Safety Data Sheet

Regulation (EC) No. 1907/2006, 1272/2008

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SDS REPORT

Ningbo Honggu Nano New Material Technology Co., Ltd
No.1 Labor Branch Road, East Zone, Guanhaiwei Town Industrial Park

SDS Report No.	:	SDS202005191
Compilation Date	:	May 26, 2020
Trade Name	:	White board ink
Composition/Ingredient of The Sample	:	See Section 3 on the SDS
Service Requested	:	Safety Data Sheet (SDS) for the sample with submitted composition.
Summary	:	As per request, the contents and formats of the SDS are prepared in accordance with Regulation (EC) No 1907/2006, 1272/2008, Regulation (EU) No 2015/830 and are provided per attached.

Signed for and on behalf of
FOCO Technical Center:

Johnny Zhang
Chemical engineer

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

· 1.1 Product identifier

· Trade name: White board ink

· Registration number: Data not available

· Other means of identification: Data not available

· 1.2 Relevant identified uses of the substance or mixture and uses advised against on

· Application of the substance/ mixture: Pen ink.

· Uses advised against: All other uses.

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Ningbo Honggu Nano New Material Technology Co., Ltd

No.1 Labor Branch Road, East Zone, Guanhaiwei Town Industrial Park

Tel:15867239599

Email: 19951677@qq.com

· Only Representative/other EU contact point: No information available.

· Further information obtainable from: Ningbo Honggu Nano New Material Technology Co., Ltd

· 1.4 Emergency telephone number

General in EU

Tel: 112 (Available 24 hours a day)

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

Classification according to regulation (EC) 1272/2008:

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour

· Classification system:

The classification is according to the latest edition of Regulation 1272/2008, and extended by company and literature data.

· 2.2 Label elements

· Labeling according to Regulation (EC) No 1272/2008: The product is labeled according to Regulation (EC) No 1272/2008.

· Hazard pictograms:

GHS02

· Signal word: Danger

· Hazard-determining components of labelling: Not applicable

· Hazard statements:

H225	Highly flammable liquid and vapour

· Precautionary statement:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370 + P378	In case of fire: Use CO_2, chemical powder, water spray or alcohol resistant foam to extinguish. Do not use water with full jet
P403 + P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local regulation.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterization: Mixture

· Description:

Mixture of the substances listed below with nonhazardous additions; For the wording of the listed risk phrases refer to section 16.

Substance	CAS No.	Index No.	EC No.	Conc. w/w	CLP Classification	SCL/M-factor
Yellow						
Ethanol	64-17-5	603-002-00-5	200-578-6	84.9%～92.2%	Flam. Liq. 2, H225	-
Isooctyl palmitate	1341-38-4	-	215-675-9	3%～6%	Aquatic Acute 1, H400	M=1
Polyvinyl butyral	63148-65-2	-	-	4.8%～5.6%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	-
Pigment yellow 180	77804-81-0	-	278-770-4	0～3.5%	None	-
Orange						
Ethanol	64-17-5	603-002-00-5	200-578-6	84.4%～92.2%	Flam. Liq. 2, H225	-
Isooctyl palmitate	1341-38-4	-	215-675-9	3%～6%	Aquatic Acute 1, H400	M=1
Polyvinyl butyral	63148-65-2	-	-	4.8%～5.6%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	-
Pigment orange 16	6505-28-8	-	229-388-1	0～4%	None	-
Grass green						
Ethanol	64-17-5	603-002-00-5	200-578-6	82.9%～92.2%	Flam. Liq. 2, H225	-
Isooctyl palmitate	1341-38-4	-	215-675-9	3%～6%	Aquatic Acute 1, H400	M=1
Polyvinyl butyral	63148-65-2	-	-	4.8%～5.6%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	-
Pigment yellow 180	77804-81-0	-	278-770-4	0～3.5%	None	-
Pigment blue 15:3	147-14-8	-	205-685-1	0～2%	None	-
Sky blue						
Ethanol	64-17-5	603-002-00-5	200-578-6	84.9%～92.2%	Flam. Liq. 2, H225	-
Isooctyl palmitate	1341-38-4	-	215-675-9	3%～6%	Aquatic Acute 1, H400	M=1
Polyvinyl butyral	63148-65-2	-	-	4.8%～5.6%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	-
Pigment blue 15:3	147-14-8	-	205-685-1	0～3.5%	None	-

