SAFETY DATA SHEET

CADMIUM PIGMENTS (ALL SHADES)

L. CORNELISSEN & SON

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830 AS AMENDED BY UK REACH REGULATIONS SI 2019/758

Date of issue: 15/01/2024
Version: 1.1

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

1.1 Product identifier

Product name	CADMIUM PIGMENTS (ALL SHADES)
Product type	Mixture

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

Identified Use(s)	Pigments for use in plastics, artists' colours, and colouring material for use in ceramics, glass and metal decoration.
Uses advised against	Medical use, tattoo inks, cosmetic applications. Restrictions on use or not allowed in EU (See Section: 15)

1.3 Details of the supplier of the safety data sheet

Company Identification	L. Cornelissen & Son 105 Great Russell Street London WC1B 3RY

1.4 Emergency telephone number

NHS 24	111	24 hr. emergency phone number
Language(s) spoken:	English	Members of Public

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 The retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain

Not classified as hazardous for supply/use. *

2.2 Label elements

According to the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain

Product name	CADMIUM PIGMENTS (ALL SHADES)
Contains:	Not applicable
Hazard Pictogram(s)	None assigned
Signal Word(s)	None assigned
Hazard Statement(s)	None assigned

Precautionary Statement(s)	None assigned
Supplemental information	Not applicable

2.3 **Other hazards**

This product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

*Cadmium pigments are much less hazardous than other cadmium compounds as they are extremely insoluble. This greatly reduces the risk of migration from applications, bioavailability and absorption of cadmium into the body and greatly reduces their environmental hazard.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 **Substances**

Not applicable

3.2 **Mixtures**

Substances in preparations / mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Cadmium sulfoselenide red* (CI Pigment Red 108)	25 - 100	58339-34-7	261-218-1	UK-01-4358163523-2-0001	Not classified
Cadmium sulfoselenide orange* (CI Pigment Orange 20)	25 - 100	12656-57-4	235-758-3	UK-01-4358163523-2-0001	Not classified
Cadmium zinc sulphide yellow* (CI Pigment Yellow 35)	25 - 100	8048-07-5	232-466-8	UK-01-3975317784-7-0001	Not classified
Barium sulphate* (CI Pigment White 21)	0 - 75	7727-43-7	231-784-4	Not yet assigned in the supply chain	Not classified

*Substance with a national exposure limit

Note 1: Regulation (EC) No 1272/2008 (CLP Regulation) - Annex VI Table 3.1 of the CLP Regulation provides a list of hazardous substances with GHS harmonised classification and labelling. As stated under Index Number 048-001-00-5, cadmium pigments are specifically exempt from the listed classification and labelling. A risk assessment of these products conducted by the EU in 2002 concluded that they offer no significant hazard to either human health or to the environment. Subsequent REACH registration has confirmed that no hazard classifications apply.

Note 2: Cadmium sulfoselenide red (CI Pigment Red 108) and Cadmium sulfoselenide orange (CI Pigment Orange 20) have the same basic chemical structure and have been covered in a single registration dossier. For EU-REACH administrative purposes, these entries have been assigned as UVCB (Variable Composition) with hexagonal structure and given an alternative EC number of 701-229-5. The compositional formula is $CdS_{1-x}Se_x$ where x=0.001 – 0.25.

Note 3: Cadmium zinc sulphide yellow (CI Pigment Yellow 35) – For EU-REACH administrative purposes, this entry has been assigned as UVCB (Variable Composition) with hexagonal structure and given an alternative EC number of 701-227-4. The compositional formula is $Cd_{1-x}Zn_xS$ where x=0.001 – 0.46.

Note 4: Barium Sulphate - This constituent is present in extended (reduced strength) pigments. As permitted under REACH, we have provided a 'cloaked' registration number. We will provide the full registration number to regulatory authorities on request.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Self-protection of the first aider	Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with skin and eyes.
Inhalation	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If irritation develops and persists, get medical attention.
Skin contact	IF ON SKIN: Remove clothing and wash thoroughly before use. Wash affected skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	IF IN EYES: Rinse cautiously with water for at least 10 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if eye irritation develops or persists.
Ingestion	IF SWALLOWED: Rinse mouth. Give plenty of water to drink. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Causes dry throat, coughing and possible redness and irritation of affected areas.

