SAFETY DATA SHEET

Date of issue/Date of revision : 20 November 2024 Version : 1.03



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

1.1 Product identifier

Product name : Productive Thinner for DP6000

Product code : D8725/E1

Product type : Liquid.

Other means of : Not available.

identification

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

Product use : Professional applications, Used by spraying.

Use of the substance/

mixture

: Thinner.

Uses advised against: Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

PPG Industries (UK) Ltd. Needham Road, Stowmarket, Suffolk, IP14 2AD, UK Tel: +44 (0) 1449 773 338

PPG Industries Italia S.r.I., Via Comasina, 121, 20161 Milano, Italy Tel: +39 02 6404.1

e-mail address of person responsible for this SDS

: Product.Stewardship.EMEA@ppg.com

1.4 Emergency telephone number

Supplier

- Company emergency telephone number: +44 (0) 1449 773 338 (0900-1600)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture Classification according to UK CLP/GHS

Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 1B, H360D STOT SE 3, H336 Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms







Signal word : Danger

English (GB) United Kingdom (UK) 1/18

Productive Thinner for DP6000

SECTION 2: Hazards identification

: Highly flammable liquid and vapour. **Hazard statements**

Causes serious eye irritation.

Harmful if inhaled.

May cause drowsiness or dizziness. Suspected of causing cancer. May damage the unborn child.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Do not handle until all safety precautions have been read and understood. Wear

protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid release to the environment.

Response : IF exposed or concerned: Get medical advice or attention.

: Not applicable. **Storage**

: Dispose of contents and container in accordance with all local, regional, national **Disposal**

and international regulations.

P202, P280, P210, P273, P308 + P313, P501

: Repeated exposure may cause skin dryness or cracking. Supplemental label elements

Contains dibutyltin dilaurate and dibutyltin di(acetate). May produce an allergic

reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Restricted to professional users.

Special packaging requirements

Containers to be fitted

with child-resistant

fastenings

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

: This mixture does not contain any substances that are assessed to be a PBT or a

vPvB.

: Not applicable.

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
rethylpentan-2-one	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≥75 - ≤90	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	[1] [2]
5-methylhexan-2-one	REACH #: 01-2119472300-51 EC: 203-737-8 CAS: 110-12-3 Index: 606-026-00-4	≥5.0 - ≤10	Flam. Liq. 3, H226 Acute Tox. 4, H332 Repr. 2, H361d (inhalation)	[1] [2]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4	≥1.0 - ≤5.0	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]

Productive Thinner for DP6000

SECTION 3: Composition/information on ingredients

929 11911 0: 99mp	osition/information on i	ingredicints		1
xylene	Index: 607-025-00-1 REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥0.30 - ≤2.3	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
dioctyltin dilaurate	EC: 222-883-3 CAS: 3648-18-8 Index: 050-031-00-9	<1.0	Repr. 1B, H360D STOT RE 1, H372 (immune system) Aquatic Chronic 3, H412	[1] [2]
dibutyltin dilaurate	REACH #: 01-2119496068-27 EC: 201-039-8 CAS: 77-58-7	<0.30	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Muta. 2, H341 Repr. 1B, H360FD STOT SE 1, H370 (thymus) STOT RE 1, H372 (thymus) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
dibutyltin di(acetate)	REACH #: 01-2119634587-29 EC: 213-928-8 CAS: 1067-33-0 Index: 050-033-00-X	<0.30	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Muta. 2, H341 Repr. 1B, H360FD STOT SE 1, H370 (thymus) (oral) STOT RE 1, H372 (immune system) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Xylene: Several REACH registrations cover the REACH registered substance with xylene isomers, ethylbenzene (and toluene). The other REACH Registrations include: 01-2119555267-33 reaction mass of ethylbenzene and m-xylene and pxylene, 01-2119486136-34 Aromatic hydrocarbons, C8, 01-2119539452-40 reaction mass of ethylbenzene and xylene.

