

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

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

Product number 583527
Product name AZ 10XT (220cP) PHOTORESIST

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

Use of the Sub- : Materials for use in technical applications, Intermediate for
stance/Mixture electronic industry

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department * e-mail: ELECTRONICS_SDS@merckgroup.com

1.4 Emergency telephone number

+49 6151 722440

CHEMTREC International Emergency Telephone Number +1 703-741-
5970 [CCN 842835]

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

Flammable liquids, Category 3 H226: Flammable liquid and vapour.

Specific target organ toxicity - single ex- H336: May cause drowsiness or dizziness.
posure, Category 3, Central nervous
system

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
P210 Keep away from heat.

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Hazardous components which must be listed on the label:

2-methoxy-1-methylethyl acetate

Additional Labelling

EUH208 Contains formaldehyde. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture of organic compounds

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29-xxxx	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)	>= 50 - <= 100
1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester	23121-00-8 01-2120753802-54-xxxx	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 10
Cresol	1319-77-3 215-293-2 604-004-00-9	Acute Tox. 3; H301 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 0,1 - < 0,25
formaldehyde	50-00-0 200-001-8 605-001-00-5 01-2119488953-20-XXXX	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Muta. 2; H341	< 0,1

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

			Carc. 1B; H350 specific concentration limit Skin Corr. 1B; H314 ≥ 25 % Skin Irrit. 2; H315 5 - < 25 % Eye Irrit. 2; H319 5 - < 25 % STOT SE 3; H335 ≥ 5 % Skin Sens. 1; H317 ≥ 0,2 %	
--	--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : fresh air. Call in physician.
- In case of skin contact : Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- In case of eye contact : rinse out with plenty of water.
Remove contact lenses.
- If swallowed : immediately make victim drink water (two glasses at most).
Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Allergic reactions
somnolence
- Nausea
Vomiting
Headache
Unconsciousness
narcosis
Cyanosis
Drowsiness
inebriation
delirium
Salivation
Gastrointestinal disturbance
slow pulse

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water
Foam
Carbon dioxide (CO₂)
Dry powder

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Combustible.

Vapours are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : Cool closed containers exposed to fire with water spray.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:
Do not breathe vapours, aerosols.
Avoid substance contact.
Ensure adequate ventilation.
Keep away from heat and sources of ignition.
Evacuate the danger area, observe emergency procedures, consult an expert.
Advice for emergency responders:
Protective equipment see section 8.

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up with liquid-absorbent material (e.g. Chemizorb®).
Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal considerations see section 13.

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
Do not inhale substance/mixture.
Avoid generation of vapours/aerosols.

Observe label precautions.

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures : Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.

Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Protected from light.

Risks from decomposition products: see section 10.3

Recommended storage temperature : If there is a suitable storage temperature range to be complied with, product label contains the relevant information accordingly.

7.3 Specific end use(s)

Specific use(s) : Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
2-methoxy-1-methylethyl acetate	Workers	dermal	Long-term systemic effects	153,5 mg/kg
	Workers	inhalation	Long-term systemic effects	275 mg/m3
	Consumers	oral	Long-term systemic effects	1,67 mg/kg
	Consumers	dermal	Long-term systemic effects	54,8 mg/kg
	Consumers	inhalation	Long-term systemic effects	33 mg/m3
formaldehyde	Workers	inhalation	Long-term systemic effects	9 mg/m3
	Workers	inhalation	Long-term local effects	0,5 mg/m3
	Workers	inhalation	Acute local effects	1 mg/m3
	Workers	dermal	Long-term systemic effects	240 mg/kg
	Workers	dermal	Long-term local effects	0,037 mg/cm2
	Consumers	inhalation	Long-term systemic effects	3,2 mg/m3
	Consumers	inhalation	Long-term local effects	0,1 mg/m3
	Consumers	dermal	Long-term systemic effects	120 mg/kg
	Consumers	dermal	Long-term local effects	0,012 mg/cm2
	Consumers	oral	Long-term systemic effects	4,1 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
2-methoxy-1-methylethyl acetate	Fresh water	0,635 mg/l
	Marine water	0,0635 mg/l
	Fresh water sediment	3,29 mg/kg
	Marine sediment	0,329 mg/kg
	Sewage treatment plant	100 mg/l
	Soil	0,29 mg/kg

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

See section 7.1.