4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary, treat symptomatically. Call a POISON CENTER in case of inhalation or ingestion of large quantities.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Not flammable. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use water jet. Direct water jet may spread the fire.

5.2 Special hazards arising from the substance or mixture

This product may give rise to hazardous fumes in a fire. Hazardous decomposition products: Cadmium oxide, Selenium oxides and Sulphur dioxide.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Evacuate the area and keep personnel upwind. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

No action should be taken involving personal risk. Evacuate the area and keep personnel upwind. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing dust. In case of inadequate ventilation wear respiratory protection (see section: 8). Remove contaminated clothing and wash all affected areas with plenty of water.

6.2	**Environmental precautions**	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities.
6.3	**Methods and material for containment and cleaning up**	Contain spill and cover if possible, to prevent spreading of spilled material and reduce dust. Damp down to avoid dust generation. Use vacuum cleaner to collect spilt material. A vacuum equipped with HEPA (high efficiency particulate air) filtration is recommended. Recover the product where possible. Collect in closed and suitable containers for disposal (Plastic-lined / plastic containers). Ventilate the area and wash spill site after material pick-up is complete.
6.4	**Reference to other sections**	See Section: 8,13

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Ensure adequate ventilation. Avoid generation of dust. Avoid breathing dust. Use personal protective equipment as required. Use with local exhaust ventilation or breathing protection (see section: 8). Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Remove contaminated clothing and wash clothing before reuse. **The HSE has produced a useful free information leaflet "Cadmium and you" – copies can be downloaded from www.hse.gov.uk**
7.2	**Conditions for safe storage, including any incompatibilities**	Keep only in the original container. Keep container tightly closed. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Keep away from food, drink and animal feeding stuffs.
	Storage temperature	Keep cool. Protect from sunlight.
	Incompatible materials	Keep away from: Concentrated acids and Strong oxidising agents.
7.3	**Specific end use(s)**	See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational exposure limits

United Kingdom

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Cadmium sulphide and cadmium sulphide pigments (respirable dust (as Cd))		-	0.03	-	-	Carc (cadmium sulphide)
Barium sulphate inhalable dust respirable dust	7727-43-7	- -	10 4	- -	- -	-

Source: WEL: Workplace Exposure Limit (UK HSE EH40).

Notes: Carc - Capable of causing cancer and/or heritable genetic damage

The HSE operates a QA scheme for laboratories carrying out the analysis of dust-in-air samples for cadmium. Details of the AIR PT Scheme can be found at: http://www.hsl.gov.uk/proficiency-testing-schemes/wasp

In the case of the range of cadmium and its inorganic compounds, SCOEL/SUM/136 recommends an OEL of 4 µg/m3 (as cadmium) for the respirable fraction. The consortium which produced the registration dossier covering Cadmium sulfoselenide red, Cadmium sulfoselenide orange and Cadmium zinc sulphide yellow (see section 3.2) has therefore used this limit value in its calculation.
There are currently no proposals to establish the SCOEL recommendation as an EU-wide limit for cadmium pigments.

Recommended monitoring procedures and relevant documents:

In the UK, the HSE has produced many "methods for the determination of hazardous substances" documents. Most, if not all, of these methods have been validated against the requirements of EN 482. The relevant documents for these products are as follows. These methods can be downloaded, free of charge, from www.hse.gov.uk

MDHS 14/4 – General methods for sampling and gravimetric analysis of respirable and inhalable dust.
MDHS 10/2 – Cadmium and inorganic compounds of cadmium in air.
MDHS 71 – Analytical quality in workplace air sampling.
MDHS 91 – Metals and metalloids in workplace air by x-ray fluorescence spectrometry.
MDHS 99 – Metals in air by ICP-AES.

