

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 1 of 9

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

MOIIN Flex Clear

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

photochemicals, Polymerisation

1.3. Details of the supplier of the safety data sheet

Company name:	DMG Digital Enterprises SE	
Street:	Elbgastrasse 248	
Place:	D-22547 Hamburg	
Telephone:	+49 40 84006-0	Telefax: +49 40 84006-222
e-mail:	info@dmg-digital.com	
Contact person:	A. Brunner	
Internet:	www.dmg-digital.com	
Responsible Department:	Quality Management	

Further Information

The substance does not require registration according to Regulation (EC) No 1907/2006 [REACH].

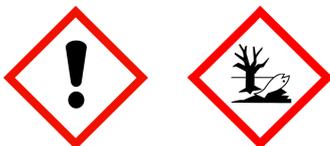
SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GB CLP Regulation**

Acute Tox. 4; H302
 Acute Tox. 4; H332
 Skin Irrit. 2; H315
 Skin Sens. 1; H317
 Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate
 2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate
 phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

Signal word: Warning**Pictograms:****Hazard statements**

H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

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

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 2 of 9

P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Special labelling of certain mixtures

15 - < 20 % of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
		REACH No
	Classification (GB CLP Regulation)	
66492-51-1	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	30 - < 35 %
	266-380-7	01-2119976303-36
	Skin Irrit. 2, Skin Sens. 1B, Aquatic Chronic 2; H315 H317 H411	
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate	15 - < 20 %
	264-036-0	01-2120751208-56
	Acute Tox. 3, Skin Sens. 1A, Aquatic Chronic 2; H331 H317 H411	
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	1 - < 5 %
	423-340-5	015-189-00-5
	Skin Sens. 1A, Aquatic Chronic 4; H317 H413	
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	1 - < 5 %
	239-701-3	607-111-00-9
		01-2119489896-11
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H315 H319 H317 H400 H410	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
66492-51-1	266-380-7	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	30 - < 35 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg	
63225-53-6	264-036-0	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate	15 - < 20 %
		inhalation: ATE = 3 mg/l (vapours); inhalation: LC50 = > 0,5 mg/l (dusts or mists); dermal: Data lacking; oral: LD50 = > 2000 mg/kg	
162881-26-7	423-340-5	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	1 - < 5 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
15625-89-5	239-701-3	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	1 - < 5 %
		dermal: LD50 = 5170 mg/kg; oral: LD50 = >5000 mg/kg M acute; H400: M=1 M chron.; H410: M=1	

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Move victim to fresh air. Put victim at rest and keep warm.

After contact with skin

After contact with skin, wash immediately with: Water and soap.

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 3 of 9

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

Call a physician immediately.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Water fog. Extinguishing powder. Sand. Foam. Carbon dioxide (CO₂).**Unsuitable extinguishing media**

High power water jet.

5.2. Special hazards arising from the substance or mixtureCO_x, NO_x**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Wear suitable protective clothing. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**Other information**

Take up mechanically.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Keep container tightly closed. Wear suitable protective clothing and gloves. Avoid contact with eyes.

Advice on general occupational hygiene

When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place.

Store only in original container.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 4 of 9

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate			
Worker DNEL, long-term		inhalation	systemic	9,9 mg/m ³
Worker DNEL, long-term		dermal	systemic	2 mg/kg bw/day
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			
Worker DNEL, long-term		inhalation	systemic	21 mg/m ³
Worker DNEL, long-term		dermal	systemic	3,3 mg/kg bw/day

PNEC values

CAS No	Substance	Value
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate	
Freshwater		0,003 mg/l
Marine water		0 mg/l
Freshwater sediment		0,024 mg/kg
Marine sediment		0,002 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,54 mg/kg
Soil		0,003 mg/kg
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,001 mg/l
Marine water		0,001 mg/l
Freshwater sediment		0,712 mg/kg
Marine sediment		0,712 mg/kg
Micro-organisms in sewage treatment plants (STP)		1 mg/l
Soil		20 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation of the storage area.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Tightly sealed safety glasses.

Hand protection

Tested protective gloves are to be worn: Suitable material: NBR (Nitrile rubber).

Respiratory protection

The following must be prevented: inhalation.

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 5 of 9

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
 Colour: colourless
 Odour: characteristic

Test method

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
point of decomposition:	not determined estim.
Flash point:	> 93 °C
Lower explosion limits:	not determined
Upper explosion limits:	not determined
pH-Value:	not determined
Water solubility: (at 20 °C)	not determined
Vapour pressure:	not determined
Density:	not determined
Relative vapour density:	> 1

SECTION 10: Stability and reactivity

10.4. Conditions to avoid

Light. heat.
 Decomposition takes place from temperatures above: 200 °C
 Decomposition under formation of: Acrylate.

10.5. Incompatible materials

Keep away from strong acids, leachates, heavy metal salts and reducing materials.

10.6. Hazardous decomposition products

In case of fire may be liberated: Gas / vapours, irritant. (Acrylate., pungent)

Further information

Substances sensitive to light.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.
 Harmful if inhaled.

ATEmix tested

	Dose	Species	Source
LD50, oral	1931 mg/kg	Rat	ATEmix (calc.)