Pink						
Ethanol	*64-17-5*	*603-002-00-5*	*200-578-6*	*84.4%～92.2%*	*Flam. Liq. 2, H225*	*-*
Isooctyl palmitate	*1341-38-4*	*-*	*215-675-9*	*3%～6%*	*Aquatic Acute 1, H400*	*M=1*
Polyvinyl butyral	*63148-65-2*	*-*	*-*	*4.8%～5.6%*	*Skin Irrit. 2, H315* *Eye Irrit. 2, H319* *STOT SE 3, H335*	*-*
Pigment Red 122	*16043-40-6*	*-*	*-*	*0～4%*	*Skin Irrit.2, H315* *Eye Irrit.2, H319* *STOT SE 3, H335*	*-*
Violet						
Ethanol	*64-17-5*	*603-002-00-5*	*200-578-6*	*85.4%～92.2%*	*Flam. Liq. 2, H225*	*-*
Isooctyl palmitate	*1341-38-4*	*-*	*215-675-9*	*3%～6%*	*Aquatic Acute 1, H400*	*M=1*
Polyvinyl butyral	*63148-65-2*	*-*	*-*	*4.8%～5.6%*	*Skin Irrit. 2, H315* *Eye Irrit. 2, H319* *STOT SE 3, H335*	*-*
Pigment violet 23	*6358-30-1*	*-*	*228-767-9*	*0～3%*	*None*	*-*
Brawn						
Ethanol	*64-17-5*	*603-002-00-5*	*200-578-6*	*83.4%～92.2%*	*Flam. Liq. 2, H225*	*-*
Isooctyl palmitate	*1341-38-4*	*-*	*215-675-9*	*3%～6%*	*Aquatic Acute 1, H400*	*M=1*
Polyvinyl butyral	*63148-65-2*	*-*	*-*	*4.8%～5.6%*	*Skin Irrit. 2, H315* *Eye Irrit. 2, H319* *STOT SE 3, H335*	*-*
Pigment brown 25	*6992-11-6*	*-*	*230-258-1*	*0～5%*	*None*	*-*
Coffee						
Ethanol	*64-17-5*	*603-002-00-5*	*200-578-6*	*81.4%～92.2%*	*Flam. Liq. 2, H225*	*-*
Isooctyl palmitate	*1341-38-4*	*-*	*215-675-9*	*3%～6%*	*Aquatic Acute 1, H400*	*M=1*
Polyvinyl butyral	*63148-65-2*	*-*	*-*	*4.8%～5.6%*	*Skin Irrit. 2, H315* *Eye Irrit. 2, H319* *STOT SE 3, H335*	*-*
Pigment brown 25	*6992-11-6*	*-*	*230-258-1*	*0～5%*	*None*	*-*
Carbon black	*1333-86-4*	*-*	*215-609-9*	*0～2%*	*None*	*-*

SECTION 4: First aid measures

· 4.1 Description of first aid measures

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

After inhalation: *Supply with fresh air. Call a POISON CENTER/doctor, if you feel unwell.*

After skin contact: *Take off immediately all contaminated clothing. Rinse skin with water/ shower. If there are signs of irritation or other symptoms seek medical attention.*

After eye contact: *Rinse cautiously with water. If eye irritation occurs: Get medical advice/attention.*

After swallowing: *Wash mouth. Get medical attention if you feel unwell.*

· 4.2 Most important symptoms and effects, both acute and delayed: *No known symptoms or effects.*

· 4.3 Indication of any immediate medical attention and special treatment needed: *No special immediate medical attention or special treatment needed.*

SECTION 5: Fire-fighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Use CO_2, chemical powder, water spray or alcohol resistant foam to extinguish.

· **Unsuitable extinguishing media:** Water with full jet.

· **5.2 Special hazards arising from the substance or mixture:** May produce irritant vapor in air under fire.

· **5.3 Advice for firefighters**

Protective equipment: Wear an approved positive pressure self-contained breathing apparatus (Comply with EN 133).

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures:**

Cut off leakage source and collect spillage timely if safe do it; Ensure adequate ventilation; Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area); Beware of accumulation of vapor in low areas or contained areas, where explosive concentrations may occur; Avoid contact with eyes.

· **6.2 Environmental precautions:**

Prevent further leakage or spillage if safe to do so; Prevent spillage from entering drains, sewer, basement or confined areas; if the spillage contaminates rivers, lakes or drains inform respective authorities.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust); Ensure good ventilation; Dispose contaminated material as waste according to section 13.

· **6.4 Reference to other sections:**

See section 7 for information on safe handing; See section 8 for information on personal protection equipment; See section 13 for disposal in formation.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling:**

Read label before use; Ensure adequate ventilation; Keep container tightly closed; Keep cool; Avoid all sources of ignition; Avoid contact with eyes.

