



Safety Data Sheet according to (EC) No 1907/2006 as amended

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LOCTITE ABLESTIK ABP 8037 TI

SDS No. : 485220

V005.0

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

1.1. Product identifier

LOCTITE ABLESTIK ABP 8037 TI

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

Intended use:

Die attach adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin sensitizer

Category 1

H317 May cause an allergic skin reaction.

Acute hazards to the aquatic environment

Category 1

H400 Very toxic to aquatic life.

Chronic hazards to the aquatic environment

Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

t-Butylcyclohexylpercarbonate

Methyl acrylate
1,6-Hexanediol diacrylate

Signal word:

Warning

Hazard statement:

H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement:
Prevention**

P273 Avoid release to the environment.
P280 Wear protective gloves.

**Precautionary statement:
Response**

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Adhesive

Base substances of preparation:

Acrylate

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	231-131-3 01-2119555669-21	50- 100 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor (Acute Aquat Tox): 10 M factor (Chron Aquat Tox): 10
2,2-dimethyl-1,3-propanediyl bismethacrylate 1985-51-9	217-856-8	5- < 10 %	STOT SE 3 H335 Skin Irrit. 2 H315 Eye Irrit. 2 H319
bis(α, α-dimethylbenzyl) 80-43-3	201-279-3 01-2119541688-27	0,1- < 0,3 %	Aquatic Chronic 2 H411 Org. Perox. F H242 Eye Irrit. 2 H319 Skin Irrit. 2 H315 Repr. 1B H360D
t-Butylcyclohexylpercarbonate 15520-11-3	239-557-1 01-2119966122-42	0,1- < 1 %	Org. Perox. C H242 Skin Sens. 1 H317 Aquatic Chronic 4 H413
Methyl acrylate 96-33-3	202-500-6 01-2119459302-44	0,1- < 1 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Flam. Liq. 2 H225 STOT SE 3 H335 Eye Irrit. 2 H319 Skin Irrit. 2 H315 Skin Sens. 1 H317 Acute Tox. 3; Inhalation H331 Aquatic Chronic 3 H412
1,6-Hexanediol diacrylate 13048-33-4	235-921-9 01-2119484737-22	0,1- < 1 %	Aquatic Acute 1 H400 Aquatic Chronic 2 H411 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Skin Sens. 1A H317

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

Prolonged or repeated contact may cause eye irritation.

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released. carbon oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Remove sources of ignition.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

- Good industrial hygiene practices should be observed.
- Wash hands before work breaks and after finishing work.
- Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

- Ensure good ventilation/extraction.
- Keep container tightly sealed.
- Refer to Technical Data Sheet

7.3. Specific end use(s)

- Die attach adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):		EH40 WEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	5	18	Time Weighted Average (TWA):		EH40 WEL
Methyl acrylate 96-33-3 [METHYLACRYLATE]	5	18	Time Weighted Average (TWA):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYLACRYLATE]	10	36	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	10	36	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYLACRYLATE]	5	18	Time Weighted Average (TWA):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYLACRYLATE]	10	36	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	5	18	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Methyl acrylate 96-33-3 [METHYL ACRYLATE]			Skin designation:	Can be absorbed through the skin.	IR_OEL
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	10	36	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	aqua (freshwater)		0,00004 mg/l				
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	aqua (marine water)		0,00086 mg/l				
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	sewage treatment plant (STP)		0,025 mg/l				
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	sediment (freshwater)				438,13 mg/kg		
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	sediment (marine water)				438,13 mg/kg		
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Air						no hazard identified
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Soil				1,41 mg/kg		
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	aqua (freshwater)		0,00234 mg/l				
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	sewage treatment plant (STP)		100 mg/l				
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	sediment (freshwater)				2,2 mg/kg		
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	Soil				0,447 mg/kg		
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	aqua (marine water)		0,00023 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (freshwater)		0,39 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (marine water)		0,039 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (intermittent releases)		0,39 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (freshwater)				4685 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	sediment (marine water)				468,5 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	Soil				936,8 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	sewage treatment plant (STP)		2 mg/l				
Methyl acrylate 96-33-3	aqua (freshwater)		0,003 mg/l				
Methyl acrylate 96-33-3	aqua (marine water)		0 mg/l				
Methyl acrylate 96-33-3	aqua (intermittent releases)		0,011 mg/l				
Methyl acrylate 96-33-3	sewage treatment plant (STP)		10 mg/l				
Methyl acrylate 96-33-3	sediment (freshwater)				0,011 mg/kg		
Methyl acrylate 96-33-3	sediment (marine water)				0,011 mg/kg		
Methyl acrylate 96-33-3	Soil				1 mg/kg		

