

according to Regulation (EC) No. 1907/2006

Revision Date 15-Feb-2024 Revision Number 4

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Platinum, nominally 20% on durable carbon support

Cat No.: 47341

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company

Thermo Fisher (Kandel) GmbH

Erlenbachweg 2, 76870 Kandel, Germany

Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300

**Swiss distributor -** Fisher Scientific AG Neuhofstrasse 11, CH 4153 Reinach

Tel: +41 (0) 56 618 41 11

https://www.fishersci.ch/ch/en/customer-help-

support/forms/email-us.html

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:

Tox Info Suisse Emergency Number: 145 (24hr)

Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)

Chemtrec (24h) Toll-Free: 0800 564 402 Chemtrec Local: +41-43 508 20 11 (Zurich)

## **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

**Physical hazards** 

ALFAA47341

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Category 2 (H228)

Flammable solids

**Health hazards** 

Based on available data, the classification criteria are not met

**Environmental hazards** 

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



**Signal Word** 

Warning

**Hazard Statements** 

H228 - Flammable solid

#### **Precautionary Statements**

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

#### 2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Carbon black	1333-86-4	215-609-9	80.0	-
Platinum	7440-06-4	231-116-1	20	Flam. Sol. 2 (H228)

Full text of Hazard Statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

**General Advice** If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

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medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

**Self-Protection of the First Aider** No special precautions required.

4.2. Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Dry sand. Carbon dioxide (CO<sub>2</sub>). Powder. Do not use water or foam.

#### Extinguishing media which must not be used for safety reasons

No information available.

## 5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Platinum oxide, Carbon monoxide (CO), Carbon dioxide (CO2).

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

#### 6.2. Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

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## **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep container tightly closed in a dry and well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510

Storage Class (LGK) (Germany)

Storage Class/LGK 4.1B

Switzerland - Storage of hazardous substances Storage class - SC 4.1

https://www.kvu.ch/de/themen/stoffe-und-produkte https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

#### 7.3. Specific end use(s)

Use in laboratories

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

## 8.1. Control parameters

#### **Exposure limits**

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

**CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Carbon black		STEL: 7 mg/m <sup>3</sup> 15 min	TWA / VME: 3.5 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 3.5
		TWA: 3.5 mg/m <sup>3</sup> 8 hr	(8 heures).		mg/m³ (8 horas)
Platinum		STEL: 15 mg/m <sup>3</sup> 15 min	TWA / VME: 1 mg/m <sup>3</sup> (8	TWA: 1 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 1 mg/m <sup>3</sup>
		TWA: 5 mg/m <sup>3</sup> 8 hr	heures).		(8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Carbon black			TWA: 3 mg/m <sup>3</sup> 8 horas		TWA: 3.5 mg/m <sup>3</sup> 8
					tunteina
					STEL: 7 mg/m <sup>3</sup> 15
					minuutteina
Platinum		TWA: 1 mg/m <sup>3</sup> (8	TWA: 1 mg/m <sup>3</sup> 8 horas	TWA: 1 mg/m <sup>3</sup> 8 uren	TWA: 1 mg/m <sup>3</sup> 8
		Stunden) AGW -		•	tunteina

Austria	Denmark	Switzerland	Poland	Norway
			TWA: 4 mg/m <sup>3</sup> 8	TWA: 3.5 mg/m <sup>3</sup> 8 timer
	STEL: 7 mg/m³ 15		godzinach	STEL: 7 mg/m <sup>3</sup> 15
	minutter			minutter. value
				calculated
MAK-TMW: 1 mg/m <sup>3</sup> 8	TWA: 1 mg/m <sup>3</sup> 8 timer	TWA: 1 mg/m <sup>3</sup> 8	TWA: 1 mg/m <sup>3</sup> 8	: 8 timer
Stunden	STEL: 2 mg/m <sup>3</sup> 15	Stunden	godzinach	: 15 minutter. no value
	minutter			adopted
-	MAK-TMW: 1 mg/m³ 8	TWA: 3.5 mg/m³ 8 timer STEL: 7 mg/m³ 15 minutter  MAK-TMW: 1 mg/m³ 8 Stunden  TWA: 1 mg/m³ 8 timer STEL: 2 mg/m³ 15	TWA: 3.5 mg/m³ 8 timer	TWA: 3.5 mg/m³ 8 timer STEL: 7 mg/m³ 15 godzinach  MAK-TMW: 1 mg/m³ 8 TWA: 1 mg/m³ 8 timer STEL: 2 mg/m³ 15 Stunden  TWA: 4 mg/m³ 8 godzinach  TWA: 4 mg/m³ 8 godzinach

