

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.04.2019




Version number 6

Revision: 03.01.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** DUPLI-COLOR Zinkgrundierung
- **Article number:** 667022
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Sector of Use**
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC9a Coatings and paints, thinners, paint removers
- **Process category**
PROC7 Industrial spraying
PROC11 Non industrial spraying
- **Application of the substance / the mixture** Anticorrosion additive
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MOTIP DUPLI GmbH
Kurt Vogelsang Strasse 6
D-74855 Haßmersheim
Tel.: +49/6266/75-0
msds@de.motipdupli.com
- **Further information obtainable from:** Department Product Safety
- **1.4 Emergency telephone number:**
Tel.: +49 6266-75-310
Fax +49 6266-75-362
(Mo - Th 08:00 am - 04:00 pm, Fr 08:00 am - 00:30 pm)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
- 
GHS02 flame
 Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- 
GHS08 health hazard
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
- 
GHS09 environment
 Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

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GHS07

Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02 GHS07 GHS08 GHS09

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

xylene

acetone

butanone

Hydrocarbons, C9, aromatics

· **Hazard statements**

H222-H229 *Extremely flammable aerosol. Pressurised container: May burst if heated.*

H315 *Causes skin irritation.*

H319 *Causes serious eye irritation.*

H336 *May cause drowsiness or dizziness.*

H373 *May cause damage to organs through prolonged or repeated exposure.*

H410 *Very toxic to aquatic life with long lasting effects.*

· **Precautionary statements**

P101 *If medical advice is needed, have product container or label at hand.*

P102 *Keep out of reach of children.*

P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

P211 *Do not spray on an open flame or other ignition source.*

P251 *Do not pierce or burn, even after use.*

P260 *Do not breathe spray.*

P280 *Wear protective gloves / eye protection.*

P284 *In case of inadequate ventilation wear respiratory protection.*

P302+P352 *IF ON SKIN: Wash with plenty of soap and water.*

P312 *Call a POISON CENTER/doctor if you feel unwell.*

P410+P412 *Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.*

P501 *Dispose of contents / container in accordance with regional regulations.*

· **Additional information:**

Buildup of explosive mixtures possible without sufficient ventilation.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

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

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· Dangerous components:		
CAS: 7440-66-6 EINECS: 231-175-3 Index number: 030-001-01-9 Reg.nr.: 01-2119467174-37	zinc powder - zinc dust (stabilised) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	25-<50%
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8 Reg.nr.: 01-2119471330-49	acetone ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	12.5-<20%
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8 Reg.nr.: 01-2119472128-37	dimethyl ether ⚠ Flam. Gas 1, H220 Press. Gas (Comp.), H280	12.5-<20%
EC number: 905-588-0 Index number: 601-022-00-9 Reg.nr.: 01-21194882216-32	xylene ⚠ Flam. Liq. 3, H226 ⚠ STOT RE 2, H373; Asp. Tox. 1, H304 ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319; STOT SE 3, H335	10-<12.5%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21	propane ⚠ Flam. Gas 1, H220 Press. Gas (Comp.), H280	5-<10%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32	butane ⚠ Flam. Gas 1, H220	5-<10%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg.nr.: 01-2119457290-43	butanone ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<5%
EC number: 918-668-5 Reg.nr.: 01-2119455851-35	Hydrocarbons, C9, aromatics ⚠ Flam. Liq. 3, H226 ⚠ Asp. Tox. 1, H304 ⚠ Aquatic Chronic 2, H411 ⚠ STOT SE 3, H335-H336	2.5-<5%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg.nr.: 01-2119485395-27	isobutane ⚠ Flam. Gas 1, H220	<2.5%
CAS: 1314-13-2 EINECS: 215-222-5 Index number: 030-013-00-7 Reg.nr.: 01-2119463881-32	zinc oxide ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	<2.5%

· Additional information:

The content of Benzene (EINECS-Nr. 200-753-7) in the ingredients is less than 0,1% (Note P Annex IA 1272/2008 EU), so the classification as carcinogen need not to apply.

xylene: Contains ethylbenzene CAS 100-41-4

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

SECTION 4: First aid measures**· 4.1 Description of first aid measures****· General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **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. If symptoms persist, consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters -**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 2 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

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· 8.1 Control parameters**· Ingredients with limit values that require monitoring at the workplace:****67-64-1 acetone**

WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
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115-10-6 dimethyl ether

WEL	Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 400 ppm
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xylene

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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106-97-8 butane

WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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78-93-3 butanone

WEL	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
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· Ingredients with biological limit values:**xylene**

BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
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78-93-3 butanone

BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one
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· **Additional information:** The lists valid during the making were used as basis.

· 8.2 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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Avoid contact with the eyes.

