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

1.1. Product identifier

Castdon Monomer

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

Use of the substance/preparation

Plastic for the manufacturing and repair of dentures

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Dreve Dentamid GmbH
Max-Planck-Straße 31
DE-59423 Unna

Telephone no.	+49 2303 8807-0
Fax no.	+49 2303 8807-29
Information provided by / telephone	Department Research & Development: Fax: +49 2303 8807-562
E-mail address of person responsible for this SDS	sicherheitsdatenblatt@dreve.com

1.4. Emergency telephone number

Henkel Fire Department / 24h-Emergency-Contact-No.: +49 211 797-3350

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Skin Sens. 1	H317
STOT SE 3	H335

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Danger

Hazard statements

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

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTRE or doctor if you feel unwell.
P501.1	Dispose of contents/container to industrial incineration plant.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains Methyl methacrylate, monomer,stabilized; Tetramethylene dimethacrylate

2.3. Other hazards

No special hazards have to be mentioned.

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Liquid based on methacrylate acid ester, containing an activator

Hazardous ingredients

Methyl methacrylate, monomer,stabilized

CAS No.	80-62-6				
EINECS no.	201-297-1				
Registration no.	01-2119452498-28				
Concentration	>=	50			%

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

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Skin Sens. 1	H317
STOT SE 3	H335

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note D

Tetramethylene dimethacrylate

CAS No.	2082-81-7				
EINECS no.	218-218-1				
Registration no.	01-2119967415-30				
Concentration	>=	10	<	25	%

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

Skin Sens. 1B	H317

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, soaked clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid. Clean body thoroughly (bath, shower). In any case show the physician the Safety Data Sheet.

After inhalation

Ensure supply of fresh air. Seek medical advice immediately.

After skin contact

Wash off immediately with soap and water. Take medical treatment.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

If swallowed, seek medical advice immediately and show this container or label. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

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

Until now no symptoms known so far.

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

Hints for the physician / hazards

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Recommended: alcohol resistant foam, CO2, powders, water spray/mist, Extinguishing measures to suit surroundings

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus. Wear full protective suit.

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues

and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective clothing. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. In case the product spills into sewage waters, immediately inform the authorities.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material. Do not pick up with the help of saw-dust or other combustible substances. Containers in which spilt substance has been collected must be adequately labelled. Dispose of as prescribed.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of aerosols. Perform filling operations only at stations with exhaust ventilation facilities. Provide suitable exhaust ventilation at the processing machines. Avoid impact, friction and electro-static loading; risk of ignition! Use explosion-proof apparatus and fittings. Keep container tightly closed.

Advice on protection against fire and explosion

Keep away from sources of heat and ignition. No smoking. Take action to prevent static discharges. Avoid impact and friction. Use only explosion-proof equipment. Keep away from combustible material. Wear shoes with conductive soles.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Provide solvent-resistant and impermeable floor.

Hints on storage assembly

Do not store with strong oxidizing agents.

Further information on storage conditions

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

Methyl methacrylate, monomer,stabilized

Value	208	mg/m³	50	ppm(V)
Short term exposure limit	416	mg/m³	100	ppm(V)

Other information

Contains no substances with occupational exposure limit values.

Derived No/Minimal Effect Levels (DNEL/DMEL)

Methyl methacrylate, monomer,stabilized

Reference substance	Methyl methacrylate, monomer,stabilized	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	348,4	mg/m³
	Methyl methacrylate, monomer,stabilized	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	208	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Lifetime	
Route of exposure	inhalative	
Concentration	416	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	13,67	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Local effects	
Concentration	1,5	mg/cm²
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	74,3	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	

Concentration	104	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	inhalative	
Concentration	208	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	8,2	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Local effects	
Concentration	1,5	mg/cm²
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	8,2	mg/kg/d

Tetramethylene dimethacrylate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	14,5	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	4,2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4,3	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	

Concentration	2,5	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2,5	mg/kg

Predicted No Effect Concentration (PNEC)

Methyl methacrylate, monomer,stabilized

Reference substance	Methyl methacrylate, monomer,stabilized	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,94	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,094	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	1,48	mg/kg
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	10,2	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Man via the environment	
Concentration	8,2	mg/kg/d
Type of value	PNEC	
Type	Marine sediment	
Concentration	1,2	mg/kg

Tetramethylene dimethacrylate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,003	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	20	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,12	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,012	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	0,022	mg/kg

8.2. Exposure controls

General protective and hygiene measures

Do not smoke during work time. Hold eye wash fountain available. Hold emergency shower available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Take off immediately all contaminated clothing. Do not eat or drink during work time. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.

