

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

## 1 Identification

### Product identifier

Trade name: **ATTBLIME - AB ZERO**  
 Application of the substance / the mixture: Matting agent

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

Manufacturer/Supplier: Graichen  
 Produktions- und Vertiebs-GmbH  
 Darmstädter Str. 127 - 129  
 D-64625 Bensheim  
 Tel.: +49(0)6251/73103  
 Fax: +49(0)6251/77901  
 e-mail: info@graichen-bensheim.de  
 homepage: http://www.graichen.net

Information department: Product Safety Department  
 Emergency telephone number: Graichen: During business hours :+49(0)6251 7707880  
 Graichen: Outside business hours: +49(0)172 7478476  
 Advice center for poisoning in Mainz Tel: +49(0)6131/19240 Poison information: +49(0)700/ GIFTINFO  
 USA / CAN : 800-424-9300 (available 24 hrs)

## 2 Hazard(s) identification

### Classification of the substance or mixture

Flammable Aerosols 1 H222 Extremely flammable aerosol.  
 Gases under Pressure - Compressed gas H280 Contains gas under pressure; may explode if heated.  
 Eye Irritation 2A H319 Causes serious eye irritation.  
 Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness.

### Label elements

GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).  
 Hazard pictograms: 

GHS02 GHS04 GHS07

### Signal word

Danger

### Hazard-determining components of labeling:

propan-2-ol

### Hazard statements

Extremely flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 Causes serious eye irritation.  
 May cause drowsiness or dizziness.  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Do not spray on an open flame or other ignition source.  
 Pressurized container: Do not pierce or burn, even after use.  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Wash thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear eye protection / face protection.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Call a poison center/doctor if you feel unwell.  
 If eye irritation persists: Get medical advice/attention.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Protect from sunlight. Store in a well-ventilated place.  
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

### Information pertaining to particular dangers for man and environment:

#### NFPA ratings (scale 0 - 4)



Health = 2  
 Fire = 4  
 Reactivity = 0

#### HMIS-ratings (scale 0 - 4)



HEALTH 2 Health = 2  
 FIRE 4 Fire = 4  
 REACTIVITY 3 Reactivity = 3

### Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable.  
 vPvB: Not applicable.

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: ATTBLIME - AB ZERO

(Contd. of page 1)

## 3 Composition/information on ingredients

### Chemical characterization: Mixtures

Description: Active substance with propellant

#### Dangerous components:

CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0)) ⚠ Flammable Gases 1, H220; ⚠ Gases under Pressure - Compressed gas, H280	50 – 100%
CAS: 74-98-6	propane ⚠ Flammable Gases 1, H220; ⚠ Gases under Pressure - Compressed gas, H280	10 – 25%
CAS: 67-63-0	propan-2-ol ⚠ Flammable Liquids 2, H225; ⚠ Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H336	10 – 25%
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0)) ⚠ Flammable Gases 1, H220; ⚠ Gases under Pressure - Compressed gas, H280	< 2.5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

### Description of first aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: Seek immediate medical advice.
- 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>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents: Water
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters: No special measures required.
- Protective equipment:

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- Environmental precautions: Keep away from ignition sources  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.
- Methods and material for containment and cleaning up: Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- Reference to other sections: See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

#### PAC-1:

CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	5500* ppm
CAS: 74-98-6	propane	5500* ppm
CAS: 67-63-0	propan-2-ol	400 ppm
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0))	5500* ppm
CAS: 74-84-0	ethane	65000*** ppm

#### PAC-2:

CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	17000** ppm
CAS: 74-98-6	propane	17000** ppm
CAS: 67-63-0	propan-2-ol	2000* ppm
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0))	17000** ppm
CAS: 74-84-0	ethane	230000*** ppm

(Contd. on page 3)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: ATTBLIME - AB ZERO

(Contd. of page 2)

. PAC-3:		
CAS: 106-97-8	butane (containing $\leq 0,1$ % butadiene (106-99-0))	53000*** ppm
CAS: 74-98-6	propane	33000*** ppm
CAS: 67-63-0	propan-2-ol	12000** ppm
CAS: 75-28-5	isobutane (containing $\leq 0,1$ % butadiene (106-99-0))	53000*** ppm
CAS: 74-84-0	ethane	400000*** ppm

## 7 Handling and storage

### . Handling:

- . Precautions for safe handling: No special precautions are necessary if used correctly.
- . Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material.