<u>Type</u>

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SUB codes represent substances without registered CAS Numbers.

Productive Thinner for DP6000

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids

apart for at least 10 minutes and seek immediate medical advice.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is

irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained

personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water

or use recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show the container or label. Keep

person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it

is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing

thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause

drowsiness or dizziness.

Skin contact: Defatting to the skin. May cause skin dryness and irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations

Skin contact: Adverse symptoms may include the following:

irritation dryness cracking

reduced foetal weight increase in foetal deaths skeletal malformations

Ingestion : Adverse symptoms may include the following:

reduced foetal weight increase in foetal deaths skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

English (GB) United Kingdom (UK) 4/18

Productive Thinner for DP6000

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing

: Do not use water jet.

media

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products

: Decomposition products may include the following materials:

carbon oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fre-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent

Productive Thinner for DP6000

SECTION 6: Accidental release measures

material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Avoid exposure obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Occupational exposure limits

English (GB) United Kingdom (UK) 6/18

Productive Thinner for DP6000

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
✓methylpentan-2-one	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed
	through skin.
	STEL 15 minutes: 416 mg/m³.
	STEL 15 minutes: 100 ppm.
	TWA 8 hours: 208 mg/m³.
E the H O	TWA 8 hours: 50 ppm.
5-methylhexan-2-one	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin.
	STEL 15 minutes: 475 mg/m³.
	STEL 15 minutes: 475 mg/m . STEL 15 minutes: 100 ppm.
	TWA 8 hours: 95 mg/m³.
	TWA 8 hours: 20 ppm.
n-butyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020)
	STEL 15 minutes: 966 mg/m³.
	STEL 15 minutes: 200 ppm.
	TWA 8 hours: 724 mg/m³.
	TWA 8 hours: 150 ppm.
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-,p-
	or mixed isomers] Absorbed through skin.
	STEL 15 minutes: 441 mg/m³.
	TWA 8 hours: 50 ppm.
	TWA 8 hours: 220 mg/m³. STEL 15 minutes: 100 ppm.
alia atultina alila umata	• •
dioctyltin dilaurate	EH40/2005 WELs (United Kingdom (UK), 1/2020) [tin compounds, organic, except cyhexatin (ISO)] Absorbed through skin.
	STEL 15 minutes: 0.2 mg/m³ (as Sn).
	TWA 8 hours: 0.1 mg/m³ (as Sn).
dibutyltin dilaurate	EH40/2005 WELs (United Kingdom (UK), 1/2020) [tin compounds,
,	organic, except cyhexatin (ISO)] Absorbed through skin.
	STEL 15 minutes: 0.2 mg/m³ (as Sn).
	TWA 8 hours: 0.1 mg/m³ (as Sn).
dibutyltin di(acetate)	EH40/2005 WELs (United Kingdom (UK), 1/2020) [tin compounds,
	organic, except cyhexatin (ISO)] Absorbed through skin.
	STEL 15 minutes: 0.2 mg/m³ (as Sn).
	TWA 8 hours: 0.1 mg/m³ (as Sn).

Biological exposure indices

Product/ingredient name	Exposure indices		
	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) BGV: 20 μmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.		
xylene	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Xylene, o-, m-, p- or mixed isomers] BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.		

Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

English (GB)	United Kingdom (UK)	7/1
Eliquisti (GD)	Officea Kiliquotti (OK)	