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
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Carbon black		TWA-GVI: 3.5 mg/m <sup>3</sup> 8 satima.	inhalable fraction		TWA: 2.0 mg/m³ 8 hodinách. dust
		STEL-KGVI: 7 mg/m <sup>3</sup> 15	STEL: 15 mg/m <sup>3</sup> 15 min		
		minutama.			
Platinum	TWA: 1.0 mg/m <sup>3</sup>	TWA-GVI: 1 mg/m <sup>3</sup> 8	TWA: 1 mg/m <sup>3</sup> 8 hr. Pt	TWA: 1 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> 8
		satima.	STEL: 3 mg/m <sup>3</sup> 15 min		hodinách.
					Ceiling: 1 mg/m <sup>3</sup>

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Carbon black	TWA: 3 mg/m³ 8 tundides. dust		STEL: 7 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup>	TWA: 3 mg/m³ 8 órában. AK	TWA: 3.5 mg/m <sup>3</sup> 8 klukkustundum. Ceiling: 7 mg/m <sup>3</sup>
Platinum	TWA: 1 mg/m <sup>3</sup> 8 tundides.	TWA: 1 mg/m³ 8 hr metallic;existing scientific data on health effects appear to be particularly limited	TWA: 5 mg/m³	TWA: 1 mg/m³ 8 órában. AK	TWA: 1 mg/m³ 8 klukkustundum. dust and powder Ceiling: 2 mg/m³ dust and powder

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Platinum	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> IPRD	TWA: 1 mg/m <sup>3</sup> 8	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> 8 ore
			Stunden		, and the second

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Carbon black		TWA: 2 mg/m <sup>3</sup>		TLV: 3 mg/m <sup>3</sup> 8 timmar.	
		respirable fraction, 5%		NGV	
		or less fibrogenic			
		component			
		TWA: 10 mg/m <sup>3</sup>			
		respirable fraction,			
		greater than 5%			
		fibrogenic component			
		TWA: 10 mg/m <sup>3</sup> total			
		aerosol			
Platinum		TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> 8 urah	TLV: 1 mg/m <sup>3</sup> 8 timmar.	TWA: 1 mg/m <sup>3</sup> 8 saat
			inhalable fraction	NGV	

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Carbon black 1333-86-4 ( 80.0 )			DNEL = 0.5mg/m <sup>3</sup>	DNEL = 1mg/m <sup>3</sup>

#### **Predicted No Effect Concentration (PNEC)**

See values below.

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#### 8.2. Exposure controls

#### **Engineering Measures**

None under normal use conditions.

Personal protective equipment

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				
PVC				

Skin and body protection Long sleeved clothing.

Inspect gloves before use, observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits Large scale/emergency use

are exceeded or if irritation or other symptoms are experienced

Solid

Recommended Filter type: Particle filter

Maintain adequate ventilation Small scale/Laboratory use

No information available. **Environmental exposure controls** 

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on basic physical and chemical properties

Solid **Physical State** 

**Appearance** 

Odor Odorless

**Odor Threshold** No data available Melting Point/Range No data available **Softening Point** No data available **Boiling Point/Range** No information available

Flammability (liquid) Not applicable

Flammability (solid, gas) No information available

No data available **Explosion Limits** 

Flash Point No information available Method - No information available

**Autoignition Temperature** No data available No data available **Decomposition Temperature** Not applicable Hq

Viscosity Not applicable Solid Insoluble in water

Water Solubility

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

**Vapor Pressure** No data available **Density / Specific Gravity** No data available **Bulk Density** No data available Vapor Density Not applicable

Solid

Particle characteristics No data available

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9.2. Other information

**Evaporation Rate** 

Flammable solids Burning rate or burning time = > 2.2 mm/s or < 45 secs

Wetted zone passed - No Not applicable - Solid

## **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous PolymerizationNo information available.Hazardous ReactionsNone under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

Acids. Oxidizing agent.

10.6. Hazardous decomposition products

Platinum oxide. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **Product Information**

(a) acute toxicity;

OralBased on available data, the classification criteria are not metDermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

#### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Carbon black	LD50 > 15400 mg/kg (Rat)	LD50 > 3 g/kg ( Rabbit )	LC50 > 4.6 mg/m <sup>3</sup> (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

**Respiratory Skin**No data available
No data available

(e) germ cell mutagenicity; No data available

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No data available

(f) carcinogenicity;

The table below indicates whether each agency has listed any ingredient as a carcinogen

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Component	EU	UK	Germany	IARC
Carbon black			Cat. 3B	Group 2B

(g) reproductive toxicity; No data available

No data available (h) STOT-single exposure;