· **Information about fire and explosion protection:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

· **7.2 Conditions for safe storage, including any non-compatibility**

· **Requirements to be met by storerooms and receptacles:** Store in a well-ventilated place. Keep cool.

· **Information about storage in one common storage facility:** Keep out of reach of children; Keep away from flammable substance.

· **Further information about storage conditions:** Store locked up.

· **7.3 Specific end use(s):** Pen ink.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

Country	Limit value - Eight hours	Limit value - Short term

64-17-5 Ethanol		
Austria	1000ppm;1900 mg/m³	2000ppm;3800 mg/m³
Belgium	1000ppm;1907 mg/m³	-
Denmark	1000ppm;1900 mg/m³	2000ppm;3800 mg/m³
Finland	1000ppm;1900 mg/m³	1300ppm;2500 mg/m³ 15 minutes average value
France	1000ppm;1900 mg/m³	5000ppm;9500 mg/m³
Germany (AGS)	200ppm;380 mg/m³	800ppm;1520mg/m³ 15 minutes average value
Germany (DFG)	200ppm;380 mg/m³	800ppm;1520mg/m³ 15 minutes average value
Hungary	1900 mg/m³	7600 mg/m³
Ireland	-	1000ppm 15 minutes reference period
Latvia	1000 mg/m³	-
Poland	1900 mg/m³	-
Romania	1000ppm;1900 mg/m³	5000ppm;9500 mg/m³15 minutes average value
Spain	-	1000ppm;1910 mg/m³
Sweden	500ppm;1000 mg/m³	1000ppm; 1900mg/m³ 15 minutes average value
The Netherlands	260 mg/m³	1900 mg/m³
United Kingdom	1000ppm;1900 mg/m³	-
147-14-8 Pigment blue 15:3		
Latvia	5 mg/m³	-
1333-86-4 Carbon black		
Belgium	3.5 mg/m³	-
Denmark	3.5 mg/m³	7.0 mg/m³
Finland	3.5 mg/m³	7 mg/m³ 15 minutes average value
France	3.5 mg/m³	-
Ireland	3.5 mg/m³	7 mg/m³15 minutes reference period
Spain	3.5 mg/m³	-
Sweden	3 mg/m³	-
United Kingdom	3.5 mg/m³	7 mg/m³

· **DNELs:**

DNEL type		**DNEL worker value**	**DNEL consumer value**
64-17-5 Ethanol			
Systemic effects	Long-term, inhalation exposure	950 mg/m³	114 mg/m³
	Long-term, dermal exposure	343 mg/kg bw/day	206 mg/kg bw/day
	Long-term, oral exposure	-	87 mg/kg bw/day
Local Effects	Acute /short term, inhalation exposure	1900 mg/m³	950 mg/m³
147-14-8 Pigment blue 15:3			
Systemic Effects	Long-term, inhalation exposure	4 mg/m³	-
	Long-term, dermal exposure	450 mg/kg bw/day	225 mg/kg bw/day
	Long-term, oral exposure	-	45 mg/kg bw/day
1333-86-4 Carbon black			
Systemic Effects	Long-term, inhalation exposure	1 mg/m³	60 µg/m³
Local Effects	Long-term, inhalation exposure	500 µg/m³	1.75 mg/m³

· **PNECs:**

PNEC type	**Value**
64-17-5 Ethanol	

Freshwater	*960 µg/L*
Intermittent releases (freshwater)	*2.75 mg/L*
Marine water	*790 µg/L*
Sewage treatment plant (STP)	*580 mg/L*
Sediment (freshwater)	*3.6 mg/kg sediment dw*
Sediment (marine water)	*2.9 mg/kg sediment dw*
147-14-8 Pigment blue 15:3	
Sediment (freshwater)	*10 mg/kg sediment dw*
Sediment (marine water)	*1 mg/kg sediment dw*
1333-86-4 Carbon black	
Freshwater	*1-50 mg/L*
Intermittent releases (freshwater)	*10 mg/L*
Marine water	*100 µg/L*
Intermittent releases (marine water)	*1 mg/L*

· **Additional information:** *The lists valid during the marking were used as basis.*

· **8.2 Exposure controls**

· **Based on the composition shown in section 3, the following measures are suggested for occupational safety measure.**

· **Appropriate engineering controls:**

Handle in accordance with good industrial hygiene and safety practice; Wash hands and face before breaks and at the end of work.

See section 7 for information about design of technical facilities.