8.1.2	**Biological limit value**	Not established
8.1.3	**PNECs and DNELs**	Not established
8.2	**Exposure controls**	
8.2.1	**Appropriate engineering controls**	Ensure adequate ventilation. Use with local exhaust ventilation. Keep container tightly closed and dry. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.
8.2.2	**Individual protection measures, such as personal protective equipment**	Keep good industrial hygiene. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke at the workplace. Wash hands thoroughly after handling.

Protective clothing should be selected specifically for the working place, depending on the concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection 	Wear protective eyewear (goggles, face shield, or safety glasses).
Skin protection 	**Hand protection:** Wear suitable chemical resistant protective gloves for frequent or prolonged operations tested to EN374 with an acceptable permeation test. Contaminated gloves should be carefully rinsed with water before reuse. **Body protection:** Wear overalls to avoid excessive dust build up on the skin.
Respiratory protection 	Respiratory protection is not necessary if room is well ventilated. Use with local exhaust ventilation. A face velocity of 0.5 – 1 m/s is suggested. In case of inadequate ventilation wear respiratory protection. Recommended: Dust mask (EN 149) with filter type P1 to P3. Small spillages: Dust mask (EN 149) with filter type P1 Large spillages: Dust mask (EN 149) with filter type P3 or Self-contained respirator (breathing apparatus).
Thermal hazards	Not applicable
8.2.3 **Environmental exposure controls**	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Red / Orange / Yellow Powder
Odour	Odourless
Odour threshold	Not established
pH	7 (5% water suspension)
Melting point/freezing point	>593 °C at 101325 Pa
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Non-flammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	3.5 – 5.5 g/cm^3 (depending upon the product)
Solubility(ies)	Insoluble in: All solvents
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	>300 °C
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidising properties	Not oxidising.

9.2 Other information

Particle characteristics	Approx. 1 µm (PSD)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under normal conditions

10.2 Chemical stability
Stable under normal conditions (See Section: 7).

10.3 Possibility of hazardous reactions
Contact with acid liberates toxic and flammable gas (Hydrogen sulphide, rotten eggs). Reacts violently with strong oxidizing substances. Reaction products may include nitrogen oxides with nitric acid.

10.4 Conditions to avoid
Keep away from heat and sources of ignition. Protect from sunlight. Avoid generation of dust.

10.5 Incompatible materials
Keep away from: Concentrated acids and Strong oxidising agents.

10.6 Hazardous decomposition products
Cadmium oxide, Selenium oxides and Sulphur dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 >2000 mg/kg bw
Acute toxicity - Inhalation	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LC50 >5 mg/l (Dust/Mist)
Acute toxicity - Skin contact	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 >2000 mg/kg bw
Skin corrosion/irritation	Mixture: Based upon the available data, the classification criteria are not met.
Serious eye damage/irritation	Mixture: Based upon the available data, the classification criteria are not met.
Respiratory or skin sensitisation	Mixture: Based upon the available data, the classification criteria are not met.
Germ cell mutagenicity	Mixture: Based upon the available data, the classification criteria are not met.
Carcinogenicity	Mixture: Based upon the available data, the classification criteria are not met.

	Reproductive toxicity	Mixture: Based upon the available data, the classification criteria are not met.
	STOT - single exposure	Mixture: Based upon the available data, the classification criteria are not met.
	STOT - repeated exposure	Mixture: Based upon the available data, the classification criteria are not met.
	Aspiration hazard	Mixture: Based upon the available data, the classification criteria are not met.
11.2	**Other information**	Note: These products are of much lower toxicity than other cadmium compounds due to their extreme solubility.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Mixture: Based upon the available data, the classification criteria are not met. Estimated LC50 (Mixture): >100 mg/l. Note: While most cadmium compounds are environmentally hazardous, the extreme insolubility of these products indicate that they offer insignificant hazard.
12.2	**Persistence and degradability**	Not applicable for inorganic substances. The product is not biodegradable. (As highly stable inorganic compounds, these products do not degrade in the environment)
12.3	**Bioaccumulative potential**	Insoluble - Not anticipated to bioaccumulate (UK's Joint Agencies Groundwater Directive Advisory Group in 2017)
12.4	**Mobility in soil**	Insoluble - The product is predicted to have low mobility in soil.
12.5	**Results of PBT and vPvB assessment**	Not classified as PBT or vPvB. None of the substances in this product fulfil the criteria for being regarded as a PBT or vPvB substance.
12.6	**Other adverse effects**	None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Disposal should be in accordance with local, state or national legislation. In the UK, this must be done following the requirements of the Environmental Protection Act 1990 and observing the "Duty of Care". Handle contaminated packages in the same way as the substance itself. Contact supplier for further information.