Productive Thinner for DP6000

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Туре	Exposure	Value	Population	Effects
≰ -methylpentan-2-one	DNEL	Long term Dermal	4.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	14.7 mg/m³	General population	
	DNEL	Long term Inhalation	14.7 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	83 mg/m³	Workers	Local
	DNEL	Long term Inhalation	83 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	155.2 mg/m³	General population	Local
	DNEL	Short term Inhalation	155.2 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	208 mg/m³	Workers	Local
	DNEL	Short term Inhalation	208 mg/m³	Workers	Systemic
5 4 4 0	DNEL	Long term Oral	4.2 mg/kg bw/day	General population	•
5-methylhexan-2-one	DNEL	Long term Oral	5.12 mg/kg bw/day	General population	
	DNEL	Long term Dermal	5.12 mg/kg bw/day	General population	
	DNEL	Long term Dermal	14.2 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	17.8125 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	100.25 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	146.5 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	196.3 mg/m³	Workers	Systemic
n-butyl acetate	DNEL	Long term Inhalation	300 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	11 mg/m³	Workers	Systemic
	DNEL	Long term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	2 mg/kg bw/day	General population	
	DNEL	Long term Dermal	3.4 mg/kg bw/day	General population	
	DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	11 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	35.7 mg/m³	General population	Local
	DNEL	Long term Inhalation	48 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	300 mg/m ³	General population	
	DNEL	Short term Inhalation	300 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	300 mg/m³	Workers	Local
	DNEL	Short term Inhalation	600 mg/m³	Workers	Local
	DNEL	Short term Inhalation	600 mg/m³	Workers	Systemic
xylene	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m³	General population	
	DNEL	Long term Inhalation	65.3 mg/m³	General population	•
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m³	General population	Local
	DNEL	Short term Inhalation	260 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
P. 4 10: 19: 4	DNEL	Short term Inhalation	442 mg/m³	Workers	Systemic
dioctyltin dilaurate	DNEL	Long term Oral	0.0005 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.0009 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	0.0035 mg/m³	Workers	Systemic
dibutyltin dilaurate	DNEL	Short term Dermal	2.08 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	0.5 mg/kg bw/day	General population	
			0.0031 mg/kg bw/day	General population	
	DNEL	Long term Oral			
	DNEL	Long term Inhalation	0.0046 mg/m³	General population	
	DNEL DNEL	Long term Inhalation Short term Oral	0.02 mg/kg bw/day	General population	Systemic
	DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation	0.02 mg/kg bw/day 0.02 mg/m³	General population Workers	Systemic Systemic
	DNEL DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation Short term Inhalation	0.02 mg/kg bw/day 0.02 mg/m³ 0.04 mg/m³	General population Workers General population	Systemic Systemic
	DNEL DNEL DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation Short term Inhalation Short term Inhalation	0.02 mg/kg bw/day 0.02 mg/m³ 0.04 mg/m³ 0.059 mg/m³	General population Workers General population Workers	Systemic Systemic Systemic Systemic
	DNEL DNEL DNEL DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation Short term Inhalation Short term Inhalation Long term Dermal	0.02 mg/kg bw/day 0.02 mg/m³ 0.04 mg/m³ 0.059 mg/m³ 0.16 mg/kg bw/day	General population Workers General population Workers General population	Systemic Systemic Systemic Systemic Systemic
	DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation Short term Inhalation Short term Inhalation Long term Dermal Long term Dermal	0.02 mg/kg bw/day 0.02 mg/m³ 0.04 mg/m³ 0.059 mg/m³ 0.16 mg/kg bw/day 0.43 mg/kg bw/day	General population Workers General population Workers General population Workers	Systemic Systemic Systemic Systemic Systemic Systemic
	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation Short term Inhalation Short term Inhalation Long term Dermal Long term Dermal Short term Dermal	0.02 mg/kg bw/day 0.02 mg/m³ 0.04 mg/m³ 0.059 mg/m³ 0.16 mg/kg bw/day 0.43 mg/kg bw/day 0.5 mg/kg bw/day	General population Workers General population Workers General population Workers General population	Systemic Systemic Systemic Systemic Systemic Systemic Systemic
dibutyltin di(acetate)	DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Inhalation Short term Oral Long term Inhalation Short term Inhalation Short term Inhalation Long term Dermal Long term Dermal	0.02 mg/kg bw/day 0.02 mg/m³ 0.04 mg/m³ 0.059 mg/m³ 0.16 mg/kg bw/day 0.43 mg/kg bw/day	General population Workers General population Workers General population Workers	Systemic Systemic Systemic Systemic Systemic Systemic