· **Personal protective equipment**

· **Respiration protection:** *Use positive pressure breathing mask if concentrations in air could exceed occupational exposure standard.*

·**Protection of hands:**

Protective gloves

Gloves made from butyl rubber Neoprene™ rubber, nitrile rubber (thickness> 0.11mm; breakthrough times up to 480 minutes).

· **Eye protection:**

Safety glasses

Protective goggles with side-shields.

· **Environmental exposure controls:**

Control measures must be made in accordance with Community environmental protection legislation.

SECTION 9: Physical and chemical properties

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

· **Appearance:**	
Form	*Liquid*
Color	*Yellow/ Orange/ Grass green/ Sky blue/ Pink/ Violet/ Brawn/ Coffee*
Odor	*Alcohol*
Odor threshold	*Not determined*
· **pH-value**	*Not determined*
· **Change in condition**	
Melting point/melting range	*Not determined*

Boiling point and boiling range	Not determined
· **Freezing point**	Not determined
· **Flash point**	<23°C (closed cup)
· **Flammability (solid, gas)**	Not applicable
· **Decomposition temperature**	Not determined
· **Self-ignition**	Not determined
· **Danger of explosion**	Product is not explosive. However, formation of explosive air/vapor mixtures is possible.
· **Explosion limits**	
Lower:	Not determined
Upper:	Not determined
· **Oxidizing properties**	Not determined
· **Vapor pressure**	Not determined
· **Density**	Not determined
· **Relative density**	Not determined
· **Vapor density**	Not determined
· **Evaporation rate**	Not determined
· **Solubility in/Miscibility with**	
Water	Soluble in water
· **Partition coefficient (n-octanol/water)**	Not determined
· **Viscosity**	
Dynamic	Not determined
Kinematic	Not determined
· **9.2 Other information**	Not determined

SECTION 10: Stability and reactivity

· **10.1 Reactivity:** No decomposition if used according to specification.

· **10.2 Chemical stability:** Stable under recommended storage conditions.

· **10.3 Possibility of hazardous reactions:** No known hazardous reactions.

· **10.4 Conditions to avoid:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

· **10.5 Incompatible materials:** Strong acid, strong oxidizing agent, flammable substance.

· **10.6 Hazardous decomposition products:** No known hazardous decomposition products.

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:** No animal test has been done for this product.

64-17-5 Ethanol		
Rat	LD50-oral LC50-inhalation	7060mg/kg 20000ppm/10H
Rabbit	LD50-oral	6300 mg/kg
guinea pig	LD50-oral	5560mg/kg
Mouse	LD50-oral	3450 mg/kg

	LC50-inhalation	39000 mg/m³ /4H
147-14-8 Pigment blue 15:3		
Rat	LD50-oral	>15000mg/kg
1333-86-4 Carbon black		
Rabbit	LD50-skin	>3000mg/kg
Rat	LD50-oral	>15400mg/kg
Remark: All the above data are from literature.		

· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

· **Serious eyes damage/ irritation:** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitization:** Based on available data, the classification criteria are not met.

· **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:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** Not hazardous to the aquatic environment.

64-17-5 Ethanol	
Short–term toxicity to fish	LC50 (4 days) 14.2 - 15.4 g/L EC50 (4 days) 12.7 - 12.9 g/L
Long–term toxicity to fish	NOEC (5 days) 250 - 1 000 mg/L
Short–term toxicity to aquatic invertebrates	EC50 (48 h) 10 g/L LC50 (48 h) 5.012 g/L
Long–term toxicity to aquatic invertebrates	NOEC (10 days) 2 - 9.6 mg/L LC50 (10 days) 1.806 g/L LC50 (48 h) 9.248 g/L
Toxicity to aquatic algae and cyanobacteria	EC50 (4 days) 675 - 22 000 mg/L
Toxicity to microorganisms	EC50 (4 h) 5.8 g/L IC50 (3 h) 1 g/L
1341-38-4 Isooctyl palmitate	
Short–term toxicity to fish	EC50 (48 h) 710 µg/L
Toxicity to aquatic algae and cyanobacteria	NOEC (72 h) 3.2 mg/L LOEC (72 h) 1 mg/L
147-14-8 Pigment blue 15:3	
Short–term toxicity to fish	LC50 (4 days) 100 - 355.6 mg/L
Short–term toxicity to aquatic invertebrates	EC50 (48 h) 500 mg/L
Long–term toxicity to aquatic invertebrates	NOEC (21 days) 1 mg/L LOEC (21 days) 1 mg/L EC50 (21 days) 1 mg/L
Toxicity to aquatic algae and cyanobacteria	EC50 (72 h) 100 mg/L
Toxicity to microorganisms	EC50 (3 h) 10 g/L

1333-86-4 Carbon black	
Short–term toxicity to aquatic invertebrates	EC50 (24 h) 5.6 g/L NOEC (24 h) 3.2 g/L
Toxicity to aquatic algae and cyanobacteria	EC50 (72 h) 10 g/L NOEC (72 h) 10 g/L

· **12.2 Persistence and degradability:** Readily degradable.