### . Conditions for safe storage, including any incompatibilities

- . Requirements to be met by storerooms and receptacles: Store in a cool location. Observe official regulations on storing packagings with pressurized containers.
- . Information about storage in one common storage facility: Store away from foodstuffs.
- . Further information about storage conditions: Keep receptacle tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- . 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:

#### CAS: 106-97-8 butane (containing $\leq 0,1$ % butadiene (106-99-0))

REL Long-term value: 1900 mg/m<sup>3</sup>, 800 ppm

TLV Short-term value: 1000 ppm (EX)

#### CAS: 74-98-6 propane

PEL Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppmREL Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm

TLV see Appendix F Minimal oxygen content ( D, EX)

#### CAS: 67-63-0 propan-2-ol

PEL Long-term value: 980 mg/m<sup>3</sup>, 400 ppmREL Short-term value: 1225 mg/m<sup>3</sup>, 500 ppmLong-term value: 980 mg/m<sup>3</sup>, 400 ppm

TLV Short-term value: 400 ppm

Long-term value: 200 ppm

BEI, A4

#### CAS: 75-28-5 isobutane (containing $\leq 0,1$ % butadiene (106-99-0))

TLV Short-term value: 1000 ppm (EX)

- . Ingredients with biological limit values:

#### CAS: 67-63-0 propan-2-ol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

- . Additional information: The lists that were valid during the creation were used as basis.

### . Exposure controls

- . Personal protective equipment:
- . General protective and hygienic measures: Wash hands before breaks and at the end of work.
- . Breathing equipment: Not required.
- . Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 4)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: ATTBLIME - AB ZERO

(Contd. of page 3)

- 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - . Eye protection: Tightly sealed goggles

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

- |                 |                 |
|-----------------|-----------------|
| Form:           | Aerosol         |
| Color:          | White           |
| Odor:           | Characteristic  |
| Odor threshold: | Not determined. |

pH-value:	Not determined.
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#### Change in condition

Boiling point/Boiling range:	-44.5 °C (-48.1 °F)
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Flash point:	-97 °C (-142.6 °F)
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Flammability (solid, gaseous):	Not applicable.
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Ignition temperature:	363 °C (685.4 °F)
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Decomposition temperature:	Not determined.
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Auto igniting:	Product is not selfigniting.
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Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
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#### Explosion limits:

Lower:	1.5 Vol %
Upper:	12 Vol %

Vapor pressure at 20 °C (68 °F):	8,300 hPa (6.200 mm Hg)
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Density at 20 °C (68 °F):	0.6754 g/cm <sup>3</sup> (5.6362 lbs/gal)
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Relative density	Not determined.
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Vapor density	Not determined.
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Evaporation rate	Not applicable.
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#### Solubility in / Miscibility with

Water:	Fully miscible.
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Partition coefficient (n-octanol/water):	Not determined.
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#### Viscosity:

Dynamic:	Not determined.
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#### Solvent content:

Organic solvents:	94.5 %
VOC content:	95.92 %

Solids content:	4.0 %
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Other information	No further relevant information available.
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## 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.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: ATTBLIME - AB ZERO

(Contd. of page 4)

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

LD/LC50 values that are relevant for classification:

#### CAS: 67-63-0 propan-2-ol

Oral	LD50	5,840 mg/kg (rat) (Acute Oral Toxicity)
Dermal	LD50	12,870 mg/kg (rab) (Acute Dermal Toxicity)
Inhalative	LC50/4h	72.6 mg/l (rat)
	LC50/6h	> 25 mg/l (rat) (Acute Inhalation Toxicity)

#### Primary irritant effect:

on the skin:

#### CAS: 67-63-0 propan-2-ol

Ätz-/Reizwirkung auf die Haut (4h) (rabbit) (Acute Dermal Irritation/Corrosion)

on the eye:

#### CAS: 67-63-0 propan-2-ol

Schwere Augenschädigung/-reizung (rabbit) (Acute Eye Irritation/Corrosion)

Sensitization: No sensitizing effects known.

Additional toxicological information:

#### CAS: 67-63-0 propan-2-ol

NOAEL, maternal	400 mg/kg KG/day (rat)
NOAEL, parents	500 mg/kg KG/day (Two-Generation Reproduction Toxicity)
	853 mg/kg KG/day (rat) (One-Generation Reproduction Toxicity Study)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

CAS: 67-63-0 propan-2-ol

3

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Reproductive toxicity

#### CAS: 67-63-0 propan-2-ol

Oral NOAEL, Parents 500 mg/kg (rat) (Two-Generation Reproduction Toxicity)

Specific target organ toxicity - repeated exposure

#### CAS: 67-63-0 propan-2-ol

STOT RE mg/kg/day (rat)

## 12 Ecological information

### Toxicity

Aquatic toxicity:

#### CAS: 106-97-8 butane (containing ≤ 0,1 % butadiene (106-99-0))

EC50 (96h)	7.71 mg/l (Algae)
LC50 (96h)	27.98 mg/l (Fisch)

#### CAS: 74-98-6 propane

EC50 (96h)	7.71 mg/l (Algae)
LC50 (96h)	27.98 mg/l (Fisch)