Personal protective equipment

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye protection : Safety glasses

Hand protection :

full contact

Glove material : butyl-rubber

Glove thickness : 0,7 mm

Break through time : 480 min

splash contact

Glove material : Nitrile rubber

Glove thickness : 0,4 mm

Break through time : 60 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example: KCL 898 Butoject®(full contact) ; KCL 730 Camatril® -Velours(splash contact)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection : required when vapours/aerosols are generated.

Filter type : Filter A-(P2)

Protective measures : Flame retardant antistatic protective clothing.

Environmental exposure controls

Water : Do not flush into surface water or sanitary sewer system.
Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

The Safety Data Sheets for catalogue items are available at www.merckgroup.com

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Physical state	:	solution
Colour	:	amber
Odour	:	No data available
Freezing point	:	No data available
Boiling point	:	
		Information on components: 2-methoxy-1-methylethyl acetate 145,8 °C (1.013 hPa) Method: OECD Test Guideline 103
Flammability	:	Remarks: Combustible.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	46,5 °C Method: closed cup (solvent)
Auto-ignition temperature	:	
		Information on components: 2-methoxy-1-methylethyl acetate 333 °C (1.013 hPa) Method: DIN 51794
Decomposition temperature	:	No data available
pH	:	substance/mixture is non-polar/aprotic
Viscosity		
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	
		Information on components: 2-methoxy-1-methylethyl acetate 3,55 hPa (20 °C) Method: OECD Test Guideline 104 5,17 hPa (25 °C) Method: OECD Test Guideline 104

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Density : 1,05 g/cm³ (20 °C)

Relative vapour density : No data available

9.2 Other information

Explosives : Not classified as explosive.

Oxidizing properties : none

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapour/air-mixtures are explosive at intense warming.
Formation of peroxides possible.

10.2 Chemical stability

Sensitivity to light
Sensitive to air.

10.3 Possibility of hazardous reactions

Hazardous reactions : Risk of ignition or formation of inflammable gases or vapours with:
Oxidizing agents
Violent reactions possible with:
alkalines
Peroxides
Strong oxidizing agents

10.4 Conditions to avoid

Conditions to avoid : Heating.

10.5 Incompatible materials

Materials to avoid : Aluminium
Light metals
oils
resins

10.6 Hazardous decomposition products

Peroxides
in the event of fire: See section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Acute oral toxicity	:	Acute Toxicity Estimate (ATE): > 2.000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	Acute Toxicity Estimate (ATE): > 2.000 mg/kg Method: Calculation method
Acute toxicity (other routes of administration)	:	No data available

Components:

2-methoxy-1-methylethyl acetate:

Acute oral toxicity	:	LD50 (Rat, male and female): 6.190 mg/kg Method: OECD Test Guideline 401 GLP: yes Remarks: (ECHA)
Acute inhalation toxicity	:	LC0 (Rat): > 8,1 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Converted acute toxicity point estimate Assessment: The substance or mixture has no acute inhalation toxicity Remarks: (ECHA)
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: (ECHA) Assessment: The substance or mixture has no acute dermal toxicity

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Acute oral toxicity	:	LD50 (Rat, female): > 5.000 mg/kg Method: OECD Test Guideline 401 Remarks: (IUCLID)
Acute inhalation toxicity	:	Assessment: Toxic effects cannot be excluded
Acute dermal toxicity	:	Assessment: Toxic effects cannot be excluded

Cresol:

Acute oral toxicity	:	LD50 (Rat, male): 121 mg/kg Method: OECD Test Guideline 401 GLP: no Remarks: (ECHA)
Acute inhalation toxicity	:	Assessment: Toxic effects cannot be excluded

The Safety Data Sheets for catalogue items are available at www.merckgroup.com

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Acute dermal toxicity : LD50 (Rabbit): 301 mg/kg
Remarks: (ECHA)

formaldehyde:

Acute oral toxicity : LD50 (Rat): 100 mg/kg
Remarks: (Lit.)