SECTION 14: TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

		ADR/RID	**IMDG**	**IATA/ICAO**
14.1	**UN number**	None assigned	None assigned	None assigned
14.2	**UN proper shipping name**	None assigned	None assigned	None assigned
14.3	**Transport hazard class(es)**	None assigned	None assigned	None assigned
14.4	**Packing group**	None assigned	None assigned	None assigned
14.5	**Environmental hazards**	Not classified	Not classified as a Marine Pollutant.	Not classified
14.6	**Special precautions for user**	See Section: 2		
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code**	No information available.	No information available.	No information available.

SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU regulations

Annex XVII (Restrictions)	Cadmium sulphoselenide orange: Entry 23: Restricted in mixtures and articles produced from certain polymers if > 0.01% w/w of plastic material. Cadmium sulphoselenide red: Entry 23: Restricted in mixtures and articles produced from certain polymers if > 0.01% w/w of plastic material. Cadmium zinc sulphide yellow: Entry 23: Restricted in mixtures and articles produced from certain polymers if > 0.01% w/w of plastic material. Annex XVII of REACH restricts the use of cadmium in pigments in certain named polymers, as well as in aqueous and non-aqueous based paints (tariff codes 3208 and 3209). These restrictions only apply within the European Union and do not apply where the use is safety-related e.g. warning signs.
Ceramics in contact with foodstuffs Directive (84/500/EEC)	Cadmium sulphoselenide orange: Listed (Cadmium compound - the quantities of cadmium transferred from ceramic articles must not exceed the following limits: Category 1 = 0.07 mg/dm²; Category 2 = 0.3 mg/l; Category 3 = 0.1 mg/l). Cadmium sulphoselenide red: Listed (Cadmium compound - the quantities of cadmium transferred from ceramic articles must not exceed the following limits: Category 1 = 0.07 mg/dm²; Category 2 = 0.3 mg/l; Category 3 = 0.1 mg/l). Cadmium zinc sulphide yellow: Listed (Cadmium compound - the quantities of cadmium transferred from ceramic articles must not exceed the following limits: Category 1 = 0.07 mg/dm²; Category 2 = 0.3 mg/l; Category 3 = 0.1 mg/l).
Directive 2009/48/EC (UK law S.I. 2011 No. 1881) on the safety of toys European standard EN 71	In the EU, the safety of toys is regulated by Directive 2009/48/EC (UK law S.I. 2011 No. 1881) and European standard EN 71. Directive 2009/48/EC states that cadmium should not be intentionally used in those parts of toys that are accessible to children. EN 71 comprises of 13 parts and part 3 stipulates the requirements and test methods for the migration of 19 elements, including cadmium, from toy materials and from parts of toys. Toy safety legislation always applies to the finished toy and the toy manufacturer or importer is responsible for ensuring that the products comply with the relevant requirements. It is our position that cadmium pigments should not be intentionally used in those parts of toys that are accessible to children.
Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]	Cadmium sulphoselenide orange: Listed (Cadmium compound). Cadmium sulphoselenide red: Listed (Cadmium compound). Cadmium zinc sulphide yellow: Listed (Cadmium compound).
ELV (End-of-Life Vehicles) Directive 2000/53/EC	Cadmium sulphoselenide orange: Listed (Cadmium compound - Maximum concentration value = 0.01% w/w). Cadmium sulphoselenide red: Listed (Cadmium compound - Maximum concentration value = 0.01% w/w). Cadmium zinc sulphide yellow: Listed (Cadmium compound - Maximum concentration value = 0.01% w/w).
Regulation (EC) No. 2037/2000 concerning materials, which cause damage to the ozone layer	No components of the mixture are listed.
Regulation (EC) No 850/2004 [POP-Regulation]	No components of the mixture are listed.

	Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food (as amended). Council of Europe (CoE) Resolution AP(89)1 on the use of colorants for food contact plastics.	Under Regulation (EU) No 10/2011, colourants are generally not covered by the Union list of substances that may be intentionally used in plastic materials and articles coming into contact with food. The use of colourants in plastics for food-contact applications is subject to national law. A number of EU member states have established their own national requirements which are closely based on Council of Europe Resolution AP (89) 1. For inorganic pigments Resolution AP (89) 1 specifies that the pigment itself must comply with the extraction limits for heavy metals, using the specified test method. All JMB cadmium pigments are tested for compliance with Resolution AP (89) 1 and have results well below the extractable cadmium limit of 0.01% (generally by a factor of at least 10). The vast majority are below the detection limit of 0.0005% extractable cadmium.
	RoHS – EEE Substance Inventory	Cadmium sulphoselenide orange: Listed (Cadmium compound - Maximum concentration value = 0.01% w/w). Cadmium sulphoselenide red: Listed (Cadmium compound - Maximum concentration value = 0.01% w/w). Cadmium zinc sulphide yellow: Listed (Cadmium compound - Maximum concentration value = 0.01% w/w). Barium sulphate: Listed (Presence in EEE: Plausable).
	PIC (Prior Informed Consent) Regulation	Not applicable - This has been confirmed in writing by the Health and Safety Executive (HSE) who are the Competent Authority in the UK.
	Waste and Waste Packaging Directive (94/62/EC)	Cadmium: Listed (Sum concentration limit of lead, cadmium, mercury, and hexavalent chromium = 100 ppm by weigh).
	To follow:	Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
15.1.2	**National regulations** **United Kingdom**	
	GB CLP – Mandatory classification and labelling list	Not Applicable.
	PIC (Prior Informed Consent) Regulation	Not applicable - This has been confirmed in writing by the Health and Safety Executive (HSE) who are the Competent Authority in the UK
	Poisons Act	No components of the mixture are listed
	UK REACH – Grandfathered registration notified substances	Cadmium sulphoselenide red: Listed Cadmium zinc sulphide yellow: Listed Barium sulphate: Listed
	UK REACH – Annex XVII (Restrictions)	Cadmium sulphoselenide orange: Entry 23: Restricted in mixtures and articles produced from certain polymers if > 0.01% w/w of plastic material. Cadmium sulphoselenide red: Entry 23: Restricted in mixtures and articles produced from certain polymers if > 0.01% w/w of plastic material. Cadmium zinc sulphide yellow: Entry 23: Restricted in mixtures and articles produced from certain polymers if > 0.01% w/w of plastic material. Annex XVII of REACH restricts the use of cadmium in pigments in certain named polymers, as well as in aqueous and non-aqueous based paints (tariff codes 3208 and 3209). These restrictions only apply within the European Union and do not apply where the use is safety-related e.g. warning signs.
	Germany	Water hazard class: 1 (Self classification)
15.2	**Chemical Safety Assessment**	A chemical safety assessment is not required under REACH.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: v1.1 – Minor format changes and addition of information in section 2.3. Additional information is marked with a □

References:
Existing Safety Data Sheet (SDS) – CADMIUM PIGMENTS (ALL SHADES) V1.0

Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830. Compiled in accordance with REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Legend

ADR	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
EC	European Community
IATA	IATA: International Air Transport Association
ICAO	ICAO: International Civil Aviation Organization
IMDG	IMDG: International Maritime Dangerous Goods
LC50	Lethal Concentration at which 50% of the population is killed
LD50	Lethal Dose at which 50% of the population is killed
LTEL	Long term exposure limit
PBT	PBT: Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	RID: Regulations concerning the international railway transport of dangerous goods
STEL	Short term exposure limit
vPvB	vPvB: very Persistent and very Bioaccumulative

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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Annex to the extended Safety Data Sheet (eSDS)
Exposure scenarios for substances in this preparation are not available.