English (GB) United Kingdom (UK) 8/18

Productive Thinner for DP6000

SECTION 8: Exposure controls/personal protection

DNEL	Long term Oral	1.5 µg/kg bw/day	General population	Systemic
DNEL	Short term Inhalation	2.22 μg/m³	General population	Systemic
DNEL	Long term Inhalation	2.22 µg/m³	General population	Systemic
DNEL	Long term Inhalation	14.8 µg/m³	Workers	Systemic
DNEL	Short term Inhalation	18.8 µg/m³	Workers	Systemic
DNEL	Short term Dermal	0.15 mg/kg bw/day	General population	Systemic
DNEL	Long term Dermal	0.15 mg/kg bw/day	General population	Systemic
DNEL	Short term Dermal	0.42 mg/kg bw/day	Workers	Systemic
DNEL	Long term Dermal	0.42 mg/kg bw/day	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
<mark>≰-</mark> methylpentan-2-one	Fresh water	0.6 mg/l	Assessment Factors
	Marine water	0.06 mg/l	Assessment Factors
	Sewage Treatment Plant	27.5 mg/l	Assessment Factors
	Fresh water sediment	8.27 mg/kg	Equilibrium Partitioning
	Marine water sediment	0.83 mg/kg	Equilibrium Partitioning
	Soil	1.3 mg/kg	Equilibrium Partitioning
5-methylhexan-2-one	Fresh water	0.1 mg/l	Assessment Factors
	Marine water	0.01 mg/l	Assessment Factors
	Sewage Treatment Plant	100 mg/l	Assessment Factors
	Fresh water sediment	1.12 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	0.112 mg/kg dwt	Equilibrium Partitioning
	Soil	0.166 mg/kg dwt	Equilibrium Partitioning
n-butyl acetate	Fresh water	0.18 mg/l	-
•	Marine water	0.018 mg/l	-
	Fresh water sediment	0.981 mg/kg	-
	Marine water sediment	0.0981 mg/kg	-
	Sewage Treatment Plant	35.6 mg/l	-
	Soil	0.0903 mg/kg	-
xylene	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg	-
dibutyltin dilaurate	Fresh water	0.000463 mg/l	Assessment Factors
	Fresh water sediment	0.05 mg/kg	-
	Marine water sediment	0.005 mg/kg	-
	Soil	0.0407 mg/kg	-
	Sewage Treatment Plant	100 mg/l	Assessment Factors
	Marine water	0.0000463 mg/l	Assessment Factors
dibutyltin di(acetate)	Fresh water	0.001 mg/l	Assessment Factors
. ,	Sewage Treatment Plant	1.63 mg/l	Assessment Factors
	Fresh water sediment	0.062 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	0.006 mg/kg wwt	Equilibrium Partitioning
	Soil	0.05 mg/kg wwt	Equilibrium Partitioning

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

English (GB) United Kingdom (UK) 9/18

Productive Thinner for DP6000

SECTION 8: Exposure controls/personal protection

Eye/face protection Skin protection : Chemical splash goggles.

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Gloves

: For prolonged or repeated handling, use the following type of gloves:

May be used: butyl rubber

Recommended: polyvinyl alcohol (PVA), Viton®

Not recommended: nitrile rubber

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.
Colour : Colourless.
Odour : Characteristic.
Odour threshold : Not available.

Melting point/freezing point

Initial boiling point and : >37.78°C (>100°F)

boiling range

Flammability (solid, gas) : liquid

Upper/lower flammability or

explosive limits

: Not available.

Flash point : Closed cup: 20°C (68°F)

English (GB) United Kingdom (UK) 10/18

Productive Thinner for DP6000

SECTION 9: Physical and chemical properties

Auto-ignition temperature

Ingredient name	°C	°F	Method
5-methylhexan-2-one	400	752	EU A.15

pH : Not applicable.

