

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**Indication of any immediate medical attention and special treatment needed***No further relevant information available.*

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**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:***CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.***For safety reasons unsuitable extinguishing agents:** *no further information***Special hazards arising from the substance or mixture** *No further relevant information available.***Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.*

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**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.***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.*

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**7 Handling and storage****Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***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.***Storage class:** *12***Specific end use(s)** *No further relevant information available.*

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**8 Exposure controls/ Personal protection****Additional information about design of technical facilities:** *No further data; see section 7.***Control parameters****Ingredients 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 valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Protection of hands:** *No chemical-protective gloves required.***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.*

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**Trade name: Reagent HA-B1**

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**Penetration time of glove material**

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

**Eye protection:** *Not required.*

**Body protection:** *Protective work clothing*

**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	<i>Liquid</i>
<b>Colour:</b>	<i>Yellow tint</i>
<b>Odour:</b>	<i>Odourless</i>
<b>Odour threshold:</b>	<i>Not determined.</i>

**pH-value at 20 °C:** *9-11*

**Change in condition**

<b>Melting point/freezing point:</b>	<i>0 °C</i>
<b>Initial boiling point and boiling range:</b>	<i>100 °C</i>

**Flash point:** *Not applicable.*

**Flammability** *Not applicable.*

**Decomposition temperature:** *Not determined.*

**Ignition temperature:** *Product is not selfigniting.*

**Explosive properties:** *Product does not present an explosion hazard.  
Not determined.*

**Explosion limits:**

<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>

**Vapour pressure at 20 °C:** *23 hPa*

**Density:** *Not determined.*

**Relative density** *Not determined.*

**Vapour density** *Not determined.*

**Evaporation rate** *Not determined.*

**Solubility in / Miscibility with**

**water:** *Not miscible or difficult to mix.*

**Partition coefficient: n-octanol/water:** *Not determined.*

**Viscosity:**

<b>Dynamic:</b>	<i>Not determined.</i>
<b>Kinematic:</b>	<i>Not determined.</i>

**Solvent content:**

<b>Water:</b>	<i>95.8 %</i>
<b>Solids content:</b>	<i>0.0 %</i>

**Other information** *No further relevant information available.*

**10 Stability and reactivity**

**Reactivity** *No further relevant information available.*

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Trade name: Reagent HA-B1

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**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****LD/LC50 values relevant for classification:****CAS: 497-19-8 sodium carbonate**

Oral | LD50 | 4,090 mg/kg (rat)

**Primary irritant effect:****Skin corrosion/irritation** *No irritant effect.***Serious eye damage/irritation** *No irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.***Additional toxicological information:***The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.**When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.***12 Ecological information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behaviour 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 (German Regulation) (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***Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.**Smaller quantities can be disposed of with household waste.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.*

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**Trade name: Reagent HA-B1**

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## 14 Transport information

<b>UN-Number</b>	
<b>ADN, IMDG, IATA</b>	Void
<b>UN proper shipping name</b>	
<b>ADR, ADN, IMDG, IATA</b>	Void
<b>Transport hazard class(es)</b>	
<b>ADR, ADN, IMDG, IATA</b>	
<b>Class</b>	Void
<b>Packing group</b>	
<b>ADR, IMDG, IATA</b>	Void
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
<b>UN "Model Regulation":</b>	Void

## 15 Regulatory information

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

**GHS label elements** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

**National regulations:**

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

**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:** PCC-TWR

**Contact:** MSDS.pcc@endress.com

**Date of the latest revision of the safety data sheet** 09/20/2024 / 4

**Abbreviations and acronyms:**

ICAO: International Civil Aviation Organisation

IMDG: International Maritime Code for Dangerous Goods

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

\* **Data compared to the previous version altered.**

## 1 Identification

### Product identifier

**Trade name:** Reagent HA-B2

**Synonym:** *for hardness*

**Article number:** 71256683B

**Application of the substance / the mixture** *Laboratory chemicals*

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

*Endress+Hauser  
Conducta GmbH+Co. KG  
Dieselstraße 24  
D-70839 Gerlingen*

### Further information obtainable from:

*Phone: +49 (0)7156 209-10117  
E-Mail: MSDS.PCC@endress.com*

**Emergency telephone number:** +1 604 682 5050

## 2 Hazard identification

### Classification of the substance or mixture



GHS02 Flame

*Flammable Liquids - Category 2 H225 Highly flammable liquid and vapour.*



GHS08 Health hazard

*Carcinogenicity - Category 1A H350 May cause cancer.*

### Label elements

#### GHS label elements

*The product is classified and labelled according to the Globally Harmonised System (GHS).*

#### Hazard pictograms



GHS02 GHS08

**Signal word** *Danger*

### Hazard-determining components of labelling:

*ethanol*

### Hazard statements

*Highly flammable liquid and vapour.*

*May cause cancer.*

### Precautionary statements

*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

*Use explosion-proof [electrical/ventilating/lighting] equipment.*

*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

*Store locked up.*

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

### Other hazards



*The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.*

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Trade name: Reagent HA-B2

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**\* 3 Composition/Information on ingredients****Chemical characterisation: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 64-17-5	ethanol	30-50% *
	 Flammable Liquids - Category 2, H225;  Carcinogenicity - Category 1A, H350	

**Additional information:** For the wording of the listed hazard phrases refer to section 16.**4 First-aid measures****Description of first aid measures****General information:** Immediately remove any clothing soiled by the product.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately rinse with water.**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:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** no further information**Special hazards arising from the substance or mixture** No further relevant information available.**Advice for firefighters** No further relevant information available.**Protective equipment:** No special measures required.**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

**Environmental precautions:**

Prevent seepage into sewage system, workpits and cellars.