Acute inhalation toxicity : LC50 (Rat, male and female): 463 ppm
Exposure time: 4 h
Test atmosphere: gas
Method: OECD Test Guideline 403
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): 270 mg/kg
Remarks: (OECD SIDS)

Skin corrosion/irritation

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Species : Rabbit
Exposure time : 24 h
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : (ECHA)

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Species : Human
Method : OECD Test Guideline 431
Result : Skin irritation
GLP : yes
Remarks : (IUCLID)

Cresol:

Species : Rabbit
Result : Causes burns.
Remarks : (ECHA)

formaldehyde:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Causes burns.
Remarks : (ECHA)

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Serious eye damage/eye irritation

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Species	: Rabbit
Method	: OECD Test Guideline 405
Result	: No eye irritation
GLP	: yes
Remarks	: (ECHA)

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Species	: Rabbit
Method	: OECD Test Guideline 405
Result	: irritating
Remarks	: (IUCLID)

Cresol:

Species	: Rabbit
Result	: Risk of serious damage to eyes.
Remarks	: (ECHA)

formaldehyde:

Species	: Rabbit
Assessment	: Risk of blindness!
Result	: Irreversible effects on the eye
Remarks	: (ECHA)

Respiratory or skin sensitisation

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Test Type	: Maximisation Test
Exposure routes	: dermal
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitisation.
GLP	: yes
Remarks	: (ECHA)

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative
GLP	:	yes
Remarks	:	(IUCLID)

formaldehyde:

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	May cause sensitisation by skin contact.
Remarks	:	(ECHA)

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	No data available
Genotoxicity in vivo	:	No data available

Components:

2-methoxy-1-methylethyl acetate:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes Remarks: (ECHA)
-----------------------	---	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative Remarks: (IUCLID)
-----------------------	---	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Cresol:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes
-----------------------	---	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: (ECHA)

Test Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 482
Result: negative
GLP: yes
Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: positive
GLP: yes
Remarks: (ECHA)

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Cell type: Red blood cells (erythrocytes)
Application Route: Oral
Result: negative
Remarks: (ECHA)

Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative
GLP: yes
Remarks: (ECHA)

formaldehyde:

Germ cell mutagenicity- Assessment : In vitro tests showed mutagenic effects

Carcinogenicity

Product:

No data available

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Components:

formaldehyde:

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

Reproductive toxicity

Product:

Effects on fertility : No data available

Effects on foetal development : No data available

Components:

2-methoxy-1-methylethyl acetate:

Effects on foetal development : Species: Rat, female
Application Route: Inhalation
General Toxicity Maternal: NOAEL: 2,7 mg/l
Teratogenicity: NOAEL: > 22,5 mg/l
Method: OECD Test Guideline 414
GLP: yes
Remarks: (ECHA)

STOT - single exposure

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Assessment : May cause drowsiness or dizziness.
Remarks : (ECHA)

STOT - repeated exposure

Product:

No data available

Repeated dose toxicity

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Species : Rat, male and female
NOAEL : ≥ 1.000 mg/kg
Application Route : Oral
Exposure time : 44 d

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Number of exposures	:	daily
Method	:	OECD Test Guideline 422
Remarks	:	(ECHA) Subacute toxicity

formaldehyde:

Species	:	Rat, male and female
NOAEL	:	21 mg/kg
LOAEL	:	109 mg/kg
Application Route	:	Oral
Method	:	OECD Test Guideline 453
GLP	:	yes
Remarks	:	(ECHA)

Aspiration toxicity

Product:

No data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
------------	---	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Further information

Product:

Remarks	:	Properties to be expected based on the main component of the mixture:
---------	---	-----------------------------------------------------------------------

Remarks	:	Nausea Vomiting Headache Unconsciousness narcosis Cyanosis Drowsiness inebriation delirium Salivation Gastrointestinal disturbance slow pulse
---------	---	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Remarks	:	Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.
---------	---	---------------------------------------------------------------------------------------------------------------------------

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

SECTION 12: Ecological information

12.1 Toxicity

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 134 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 408 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes Remarks: (ECHA)
Toxicity to algae/aquatic plants	: NOEC (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 Remarks: (ECHA) ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 Remarks: (ECHA)
Toxicity to microorganisms	: EC10 (activated sludge): > 1.000 mg/l Exposure time: 30 min Test Type: static test Method: OECD Test Guideline 209 Remarks: (ECHA) EC20 (activated sludge): > 1.000 mg/l Exposure time: 30 min Test Type: static test Method: OECD Test Guideline 209 Remarks: (ECHA)

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Toxicity to fish (Chronic toxicity) : NOEC: 47,5 mg/l
Exposure time: 14 d
Species: *Oryzias latipes* (Orange-red killifish)
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 204
GLP: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: ≥ 100 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes
Remarks: (ECHA)

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: (IUCLID)

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 1,43 - 1,58 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: (IUCLID)

Toxicity to microorganisms : IC50 (Bacteria): > 7 mg/l
Remarks: (Lit.)