#### CAS: 67-63-0 propan-2-ol

EC50	> 100 mg/l (Bacteria)
EC50 (48h)	> 100 mg/l (daphnia magna/gr. Wasserfloh)
EC50 (72h)	> 100 mg/l (Scenedesmus subspicatus)
EC50 (96h)	> 1,000 mg/l (Scenedesmus subspicatus) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
LC50 (24h)	9,714 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia sp. Acute Immobilisation Test)
	9,640 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)
LC50 (48h)	> 100 mg/l (Leuciscus idus (Goldorfe))
LC50 (96h)	> 9,640 – 10,000 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)
LOEC (8d)	1,000 mg/l (Algae)
EC50 (3h)	> 1,000 mg/l (activated sludge) (Mikroorganismen/Wirkung auf Belebtschlamm)
NOEC (21d)	30 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia magna Reproduction Test)
NOEC (96h)	1,000 mg/l (Scenedesmus subspicatus) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)

(Contd. on page 6)

US

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: ATTBLIME - AB ZERO

(Contd. of page 5)

**CAS: 75-28-5 isobutane (containing ≤ 0,1 % butadiene (106-99-0))**

EC50 (96h)	7.71 mg/l (Algae)
LC50 (96h)	27.98 mg/l (Fisch)

**. Persistence and degradability**

**CAS: 67-63-0 propan-2-ol**

Biodegradability 30d | 70 – 84 % (aerob) ((Derterm. of the "Ready" Biodegr. Closed Bottle))

**. Behavior in environmental systems:**

. Bioaccumulative potential

**CAS: 67-63-0 propan-2-ol**

Log Pow | 0.05

. 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: | 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**

**. UN-Number**

. DOT, ADR, IMDG, IATA | UN1950

**. UN proper shipping name**

. DOT | Aerosols, flammable  
. ADR | 1950 AEROSOLS  
. IMDG | AEROSOLS  
. IATA | AEROSOLS, flammable

**. Transport hazard class(es)**

. DOT



. Class | 2.1 Gases  
. Label | 2.1

. ADR



. Class | 2.5F Gases  
. Label | 2.1

. IMDG, IATA



. Class | 2.1 Gases  
. Label | 2.1

**. Packing group**

. DOT, ADR, IMDG, IATA | Void

**. Environmental hazards:**

| Not applicable.

**. Special precautions for user**

. Hazard identification number (Kemler code): | Warning: Gases

. Hazard identification number (Kemler code): | -

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: **ATTBLIME - AB ZERO**

(Contd. of page 6)

. EMS Number: . Stowage Code	F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
. Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
. <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>. Transport/Additional information:</b>	
. ADR . Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
. IMDG . Limited quantities (LQ) . Excepted quantities (EQ)	1L Code: E0 Not permitted as Excepted Quantity
. <b>UN "Model Regulation":</b>	UN 1950 AEROSOLS, 2.1

**15 Regulatory information**

. **Safety, health and environmental regulations/legislation specific for the substance or mixture** No further relevant information available.  
. Sara

. Section 355 (extremely hazardous substances):	None of the ingredients is listed.
. Section 313 (Specific toxic chemical listings):	CAS: 67-63-0   propan-2-ol
. TSCA (Toxic Substances Control Act):	All components have the value ACTIVE.
. Hazardous Air Pollutants	None of the ingredients is listed.
. Proposition 65	
. Chemicals known to cause cancer:	None of the ingredients is listed.
. Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.
. Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.
. Chemicals known to cause developmental toxicity:	None of the ingredients is listed.
. Carcinogenic categories	
. EPA (Environmental Protection Agency)	None of the ingredients is listed.
. TLV (Threshold Limit Value)	CAS: 67-63-0   propan-2-ol <span style="float: right;">A4</span>
. MAK (German Maximum Workplace Concentration)	None of the ingredients is listed.
. NIOSH-Ca (National Institute for Occupational Safety and Health)	None of the ingredients is listed.

. GHS label elements  
. Hazard pictograms

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



GHS02 GHS04 GHS07

. Signal word

Danger

. Hazard-determining components of labeling:

propan-2-ol

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/13/2023

Reviewed on 01/13/2023

Trade name: ATTBLIME - AB ZERO

(Contd. of page 7)

. Hazard statements	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation.
. Precautionary statements	May cause drowsiness or dizziness. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/fume/gas/mist/vapors/spray Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection / face protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. 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:	Environment protection department.
. Contact:	
. Date of preparation / last revision	01/13/2023
. Abbreviations and acronyms:	ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) 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) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit BEI: Biological Exposure Limit Flammable Gases 1: Flammable gases – Category 1 Flammable Aerosols 1: Aerosols – Category 1 Gases under Pressure - Compressed gas: Gases under pressure – Compressed gas Flammable Liquids 2: Flammable liquids – Category 2 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

. \* Data compared to the previous version altered.

US