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).

Dispose contaminated material as waste according to section 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.

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Trade name: Reagent HA-B2

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## 7 Handling and storage

### Precautions for safe handling

Keep receptacles tightly sealed.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

### Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

### Storage:

**Requirements to be met by storerooms and receptacles:** Store in a cool location.

**Information about storage in one common storage facility:** Not required.

### Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

**Storage class:** 3

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/ Personal protection

**Additional information about design of technical facilities:** No further data; see section 7.

### Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

**CAS: 64-17-5 ethanol**

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m<sup>3</sup>, 1,000 ppm

**Additional information:** The lists valid during the making 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.

Store protective clothing separately.

#### Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

#### Protection of hands:



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

No chemical-protective gloves required.

#### Material of gloves

Nitrile rubber, NBR

Natural rubber, NR

Chloroprene rubber, CR

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

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**Trade name: Reagent HA-B2**

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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 through 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 chemical properties

#### General Information

##### Appearance:

Form:	Liquid
Colour:	Yellow
Odour:	Alcohol-like
Odour threshold:	Not determined.
pH-value:	Neutral

#### Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	78 °C

Flash point: < 23 °C

Flammability: Highly flammable.

Auto-ignition temperature: 425 °C

Decomposition temperature: Not determined.

Ignition temperature: Product is not selfigniting.

Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

#### Explosion limits:

Lower:	3.5 Vol %
Upper:	15 Vol %

Vapour pressure at 20 °C: 59 hPa

Density: Not determined.

Relative density: Not determined.

Vapour density: Not determined.

Evaporation rate: Not determined.

#### Solubility in / Miscibility with

water: Fully miscible.

Partition coefficient: n-octanol/water: Not determined.

#### Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

#### Solvent content:

Organic solvents: 42.0 %

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**Trade name: Reagent HA-B2**

(Contd. of page 4)

**Water:** 57.7 %**Solids content:** 0.0 %**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****LD/LC50 values relevant for classification:****CAS: 64-17-5 ethanol**

Oral LD50 7,060 mg/kg (rat)

Inhalative LC50/4 h 20,000 mg/l (rat)

**Primary irritant effect:****Skin corrosion/irritation** No irritant effect.**Serious eye damage/irritation** No irritating effect.**Respiratory or skin sensitisation** No sensitising effects known.**Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Carcinogenicity - Category 1A

**12 Ecological information****Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behaviour 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 (German Regulation) (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.

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—CDN—

**Trade name: Reagent HA-B2**

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### 13 Disposal considerations

**Waste treatment methods**

**Recommendation**

*Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.*

**Uncleaned packaging:**

**Recommendation:** *Disposal must be made according to official regulations.*

**Recommended cleansing agents:** *Water, if necessary together with cleansing agents.*

### 14 Transport information

**UN-Number**

UN1170

**IMDG, IATA**

**UN proper shipping name**

UN1170 ETHANOL (ETHYL ALCOHOL) solution

**ADR**

ETHANOL (ETHYL ALCOHOL) solution

**IMDG**

Ethanol solution

**IATA**

**Transport hazard class(es)**

**ADR**



**Class**

3 (F1) Flammable liquids.

**Label**

3

**IMDG, IATA**



**Class**

3 Flammable liquids.

**Label**

3

**Packing group**

II

**ADR, IMDG, IATA**

**Environmental hazards:**

Not applicable.

**Special precautions for user**

Warning: Flammable liquids.

**Hazard identification number (Kemler code):** 33

**EMS Number:**

F-E,S-D

**Stowage Category**

A

**Transport in bulk according to Annex II of**

**Marpol and the IBC Code**

Not applicable.

**Transport/Additional information:**

**ADR**

**Limited quantities (LQ)**

1L

**Transport category**

2

**Tunnel restriction code**

D/E

**IMDG**

**Limited quantities (LQ)**

1L

**Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

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Trade name: Reagent HA-B2

UN "Model Regulation":

UN 1170 ETHANOL (ETHYL ALCOHOL) SOLUTION, 3, II

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## 15 Regulatory information

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

### GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

### Hazard pictograms



GHS02 GHS08

Signal word *Danger*

### Hazard-determining components of labelling:

*ethanol*

### Hazard statements

*Highly flammable liquid and vapour.*

*May cause cancer.*

### Precautionary statements

*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

*Use explosion-proof [electrical/ventilating/lighting] equipment.*

*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

*Store locked up.*

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

### National regulations:

#### Information about limitation of use:

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.*

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

**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:** *PCC-TWR*

**Contact:** *MSDS.pcc@endress.com*

**Date of the latest revision of the safety data sheet** *09/20/2024 / 4*

### 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*

*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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

**\* Data compared to the previous version altered.**