· Respiratory protection:

Not necessary if room is well-ventilated.
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:

In case of contact with spray dust protective gloves made of butyl should be used (min. 0.4 mm thick), e.g. KCL Camatril, article no. 898 or similar products
Solvent resistant gloves

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

**Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

Natural rubber, NR

Butyl rubber, BR

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**

Butyl rubber gloves with a thickness of 0.4 mm are resistant to:

Acetone: 480 min

Butyl acetate: 60 min

Ethyl acetate: 170 min

Xylene: 42 min

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

- **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

Natural rubber, NR

- **Eye protection:**

**Tightly sealed goggles**

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Aerosol

Colour: According to product specification

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Not applicable, as aerosol.

- **Flash point:** Not applicable, as aerosol.

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 235 °C (455 °F)

- **Decomposition temperature:** Not determined.

- **Explosive properties:** Not determined.

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· Explosion limits:	
Lower:	1.1 Vol %
Upper:	18.6 Vol %
· Vapour pressure at 20 °C (68 °F): 5,200 hPa (3,900.3 mm Hg)	
· Density at 20 °C (68 °F): 1.55 g/cm ³ (12.93 lbs/gal)	
· Relative density Not determined.	
· Vapour density Not determined.	
· Evaporation rate Not applicable.	
· Solubility in / Miscibility with water: Not miscible or difficult to mix.	
· Partition coefficient: n-octanol/water: Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	64.2 %
VOC (EC)	---
	630.0 g/l
· VOC-EU%	64.23 %
· Solids content: 39.7 %	
· 9.2 Other information No further relevant information available.	

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

7440-66-6 zinc powder - zinc dust (stabilised)

Oral	LD50	>2,000 mg/kg (rat) (OECD 401)
Inhalative	LC50 / 4 h	>5,410 mg/m ³ (rat) (OECD 403)

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	>15,800 mg/kg (rabbit)
Inhalative	LC50 / 4h	76 mg/l (rat)

xylene

Oral	LD50	3,523 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50 / 4 h	29,000 mg/m ³ (rat)

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78-93-3 butanone

Oral	LD50	>2,193 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50 / 4 h	34 mg/m ³ (rat)

Hydrocarbons, C9, aromatics

Oral	LD50	3,592 mg/kg (rat)
Dermal	LD50	3,160 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information· **12.1 Toxicity**· **Aquatic toxicity:****67-64-1 acetone**

LC50/96h	8,300 mg/l (fish)
EC50/96h	7,200 mg/l (algae)
LC50 / 48 h	8,450 mg/l (crustacean (water flea))

115-10-6 dimethyl ether

EC50 / 96 h	155 mg/l (algae)
LC50 / 48 h	>4,000 mg/l (daphnia magna)
LC50 / 96 h	>4,000 mg/l (fish)

xylene

EC50 / 48 h	7.4 mg/l (daphnia magna)
LC50 / 96 h	13.5 mg/l (fish)

78-93-3 butanone

LC50 / 48 h	308 mg/l (daphnia magna)
LC50 / 72 h	1,972 mg/l (Pseudokirchneriella Subcapitata)
LC50 / 96 h	2,990 mg/l (fish)

Hydrocarbons, C9, aromatics

EC50 / 48 h	3.2 mg/l (Daphnia magna)
EC50 / 72 h	2.75 mg/l (Pseudokirchneriella Subcapitata)
EC50 / 96 h	9.2 mg/l (Regenbogenforelle)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations



- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
15 01 04	metallic packaging
15 01 10*	packaging containing residues of or contaminated by hazardous substances

- **Uncleaned packaging:**
- **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Non contaminated packagings may be recycled.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**
- **ADR** 1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
- **IMDG** AEROSOLS (zinc powder - zinc dust (stabilised), Solvent
- **IATA** naphtha (petroleum), light arom.), MARINE POLLUTANT
- **14.3 Transport hazard class(es)**
- **ADR**
- 
- **Class** 2 5F Gases.
- **Label** 2.1
- **IMDG**
- 
- **Class** 2.1

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· **Label** 2.1· **IATA**· **Class** 2.1· **Label** 2.1

· **14.4 Packing group**
· **ADR, IMDG, IATA** not regulated

· **14.5 Environmental hazards:**
· **Marine pollutant:** Yes
Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user** Warning: Gases.
· **Danger code (Kemler):** -
· **EMS Number:** F-D,S-U
· **Stowage Code** 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.

· **14.7 Transport in bulk according to Annex II of
Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
· **Transport category** 2
· **Tunnel restriction code** D

· **IMDG**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

· **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY
HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

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- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

- **Relevant phrases**

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1: Flammable gases – Category 1

Aerosol 1: Aerosols – Category 1

Press. Gas (Comp.): Gases under pressure – Compressed gas

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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