

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MOIIN Easy Cast

Revision date: 19.07.2022

Product code: 023522-AA

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

MOIIN Easy Cast

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

Manufacture of plastics products, including compounding and conversion

Uses advised against

pregnant or breastfeeding people should not work with hazardous substances

1.3. Details of the supplier of the safety data sheet

Company name:	DMG Digital Enterprises SE	
Street:	Elbgaustrasse 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	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Skin Sens. 1; H317

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

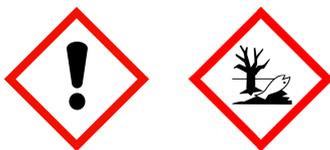
2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)

Triethylene glycol dimethacrylate

phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate

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

H317

May cause an allergic skin reaction.

H411

Toxic to aquatic life with long lasting effects.

Precautionary statements

P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

P501

Dispose of contents/container to an appropriate recycling or disposal facility.

P273

Avoid release to the environment.

P280

Wear protective gloves and eye/face protection.

P333+P313

If skin irritation or rash occurs: Get medical advice/attention.

P302+P352

IF ON SKIN: Wash with plenty of soap and water.

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Special labelling of certain mixtures

Contains 10 - < 15 % of components with unknown hazards to the aquatic environment.
10 - < 15 % of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
72869-86-4	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)			65 - < 70 %
	276-957-5		01-2120751202-68	
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			
109-16-0	Triethylene glycol dimethacrylate			15 - < 20 %
	203-652-6		01-2119969287-21	
	Skin Sens. 1B; H317			
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			
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate			< 1 %
	201-297-1	607-035-00-6	01-2119452498-28	
	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335			

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	
72869-86-4	276-957-5	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)	65 - < 70 %
		oral: LD50 = >5000 mg/kg	
109-16-0	203-652-6	Triethylene glycol dimethacrylate	15 - < 20 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg	
80-62-6	201-297-1	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	< 1 %
		inhalation: LC50 = 29,8 mg/l (vapours); dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg	

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.

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.

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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 mixture

CO_x, NO_x

5.3. Advice for firefighters

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

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
128-37-0	2,6-Ditertiary-butyl-para-cresol	-	2		TWA (8 h)	
80-62-6	Methyl methacrylate	50	-		TWA (8 h)	
		100	-		STEL (15 min)	

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
72869-86-4	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)		
Worker DNEL, long-term	inhalation	systemic	3,3 mg/m ³
Worker DNEL, long-term	dermal	systemic	1,3 mg/kg bw/day
109-16-0	Triethylene glycol dimethacrylate		
Worker DNEL, long-term	inhalation	systemic	48,5 mg/m ³
Worker DNEL, long-term	dermal	systemic	13,9 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
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate		
Worker DNEL, long-term	inhalation	systemic	208 mg/m ³
Worker DNEL, long-term	dermal	systemic	13,7 mg/kg bw/day
Worker DNEL, acute	dermal	local	1,5 mg/cm ²
128-37-0	2,6-Di-tert-butyl-4-methylphenol		
Worker DNEL, long-term	inhalation	systemic	3,5 mg/m ³
Worker DNEL, long-term	dermal	systemic	0,5 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		Value
72869-86-4	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)	
Freshwater		0,01 mg/l
Marine water		0,001 mg/l
Freshwater sediment		4,56 mg/kg
Marine sediment		0,456 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,61 mg/l
Soil		0,91 mg/kg
109-16-0	Triethylene glycol dimethacrylate	
Freshwater		0,164 mg/l
Marine water		0,0164 mg/l
Freshwater sediment		1,85 mg/kg
Marine sediment		0,185 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,274 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
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	
Freshwater		0,94 mg/l
Marine water		0,094 mg/l
Freshwater sediment		10,2 mg/kg
Marine sediment		10,2 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		1,48 mg/kg
128-37-0	2,6-Di-tert-butyl-4-methylphenol	
Freshwater		0,000199 mg/l
Freshwater (intermittent releases)		0,00199 mg/l
Marine water		0,000199 mg/l
Freshwater sediment		0,0996 mg/kg
Marine sediment		0,00996 mg/kg
Soil		0,04769 mg/kg

8.2. Exposure controls

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**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.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	light blue
Odour:	like: ester

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
pH-Value:	not determined
Water solubility: (at 20 °C)	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1.1 g/cm ³ calc.
Relative vapour density:	> 1
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
point of decomposition:	> 200 °C estim.

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.

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SECTION 11: Toxicological information

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

Acute toxicity

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

LD50: Rat > 4000 mg/kg (ATE mix, calc.)