Methyl acrylate 96-33-3	oral				0,001 mg/kg		
Hexamethylene diacrylate 13048-33-4	aqua (freshwater)		0,007 mg/l				
Hexamethylene diacrylate 13048-33-4	aqua (marine water)		0,001 mg/l				
Hexamethylene diacrylate 13048-33-4	Soil				0,094 mg/kg		
Hexamethylene diacrylate 13048-33-4	sewage treatment plant (STP)		2,7 mg/l				
Hexamethylene diacrylate 13048-33-4	sediment (freshwater)				0,493 mg/kg		
Hexamethylene diacrylate 13048-33-4	sediment (marine water)				0,049 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	Workers	inhalation	Long term exposure - systemic effects		0,1 mg/m3	no hazard identified
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	General population	inhalation	Long term exposure - systemic effects		0,04 mg/m3	no hazard identified
Silver >= 99,9 % Ag as powder (>100nm<1mm) classified for environment 7440-22-4	General population	oral	Long term exposure - systemic effects		1,2 mg/kg	no hazard identified
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	Workers	Inhalation	Long term exposure - systemic effects		1,4 mg/m3	
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	Workers	dermal	Long term exposure - systemic effects		2 mg/kg	
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	General population	Inhalation	Long term exposure - systemic effects		0,42 mg/m3	
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	General population	dermal	Long term exposure - systemic effects		1 mg/kg	
bis(.alpha.,.alpha.-Dimethylbenzyl) peroxide 80-43-3	General population	oral	Long term exposure - systemic effects		0,1 mg/kg	
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	Workers	inhalation	Long term exposure - systemic effects		5,87 mg/m3	
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	Workers	dermal	Long term exposure - systemic effects		16,67 mg/kg	
Methyl acrylate 96-33-3	Workers	inhalation	Long term exposure - local effects		18 mg/m3	
Methyl acrylate 96-33-3	Workers	dermal	Acute/short term exposure - local effects		0,49 mg/cm2	
Methyl acrylate 96-33-3	General population	inhalation	Acute/short term exposure - local effects		2,1 mg/m3	
Hexamethylene diacrylate 13048-33-4	Workers	dermal	Long term exposure - systemic effects		2,77 mg/kg	
Hexamethylene diacrylate 13048-33-4	Workers	inhalation	Long term exposure - systemic effects		24,48 mg/m3	
Hexamethylene diacrylate 13048-33-4	General population	dermal	Long term exposure - systemic effects		1,66 mg/kg	
Hexamethylene diacrylate 13048-33-4	General population	inhalation	Long term exposure - systemic effects		7,24 mg/m3	
Hexamethylene diacrylate 13048-33-4	General population	oral	Long term exposure - systemic effects		2,08 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	paste Liquid silver
Odor	Acrylic
Odour threshold	No data available / Not applicable
pH	Not available.
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	> 98 °C (> 208.4 °F); calculated
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density	3,77 g/cm ³
()	
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative)	Insoluble
(Solvent: Water)	
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable

Explosive properties
Oxidising properties

No data available / Not applicable
No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Strong oxidizing agents.
Strong bases.
Acids.
Reducing agents.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if stored and applied as directed.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.
Hydrocarbons
nitrogen oxides
Rapid polymerisation may generate excessive heat and pressure.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
bis(α, α-dimethylbenzyl) 80-43-3	LD50	4.000 mg/kg	rat	not specified
t- Butylcyclohexylpercarbon ate 15520-11-3	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Methyl acrylate 96-33-3	LD50	768 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
1,6-Hexanediol diacrylate 13048-33-4	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