Respiratory protection

Do not inhale vapours; Use suitable respiratory protective device in case of insufficient ventilation

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Appropriate Material Butyl rubber
Hand protection must comply with EN 374.

Eye protection

Safety glasses

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties ***

9.1. Information on basic physical and chemical properties

Physical state	liquid	
Colour	colourless	
Odour	ester-like	
Melting point		
Value	-48	°C
Freezing point		
Remarks	not determined	
Boiling point or initial boiling point and boiling range		
Value	101	°C
Flammability		
evaluation	Not applicable	
Upper and lower explosive limits		
Lower explosion limit	2,1	%(V)
Upper explosion limit	12,5	%(V)
Flash point		
Value	10	°C
Method	closed cup	
Auto-ignition temperature		

Value	430		°C

Decomposition temperature

Remarks	not determined

pH value

Remarks	not determined

Viscosity *

Remarks	not determined

Solubility(ies)

Remarks	not determined

Partition coefficient n-octanol/water (log value)

Remarks	not determined

Vapour pressure

Value	47		hPa
Temperature	20	°C	

Density and/or relative density

Value	0,95		g/cm³
Temperature	20	°C	

Relative vapour density

Remarks	not determined

9.2. Other information

Odour threshold

Remarks	not determined

Evaporation rate (ether = 1) :

Remarks	not determined

Solubility in water

Remarks	partially miscible

Explosive properties

evaluation	not determined

Oxidising properties

Remarks	not determined

Other information

None known

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

No hazardous reactions known.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Protect from heat and direct sunlight

10.5. Incompatible materials

Polymerisation with evolution of heat.

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Acute oral toxicity

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

Acute oral toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rat		
LD50	appr.	7900	mg/kg

Tetramethylene dimethacrylate

Species	rat		
LD50		10066	mg/kg
Method	OECD 401		

Acute dermal toxicity

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

Acute dermal toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rabbit		
LD50	>	5000	mg/kg
Method	OECD 402		

Tetramethylene dimethacrylate

Species	rat (female)		
LD50	>	2000	mg/kg
Method	OECD 402		

Acute inhalational toxicity

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

Acute inhalative toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rat		
LC50		29,8	mg/l
Duration of exposure		4	h
Administration/Form	Vapors		

Skin corrosion/irritation

evaluation	irritant
Remarks	The classification criteria are met.

Skin corrosion/irritation (Components)

Methyl methacrylate, monomer,stabilized

Species	Human
evaluation	irritant

Serious eye damage/irritation

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

Sensitization

evaluation	May cause sensitization by skin contact.
Remarks	The classification criteria are met.

Sensitization (Components)

Methyl methacrylate, monomer,stabilized

Route of exposure	dermal
Species	mouse
evaluation	sensitizing
Method	OECD 429

Tetramethylene dimethacrylate

Route of exposure	dermal
Species	mouse
evaluation	sensitizing
Method	OECD 429

Subacute, subchronic, chronic toxicity

Remarks	not determined

Mutagenicity

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

Reproductive toxicity

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

Carcinogenicity

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

Specific Target Organ Toxicity (STOT)

Single exposure

Remarks	The classification criteria are met.
evaluation	May cause respiratory irritation.

Repeated exposure

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

Specific Target Organ Toxicity (STOT) (Components)

Methyl methacrylate, monomer,stabilized

Single exposure

evaluation	May cause respiratory irritation. Route of exposure inhalative

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties with respect to humans

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Inhalation may lead to irritation of the respiratory tract.

Other information

No toxicological data are available.