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
72869-86-4	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)				
	oral	LD50 >5000 mg/kg	Rat	supplier SDS	OECD 401
109-16-0	Triethylene glycol dimethacrylate				
	oral	LD50 >5000 mg/kg	Rat	supplier SDS	
	dermal	LD50 >2000 mg/kg	Mouse	supplier SDS	
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate				
	oral	LD50 >5000 mg/kg	Rat	supplier SDS	
	dermal	LD50 >5000 mg/kg	Rabbit	supplier SDS	
	inhalation (4 h) vapour	LC50 29,8 mg/l	Rat	supplier SDS	

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers); Triethylene glycol dimethacrylate; phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide; methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate)
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

Preparation not tested.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
109-16-0	Triethylene glycol dimethacrylate					
	Acute algae toxicity	ErC50 >100 mg/l	72 h	Pseudokirchneriella subcapitata		OECD 201
	Crustacea toxicity	NOEC 32 mg/l	21 d	Daphnia magna (Big water flea)		
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate					
	Acute fish toxicity	LC50 >100 mg/l	96 h		supplier SDS	OECD 203
	Acute algae toxicity	ErC50 110 mg/l	72 h	Selenastrum capricornutum	ECHA	
	Fish toxicity	NOEC 9,4 mg/l			supplier SDS	OECD 210
	Algae toxicity	NOEC >110 mg/l		Selenastrum capricornutum	supplier SDS	OECD 201
	Crustacea toxicity	NOEC 37 mg/l		Daphnia magna (Big water flea)	supplier SDS	OECD 202

12.2. Persistence and degradability

Preparation not tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
72869-86-4	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)				
	OECD 301F	22%	28		
	Not readily biodegradable (according to OECD criteria)				
109-16-0	Triethylene glycol dimethacrylate				
	OECD 301B	85%			
	Readily biodegradable (according to OECD criteria).				
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide				
	OECD 301B	1 %	28		
	Not readily biodegradable (according to OECD criteria)				
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate				
	OECD 301C	94%	14		
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

Preparation not tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
72869-86-4	7,7,9-(resp. 7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)	3,39
109-16-0	Triethylene glycol dimethacrylate	2,3
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5,8
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	1,38

BCF

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

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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 REACH, annex XIII.

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

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number or ID number:**

UN 3082

14.2. UN proper shipping name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
7,7,9-(resp.

7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecane-1,16-diol dimethacrylate (mixture of isomers)

14.3. Transport hazard class(es):

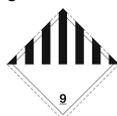
9

14.4. Packing group:

III

Hazard label:

9



Classification code:

M6

Special Provisions:

274 335 375 601

Limited quantity:

5 L

Excepted quantity:

E1

Transport category:

3

Hazard No:

90

Tunnel restriction code:

-

Inland waterways transport (ADN)**14.1. UN number or ID number:**

UN 3082

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14.2. UN proper shipping name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
7,7,9-(resp.7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecane-1,16-diol
dimethacrylate (mixture of isomers)**14.3. Transport hazard class(es):**

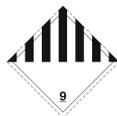
9

14.4. Packing group:

III

Hazard label:

9



Classification code:

M6

Special Provisions:

274 335 375 601

Limited quantity:

5 L

Excepted quantity:

E1

Marine transport (IMDG)**14.1. UN number or ID number:**

UN 3082

14.2. UN proper shipping name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
7,7,9-(resp.7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecane-1,16-diol
dimethacrylate (mixture of isomers)**14.3. Transport hazard class(es):**

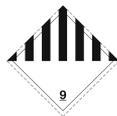
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14.4. Packing group:

III

Hazard label:

9



Special Provisions:

274, 335, 969

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-A, S-F

Segregation group:

2 - ammonium compounds

Air transport (ICAO-TI/IATA-DGR)**14.1. UN number or ID number:**

UN 3082

14.2. UN proper shipping name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
7,7,9-(resp.7,9,9-)Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecane-1,16-diol
dimethacrylate (mixture of isomers)**14.3. Transport hazard class(es):**

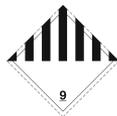
9

14.4. Packing group:

III

Hazard label:

9



Special Provisions:

A97 A158 A197 A215

Limited quantity Passenger:

30 kg G

Passenger LQ:

Y964

Excepted quantity:

E1

IATA-packing instructions - Passenger:

964

IATA-max. quantity - Passenger:

450 L

IATA-packing instructions - Cargo:

964

IATA-max. quantity - Cargo:

450 L

14.5. Environmental hazards

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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

2010/75/EU (VOC): 0,033 % (0,36 g/l)

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
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.)