Not applicable. insoluble in water.

Viscosity : Dynamic (room temperature): Not available.

Kinematic (room temperature): Not available.

Kinematic (40°C): >21 mm²/s

Solubility(ies)

Media	Result
cold water	Not soluble

Miscible with water : No.

Partition coefficient: n-octanol/ : Not applicable.

water

Vapour pressure :

	Vapour Pressure at 20°C			Vap	our pressu	re at 50°C
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
methylpentan-2-one	15.75128	2.1				

Relative density : 0.81

Explosive properties : The product itself is not explosive, but the formation of an explosible mixture of

: Product does not present an oxidizing hazard.

vapour or dust with air is possible.

Oxidising properties

Particle characteristics

Median particle size : Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

Refer to protective measures listed in sections 7 and 8.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions:

oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products

: Depending on conditions, decomposition products may include the following

materials: carbon oxides

English (GB) United Kingdom (UK) 11/18

Productive Thinner for DP6000

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
✓-methylpentan-2-one	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	2.08 g/kg	-
5-methylhexan-2-one	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	8.14 g/kg	-
	LD50 Oral	Rat	5657 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10.768 g/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
dioctyltin dilaurate	LD50 Oral	Rat	6450 mg/kg	-
dibutyltin dilaurate	LD50 Oral	Rat	2071 mg/kg	-
dibutyltin di(acetate)	LD50 Dermal	Rabbit	2318 mg/kg	-

Conclusion/Summary
Acute toxicity estimates

: There are no data available on the mixture itself.

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Froductive Thinner for DP6000	N/A	90532.1	69986.1	12.4	N/A
4-methylpentan-2-one	2080	N/A	N/A	11	N/A
5-methylhexan-2-one	5657	8140	5000	N/A	N/A
n-butyl acetate	10768	N/A	N/A	N/A	N/A
xylene	4300	1700	N/A	11	N/A
dioctyltin dilaurate	6450	N/A	N/A	N/A	N/A
dibutyltin dilaurate	2071	N/A	N/A	N/A	N/A
dibutyltin di(acetate)	N/A	2318	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
kylene	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
				mg	

: There are no data available on the mixture itself.

Conclusion/Summary: Not available.

SkinThere are no data available on the mixture itself.EyesThere are no data available on the mixture itself.

Respiratory Sensitisation

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary: There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Reproductive toxicity

English (GB) United Kingdom (UK) 12/18

Productive Thinner for DP6000

SECTION 11: Toxicological information

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
万 -methylhexan-2-one	-	-	Equivocal		Inhalation: 1250 ppm	-

Conclusion/Summary

Teratogenicity

: There are no data available on the mixture itself.

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
4-methylpentan-2-one n-butyl acetate xylene	Category 3 Category 3 Category 3	-	Narcotic effects Narcotic effects Respiratory tract
dibutyltin dilaurate dibutyltin di(acetate)	Category 1 Category 1	-	irritation thymus thymus

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
	Category 1		immune system
	Category 1 Category 1		thymus immune system

Aspiration hazard

Product/ingredient name	Result
x ýlene	ASPIRATION HAZARD - Category 1

Information on likely routes : Not available.

of exposure

Potential acute health effects

Eye contact

: Causes serious eye irritation.

Inhalation

: Harmful if inhaled. Can cause central nervous system (CNS) depression. May

cause drowsiness or dizziness.

Skin contact

: Defatting to the skin. May cause skin dryness and irritation.

Ingestion

: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

> pain or irritation watering redness

Inhalation

: Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced foetal weight increase in foetal deaths skeletal malformations

Productive Thinner for DP6000

SECTION 11: Toxicological information

Skin contact: Adverse symptoms may include the following:

irritation dryness cracking

reduced foetal weight increase in foetal deaths skeletal malformations

Ingestion : Adverse symptoms may include the following:

reduced foetal weight increase in foetal deaths skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate

effects

: Not available.