Hazardous substances CAS-No.	Value type	Value	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
bis(α, α-dimethylbenzyl) 80-43-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Methyl acrylate 96-33-3	LD50	1.250 mg/kg	rabbit	Draize Test
1,6-Hexanediol diacrylate 13048-33-4	LD50	3.650 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Methyl acrylate 96-33-3	LC50	6,5 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
bis(α, α-dimethylbenzyl) 80-43-3	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methyl acrylate 96-33-3	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1,6-Hexanediol diacrylate 13048-33-4	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
bis(α, α-dimethylbenzyl) 80-43-3	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
1,6-Hexanediol diacrylate 13048-33-4	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
bis(α, α-dimethylbenzyl) 80-43-3	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
t-Butylcyclohexylpercarbonate 15520-11-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Methyl acrylate 96-33-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
1,6-Hexanediol diacrylate 13048-33-4	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
bis(α, α-dimethylbenzyl) 80-43-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
bis(α, α-dimethylbenzyl) 80-43-3	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
bis(α, α-dimethylbenzyl) 80-43-3	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
1,6-Hexanediol diacrylate 13048-33-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
1,6-Hexanediol diacrylate 13048-33-4	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Methyl acrylate 96-33-3	negative	inhalation: vapour		mouse	not specified
1,6-Hexanediol diacrylate 13048-33-4	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Methyl acrylate 96-33-3	not carcinogenic	inhalation: vapour	24 m 6 h/d, 5 d/w	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
1,6-Hexanediol diacrylate 13048-33-4	NOAEL P 250 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
bis(α , α -dimethylbenzyl) 80-43-3	NOAEL 80 mg/kg	oral: gavage	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Methyl acrylate 96-33-3	NOAEL 23 ppm	inhalation	13 weeks 6 hrs/day, 5 days/wk	rat	BASF Test
Methyl acrylate 96-33-3	NOAEL 5 mg/kg	oral: drinking water	13 w continuous	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
1,6-Hexanediol diacrylate 13048-33-4	NOAEL 250 mg/kg	oral: gavage	28 - 52 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	LC50	0,0012 mg/l	96 h	Pimephales promelas	other guideline:
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	EC10	0,00019 mg/l	217 d	Salmo trutta	OECD Guideline 210 (fish early lite stage toxicity test)
bis(α, α-dimethylbenzyl) 80-43-3	LC50	4,2 mg/l	48 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
Methyl acrylate 96-33-3	LC50	3,4 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,6-Hexanediol diacrylate 13048-33-4	LC50	0,38 mg/l	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,6-Hexanediol diacrylate 13048-33-4	NOEC	0,072 mg/l	39 d	Oryzias latipes	OECD Guideline 210 (fish early lite stage toxicity test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	EC50	0,00022 mg/l	48 h	Daphnia magna	other guideline:
bis(α, α-dimethylbenzyl) 80-43-3	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
t-Butylcyclohexylpercarbonate 15520-11-3	EC50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methyl acrylate 96-33-3	EC50	2,6 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,6-Hexanediol diacrylate 13048-33-4	EC50	2,7 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	NOEC	0,00032 mg/l	21 d	Daphnia magna	EPA OPPTS 850.1300 (Daphnid Chronic Toxicity Test)
bis(α, α-dimethylbenzyl) 80-43-3	NOEC	0,177 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Methyl acrylate 96-33-3	NOEC	0,19 mg/l	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)
1,6-Hexanediol diacrylate 13048-33-4	NOEC	0,14 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	EC10	0,00016 mg/l	15 d	other:	other guideline:
bis(α, α-dimethylbenzyl) 80-43-3	EC50	> 20 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
bis(α, α-dimethylbenzyl) 80-43-3	NOEC	8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
t-Butylcyclohexylpercarbonate 15520-11-3	EC50	Toxicity > Water solubility	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
t-Butylcyclohexylpercarbonate 15520-11-3	NOEC	Toxicity > Water solubility	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methyl acrylate 96-33-3	EC50	3,55 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,6-Hexanediol diacrylate 13048-33-4	EC50	2,33 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,6-Hexanediol diacrylate 13048-33-4	NOEC	0,9 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
bis(α, α-dimethylbenzyl) 80-43-3	NOEC	> 1.000 mg/l	30 min	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Methyl acrylate 96-33-3	EC10	> 100 mg/l	72 h		not specified
1,6-Hexanediol diacrylate 13048-33-4	EC20	60 mg/l	30 min	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
bis(α, α-dimethylbenzyl) 80-43-3	not readily biodegradable.	aerobic	20,2 - 43,8 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
t-Butylcyclohexylpercarbonate 15520-11-3	not readily biodegradable.	aerobic	3 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Methyl acrylate 96-33-3	readily biodegradable	aerobic	90 - 100 %	28 d	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test))
1,6-Hexanediol diacrylate 13048-33-4	readily biodegradable	aerobic	69 %	28 d	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test))
1,6-Hexanediol diacrylate 13048-33-4	inherently biodegradable	aerobic	> 70 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	70	42 d	20 °C	Cyprinus carpio	other guideline:
bis(α, α-dimethylbenzyl) 80-43-3	137 - 1.470	56 d	25 °C	Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
Methyl acrylate 96-33-3	3,16				not specified

12.4. Mobility in soil

Cured adhesives are immobile.

Hazardous substances CAS-No.	LogPow	Temperature	Method
bis(α, α-dimethylbenzyl) 80-43-3	5,6	25 °C	EU Method A.8 (Partition Coefficient)
t-Butylcyclohexylpercarbonate 15520-11-3	8,34		QSAR (Quantitative Structure Activity Relationship)
Methyl acrylate 96-33-3	0,739	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
1,6-Hexanediol diacrylate 13048-33-4	2,81	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Silver >= 99,9 % Ag in powder (>100nm<1mm) 7440-22-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
bis(α, α-dimethylbenzyl) 80-43-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
t-Butylcyclohexylpercarbonate 15520-11-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Methyl acrylate 96-33-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1,6-Hexanediol diacrylate 13048-33-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Collection and delivery to recycling enterprise or other registered elimination institution.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Silver)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
	Tunnelcode:
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content < 3 %
(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H225 Highly flammable liquid and vapor.
H242 Heating may cause a fire.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H360D May damage the unborn child.
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.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

Further information:

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