64-17-5	Ethanol	BOD_5=1.067 - 1.236 g O_2/g test material; COD=1.99 g O_2/g test material; Readily biodegradable in water
1341-38-4	Isooctyl palmitate	Readily biodegradable in water

· **12.3 Bio-accumulative potential:** Low bio-accumulation.

64-17-5	Ethanol	Log Pow = -0.77 - -0.3 at 24 - 25 °C and pH 7 - 7.4
1341-38-4	Isooctyl palmitate	Log Pow = 3.763 at 25 °C and pH 5.97

· **12.4 Mobility in soil:** High mobility in soil.

· **12.5 Results of PBT and vPvB assessment**

PBT: Not applicable

vPvB: Not applicable

· **12.6 Other adverse effects:** No known other adverse effects.

· **12.7 Additional ecological information**

· **General notes:** Water hazard class 1 (German Regulation) (self-assessment): Low hazard to waters.

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

SECTION 13:Disposal consideration

· **13.1 Waste treatment methods**

· **Recommendation:** Must not be disposed together with household garbage.

· **13.2 Un-cleaned packaging**

· **Recommendation:** Dispose of contents/container in according to the local/regional/national/ international regulation.

SECTION 14: Transport information

· **14.1UN-Number** **ADR, RID, ADN, IMDG, IATA**	UN1170
· **14.2 UN proper shipping name** **ADR, RID, ADN, IMDG, IATA**	ETHANOL
· **14.3 Transport hazard class (es)** **ADR, RID, ADN, IMDG, IATA** **Class** **Label**	 3 Flammable liquids 3
· **14.4 Packing group** **ADR, RID, ADN, IMDG, IATA**	II
· **14.5 Marine pollution**	No
· **14.6 Special precautions for user**	Warning: Flammable liquids

· **Danger code (Kemler)**	33
· **EMS number**	F-E,S-D
· **14.7 UN "Model Regulation"**	UN1170, ETHANO, 3, II

SECTION 15: Regulatory information

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

· **MAK (German Maximum Workplace Concentration):**

64-17-5	Ethanol	5
1333-86-4	Carbon black	3B

· **Directive 2012/18/EU**

· **Named dangerous substances-ANNEX I:** None of the ingredients is listed.

· **Seveso category:** P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements:** 5000 ton(net)

· **Qualifying quantity (tonnes) for the application of upper-tier requirements:** 50000 ton(net)

· **National regulations.**

· **Water hazard class:** Water hazard class 1 (German Regulation) (self-assessment): Low hazard to waters.

· **Other regulations, limitations and prohibitive regulations**

· **SVHC Candidate list of REACH Regulation Annex XIV Authorization:** None of the ingredients is listed.

· **REACH Regulation Annex XVII Restriction:** None of the ingredients is listed.

· **REACH Regulation Annex XIV Authorization List:** None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safe Assessment has not been carried out.

SECTION 16: Other information

Relevant phrases:

H225 Highly flammable liquid and vapour

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H400 Very toxic to aquatic life

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The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, 1272/2008 and Regulation (EU) No 2015/830.

DISCLAIMER OF LIABILITY:

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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· **Abbreviations and acronyms:**

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.*

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

DNEL: *Derived No-Effect Level (REACH)*

PNEC: *Predicted No-Effect Concentration (REACH)*

PBT: *Persistent, Bio accumulative and Toxic*

SVHC: *Substance of Very High Concern*

LD50: *Lethal dose, 50 percent*

LC50: *Lethal concentration, 50 percent*

EC50: *Concentration of maximal effect, 50 percent*

IC50:*Half maximal inhibitory concentration*

NOEC: *No observed effect concentration*

LOEC: *Lowest Observed Effect Concentration*

BOD_5: *Five days biochemical oxygen demand*

COD: *Chemical oxygen demand*

Flam. Liq. 2:*Flammable liquid, hazard category 2*

Skin Irrit.2: *Skin corrosion/irritation, hazard category 2*

Eye Irrit. 2: *Eye damage/irritation, hazard category 2*

STOT SE 3: *Specific target organ toxicity after single exposure, hazard category 3*

Aquatic Acute 1: *Hazardous to the aquatic environment-acute toxic, hazard category 1*

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End of safety data sheet