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 6 of 9

ATEmix calculated

ATE (inhalation vapour) 15,87 mg/l; ATE (inhalation dust/mist) 2,646 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
66492-51-1	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate				
	oral	LD50 >2000 mg/kg	Rat	supplier SDS/ ECHA	OECD 423
	dermal	LD50 >2000 mg/kg	Rat	supplier SDS/ ECHA	OECD 402
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate				
	oral	LD50 > 2000 mg/kg	Rat	supplier SDS	
	dermal	Data lacking			
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	LC50 > 0,5 mg/l	Rat	supplier SDS	
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide				
	oral	LD50 > 2000 mg/kg	Rat	supplier SDS	
	dermal	LD50 > 2000 mg/kg	Rat	supplier SDS	
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate				
	oral	LD50 >5000 mg/kg	Rat	ECHA	
	dermal	LD50 5170 mg/kg	Rabbit	ECHA	

Irritation and corrosivity

Causes skin irritation.

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

Frequently or prolonged contact with skin may cause dermal irritation.

Irritant effect on the eye:

Sensitising effects

May cause an allergic skin reaction. ((5-Ethyl-1,3-dioxan-5-yl)methyl acrylate; 2-

[[[(Butylamino)carbonyl]oxy]ethyl acrylate; phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide;

2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate)

May cause sensitization by skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

Contains Methacrylic esters.: May produce an allergic reaction.

SECTION 12: Ecological information**12.1. Toxicity**

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 7 of 9

Preparation not tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
66492-51-1	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate					
	Acute fish toxicity	LC50 4 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	supplier SDS/ECHA	OECD 203
	Acute algae toxicity	ErC50 34 mg/l		Desmodesmus subspicatus	supplier SDS/ECHA	OECD 201
	Acute crustacea toxicity	EC50 20 mg/l	48 h	Daphnia magna (Big water flea)	supplier SDS/ECHA	OECD 202
	Acute bacteria toxicity	(EC50 >1000 mg/l)	3 h	Activated sludge	supplier SDS	
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate					
	Acute fish toxicity	LC50 2,52 mg/l	96 h	Danio rerio (zebrafish)	supplier SDS	
	Acute algae toxicity	ErC50 5,98 mg/l	72 h	Desmodesmus subspicatus	supplier SDS	
	Acute crustacea toxicity	EC50 18,6 mg/l	48 h	Daphnia magna (Big water flea)	supplier SDS	
	Acute bacteria toxicity	(EC50 305 mg/l)	3 h		ECHA	OECD 209
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide					
	Acute fish toxicity	LC50 > 0,090 mg/l	96 h	B.Danio rerio (zebrafish)	supplier SDS	
	Acute algae toxicity	ErC50 > 0,260 mg/l	72 h	Desmodesmus subspicatus	supplier SDS	
	Acute crustacea toxicity	EC50 > 1,175 mg/l	48 h	Daphnia magna (Big water flea)	supplier SDS	
	Crustacea toxicity	NOEC 0,008 mg/l	21 d	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(EC50 > 100 mg/l)	3 h	Activated sludge	supplier SDS	
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate					
	Acute fish toxicity	LC50 0,87 mg/l	96 h	Leuciscus idus (golden orfe)	ECHA	OECD 203
	Acute algae toxicity	ErC50 18,8 mg/l	72 h	Scenedesmus subspicatus	ECHA	
	Acute crustacea toxicity	EC50 19,9 mg/l	48 h		ECHA	
	Algae toxicity	NOEC 1,9 mg/l	3 d	Scenedesmus subspicatus	ECHA	

12.2. Persistence and degradability

Preparation not tested.

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 8 of 9

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
66492-51-1	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate		28%	28	
	Not readily biodegradable (according to OECD criteria)				
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate		15 %	28	
	Not readily biodegradable (according to OECD criteria)				
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide		1 %	28	
	Not readily biodegradable (according to OECD criteria)				

12.3. Bioaccumulative potential

Preparation not tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
66492-51-1	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	1,9
63225-53-6	2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate	1,82
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5,8
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	1,75

BCF

CAS No	Chemical name	BCF	Species	Source
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	< 5	Cyprinus carpio (Common Carp)	

12.4. Mobility in soil

Preparation not tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

Preparation not tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Preparation not tested.

Further information

Do not allow to enter into surface water or drains. Leakage into the environment must be prevented.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Can be burnt together with household waste in compliance with official regulations in contact with approved waste disposal companies and with authorities in charge.

Paste: Carry out a burning of hazardous waste according to official regulations.

List of Wastes Code - residues/unused products

180106 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE); wastes from natal care, diagnosis, treatment or prevention of disease in humans; chemicals consisting of or containing hazardous substances; hazardous waste

Safety Data Sheet

according to UK REACH Regulation

MOIIN Flex Clear

Revision date: 19.10.2022

Product code: 023623-AB

Page 9 of 9

SECTION 14: Transport information**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes

**Other applicable information**

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Acute Tox. 4; H302	On basis of test data
Acute Tox. 4; H332	Calculation method
Skin Irrit. 2; H315	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Further Information

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(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)