(i) STOT-repeated exposure; No data available

No information available. **Target Organs** 

(j) aspiration hazard; Not applicable

Solid

Symptoms / effects,both acute and No information available.

delayed

11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

#### **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

**Ecotoxicity effects** May cause long-term adverse effects in the environment. Do not allow material to

contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Carbon black		EC50: > 5600 mg/L, 24h	
		(Daphnia magna)	

12.2. Persistence and degradability Product contains heavy metals. Discharge into the environment must be avoided. Special

pre-treatment is necessary

**Persistence** Insoluble in water, May persist. Degradability Not relevant for inorganic substances.

Contains substances known to be hazardous to the environment or not degradable in waste Degradation in sewage

treatment plant water treatment plants.

12.3. Bioaccumulative potential May have some potential to bioaccumulate; Product has a high potential to bioconcentrate

Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water 12.4. Mobility in soil

solubility.

No data available for assessment. 12.5. Results of PBT and vPvB

assessment

12.6. Endocrine disrupting

properties

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors Revision Date 15-Feb-2024

12.7. Other adverse effects **Persistent Organic Pollutant Ozone Depletion Potential** 

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods

Waste from Residues/Unused

**Products** 

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers

retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and

empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with

local regulations.

**Switzerland - Waste Ordinance** Disposal should be in accordance with applicable regional, national and local laws and

regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance,

ADWO) SR 814.600

https://www.fedlex.admin.ch/eli/cc/2015/891/en

#### **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

14.1. UN number UN1325

Flammable solid, organic, n.o.s. 14.2. UN proper shipping name (Platinum powder, Carbon black) **Technical Shipping Name** 

14.3. Transport hazard class(es) 4.1 II

14.4. Packing group

ADR

14.1. UN number UN1325

14.2. UN proper shipping name Flammable solid, organic, n.o.s. **Technical Shipping Name** (Platinum powder, Carbon black)

14.3. Transport hazard class(es) 4.1

14.4. Packing group

П

IATA

14.1. UN number UN1325

14.2. UN proper shipping name Flammable solid, organic, n.o.s. **Technical Shipping Name** (Platinum powder, Carbon black)

14.3. Transport hazard class(es) 14.4. Packing group Π

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required.

Not applicable, packaged goods 14.7. Maritime transport in bulk

#### according to IMO instruments

## **SECTION 15: REGULATORY INFORMATION**

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

#### **International Inventories**

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Carbon black	1333-86-4	215-609-9	435-640-3	-	X	X	X	X	X
Platinum	7440-06-4	231-116-1	-	-	Х	X	KE-28808	X	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Carbon black	1333-86-4	Х	ACTIVE	X	Ī	X	Χ	X
Platinum	7440-06-4	Х	ACTIVE	X	-	X	Х	Х

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

#### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Carbon black	1333-86-4	-	Use restricted. See item 75.	-
			(see link for restriction details)	
Platinum	7440-06-4	-	-	-

#### **REACH links**

https://echa.europa.eu/substances-restricted-under-reach

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident	, ,
		Notification	Requirements
Carbon black	1333-86-4	Not applicable	Not applicable
Platinum	7440-06-4	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

#### **National Regulations**

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

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**WGK Classification** Water endangering class = non-hazardous to waters (self classification)

Co	mponent	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Car	bon black	nwg	

Component	omponent France - INRS (Tables of occupational diseases)			
Carbon black	Tableaux des maladies professionnelles (TMP) - RG 16,RG 16bis			

#### **Swiss Regulations**

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

#### 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

#### **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3

H228 - Flammable solid

#### Legend

TWA - Time Weighted Average

ATE - Acute Toxicity Estimate

VOC - (volatile organic compound)

MARPOL - International Convention for the Prevention of Pollution from

**CAS** - Chemical Abstracts Service TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic

Substances/EU List of Notified Chemical Substances Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances **AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC) **DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment LD50 - Lethal Dose 50%

LC50 - Lethal Concentration 50% EC50 - Effective Concentration 50% NOEC - No Observed Effect Concentration POW - Partition coefficient Octanol:Water

PBT - Persistent, Bioaccumulative, Toxic vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of

ICAO/IATA - International Civil Aviation Organization/International Air Dangerous Goods by Road Transport Association

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Ships

Physical hazards On basis of test data Calculation method **Health Hazards** Calculation method **Environmental hazards** 

**Training Advice** 

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**Prepared By** Health, Safety and Environmental Department

**Revision Date** 15-Feb-2024

**Revision Summary** New emergency telephone response service provider.

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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No. 1907/2006

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**