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

: Not available.

Potential chronic health effects

Potential delayed effects

Not available.

Conclusion/Summary : Not available.

General: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/

or dermatitis.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of

exposure.

Mutagenicity: No known significant effects or critical hazards.

Reproductive toxicity: May damage the unborn child.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
	Acute LC50 >179 mg/l	Fish	96 hours
5-methylhexan-2-one	Acute LC50 159 mg/l	Fish	96 hours
n-butyl acetate	Acute LC50 18 mg/l	Fish	96 hours
dibutyltin dilaurate	Acute EC50 >1 mg/l	Algae	72 hours
j	Acute EC50 < 0.463 mg/l	Daphnia	48 hours
dibutyltin di(acetate)	Acute EC10 3.1 mg/l	Fish	72 hours
	Acute EC50 0.5 mg/l	Algae	72 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

English (GB) United Kingdom (UK) 14/18

Productive Thinner for DP6000

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
	OECD 301F	83 % - Readily - 28 days	-	-
5-methylhexan-2-one	OECD 301D	67 % - Readily - 28 days	-	-
n-butyl acetate	TEPA and	83 % - Readily - 28 days	-	-
	OECD 301D			
dibutyltin dilaurate	OECD 301F	23 % - Not readily - 39 days	-	-
	Ready			
	Biodegradability -			
	Manometric			
	Respirometry			
	Test			

Conclusion/Summary: Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
 ✓-methylpentan-2-one	-	-	Readily
5-methylhexan-2-one	-	-	Readily
n-butyl acetate	-	-	Readily
xylene	-	-	Readily
dibutyltin di(acetate)	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
✓ methylpentan-2-one	1.9	-	Low
5-methylhexan-2-one	1.88	-	Low
n-butyl acetate	2.3	-	Low
xylene	3.12	7.4 to 18.5	Low
dioctyltin dilaurate	-	<100	Low
dibutyltin dilaurate	4.44	2.91	Low

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste Waste catalogue

English (GB) United Kingdom (UK) 15/18

Productive Thinner for DP6000

SECTION 13: Disposal considerations

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	Waste catalogue	
Container	15 01 02	plastic packaging

Special precautions

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	Yes.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

: None identified. ADR/RID

ADN The product is only regulated as an environmentally hazardous substance when transported in tank

vessels.

: None identified. **IMDG IATA** : None identified.

user

14.6 Special precautions for : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

: Not available.

16/18 English (GB) **United Kingdom (UK)**

Productive Thinner for DP6000

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Explosive precursors : Not applicable.

Ozone depleting substances

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	Entry Number (REACH)
Froductive Thinner for DP6000	3
	30
dioctyltin dilaurate	20
	30
dibutyltin di(acetate)	20

Labelling : Restricted to professional users.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category P5c

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate

GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and

Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019

No. 720 and amendments

DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level

EUH statement = GB CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Acute Tox. 4, H332	Calculation method
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	Calculation method
Repr. 1B, H360D	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

Productive Thinner for DP6000

SECTION 16: Other information

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

<u>Full text of classifications</u>		
Cute Tox. 4	ACUTE TOXICITY - Category 4	
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1	
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1	
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3	
Asp. Tox. 1	ASPIRATION HAZARD - Category 1	
Carc. 2	CARCINOGENICITY - Category 2	
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2	
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2	
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3	
Muta. 2	GERM CELL MUTAGENICITY - Category 2	
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B	
Repr. 2	REPRODUCTIVE TOXICITY - Category 2	
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B	
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2	
Skin Sens. 1B	SKIN SENSITISATION - Category 1B	
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1	
STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1	
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3	

History

Date of issue/ Date of : 20 November 2024

revision

Date of previous issue : 26 October 2023

Prepared by : EHS Version : 1.03

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

English (GB) United Kingdom (UK) 18/18