SECTION 12: Ecological information

12.1. Toxicity

General information

not determined

Fish toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rainbow trout (Oncorhynchus mykiss)		
LC50	> 79		mg/l
Duration of exposure	96	h	

Methyl methacrylate, monomer,stabilized

Species	zebra fish (Brachydanio rerio)		
NOEC	9,4		mg/l
Duration of exposure	35	d	
Method	OECD 210		

Tetramethylene dimethacrylate

Species	zebra fish (Brachydanio rerio)		
LC50	3,34		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Daphnia toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	Daphnia magna		
EC50	69		mg/l
Duration of exposure	48	h	

Methyl methacrylate, monomer,stabilized

Species	Daphnia magna		
NOEC	37		mg/l
Duration of exposure	21	d	
Method	OECD 211		

Tetramethylene dimethacrylate

Species	Daphnia magna		
EC10	7,51		mg/l
Duration of exposure	21	d	
Method	OECD 211		

Algae toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	Pseudokirchneriella subcapitata		
EC50	> 110		mg/l
Duration of exposure	72	h	
Method	OECD 201		

Tetramethylene dimethacrylate

Species	Scenedesmus subspicatus		
EC50	9,79		mg/l
Duration of exposure	72	h	
Method	OECD 201		

Bacteria toxicity (Components)

Tetramethylene dimethacrylate

Species	activated sludge		
NOEC	20		mg/l
Duration of exposure	28	d	

Methyl methacrylate, monomer,stabilized

Species	activated sludge		

EC50	100		mg/l
Duration of exposure	14	d	

12.2. Persistence and degradability

General information

not determined

Biodegradability (Components)

Tetramethylene dimethacrylate

Value	84		%
Duration of test	28	d	
evaluation	Readily biodegradable (according to OECD criteria)		

Methyl methacrylate, monomer,stabilized

Value	94		%
Duration of test	14	d	
evaluation	Readily biodegradable (according to OECD criteria)		
Method	OECD 301 C		

12.3. Bioaccumulative potential

General information

not determined

Partition coefficient n-octanol/water (log value)

Remarks not determined

Octanol/water partition coefficient (log Pow) (Components)

Methyl methacrylate, monomer,stabilized

log Pow	1,38	
Temperature	20	°C
Method	OECD 107	

Tetramethylene dimethacrylate

log Pow	3,1	
Temperature	20	°C

12.4. Mobility in soil

General information

not determined

Mobility in soil (Components)

Methyl methacrylate, monomer,stabilized

Immobile

12.5. Results of PBT and vPvB assessment

General information

not determined

Results of PBT and vPvB assessment

The product contains no PBT substances

The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

General information

not determined

General information / ecology

Do not allow to enter soil, waterways or waste water canal. Avoid release into the atmosphere.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

EWC waste code 07 01 04* other organic solvents, washing liquids and mother liquors
Must not be disposed together with household garbage.
Dispose of waste according to applicable legislation.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information ***

	Land transport ADR/RID	Marine transport IMDG/GGVSee ***	Air transport ICAO/IATA ***
14.1. UN number or ID number	1247	1247	1247
14.2. UN proper shipping name	METHYL METHACRYLATE MONOMER, STABILIZED, Solution	METHYL METHACRYLATE MONOMER, STABILIZED, Solution	METHYL METHACRYLATE MONOMER, STABILIZED, Solution
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 l	1 l	
Transport category	2		
14.5. Environmental hazards	-		
Tunnel restriction code	D/E		

SECTION 15: Regulatory information ***

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

Major-accident categories acc. 2012/18/EU

Category	P5c	FLAMMABLE LIQUID

VOC

VOC (EU)	99,69	%

Other regulations, restrictions and prohibition regulations

Observe employment restrictions for young people.
Observe employment restrictions for child bearing mothers and nursing mothers.

Restriction according to annex XVII to regulation (EU) No 1907/2006

The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 3

Ingredients with restrictions according to Annex XVII Regulation (EU) No. 1907/2006 ***

Methyl methacrylate, monomer,stabilized

The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 3
The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 40
The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry-No. 75

Other information

All components are contained in the TSCA inventory or exempted.

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

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

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

Flam. Liq. 2	H225	On basis of test data
Skin Irrit. 2	H315	Calculation method
Skin Sens. 1	H317	Calculation method
STOT SE 3	H335	Calculation method

Hazard statements listed in Chapter 2/3

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

CLP categories listed in Chapter 2/3

Flam. Liq. 2	Flammable liquid, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1B	Skin sensitization, Category 1B
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a

guarantee for any specific product properties and shall not establish a legally valid relationship.