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Cresol:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 7,4 mg/l
Exposure time: 96 h
Test Type: static test
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 7,7 mg/l
Exposure time: 48 h
Test Type: static test

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

	Analytical monitoring: no Method: DIN 38412 part 11 GLP: no Remarks: (ECHA)
Toxicity to algae/aquatic plants	: ErC50 (Desmodesmus subspicatus (green algae)): 21 mg/l Exposure time: 48 h Test Type: static test Method: DIN 38412 part 9 Remarks: (ECHA)
Toxicity to microorganisms	: EC50 (activated sludge): 11,4 mg/l Exposure time: 4 h Test Type: static test Analytical monitoring: no GLP: no Remarks: (ECHA)
Toxicity to fish (Chronic toxicity)	: NOEC: 1,35 mg/l Exposure time: 32 d Species: Pimephales promelas (fathead minnow) Test Type: flow-through test Method: OECD Test Guideline 210 Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 1 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Analytical monitoring: yes Remarks: (ECHA)

12.2 Persistence and degradability

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 76,4 mg/l
Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: (ECHA)

Biochemical Oxygen Demand (BOD) : 330 mg/g
Incubation time: 5 d

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Remarks: (IUCLID)

Chemical Oxygen Demand (COD) : 1.740 mg/g
Remarks: (IUCLID)

ThOD : 1.820 mg/g
Remarks: (IUCLID)

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: (Lit.)

Cresol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 0,8 mg/l
Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: (ECHA)

12.3 Bioaccumulative potential

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 1,2 (20 °C)
pH: 6,8
Method: OECD Test Guideline 117
GLP: yes
Remarks: Bioaccumulation is not expected.
(ECHA)

1-Naphthalenesulfonic acid, 3-diazo-3,4-dihydro-4-oxo-, 4-(1-methyl-1-phenylethyl)phenyl ester:

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

Partition coefficient: n-octanol/water	:	log Pow: 5,2 (25 °C) Method: OECD Test Guideline 117 Remarks: Potential bioaccumulation (IUCLID)
----------------------------------------	---	--------------------------------------------------------------------------------------------------------

Cresol:

Partition coefficient: n-octanol/water	:	log Pow: 2,33 Method: OECD Test Guideline 117 Remarks: Bioaccumulation is not expected. (ECHA)
----------------------------------------	---	------------------------------------------------------------------------------------------------------

formaldehyde:

Partition coefficient: n-octanol/water	:	log Pow: 0,35 (25 °C) Remarks: Bioaccumulation is not expected.
----------------------------------------	---	--------------------------------------------------------------------

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
------------	---	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Components:

2-methoxy-1-methylethyl acetate:

Assessment	:	Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.
------------	---	-------------------------------------------------------------------------------------------------------------

formaldehyde:

Assessment	:	Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.
------------	---	-------------------------------------------------------------------------------------------------------------

12.6 Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation
------------	---	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste should not be disposed of by release to sewers.

SECTION 14: Transport information

Air transport (IATA)

14.1. UN/ID No. : UN 1993
14.2. Proper shipping name : Flammable liquid, n.o.s.
(2-methoxy-1-methylethyl acetate)
14.3. Class : 3
14.4. Packing group : III
14.5. Environmentally hazardous : --
14.6. Special precautions for user : no

Sea transport (IMDG)

14.1. UN number : UN 1993
14.2. Proper shipping name : FLAMMABLE LIQUID, N.O.S.
(2-methoxy-1-methylethyl acetate)
14.3. Class : 3
14.4. Packing group : III
14.5. Environmentally hazardous : --
14.6. Special precautions for user : yes
EmS Code : F-E, S-E
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

Land transport (ADR/RID)

14.1. UN number : UN 1993
14.2. Proper shipping name : FLAMMABLE LIQUID, N.O.S.
(2-methoxy-1-methylethyl acetate)

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

14.3. Class	:	3
14.4. Packing group	:	III
14.5 Environmentally hazardous	:	--
14.6 Special precautions for user	:	yes
Tunnel restriction code	:	(D/E)

Inland waterway transport (ADN)

ADN Classification : Not Assigned

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 formaldehyde (Number on list 72, 28)
--------------------------------------------------------------------------------------------------------------------------------------------	---	-------------------------------------------------------------------------------------------------------------------------------------------

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
-------------------------------------------------------------------------------------------	---	----------------

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
-------------------------------------------------------------------------	---	----------------

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
---------------------------------------------------------------------	---	----------------

REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
-----------------------------------------------------------------	---	----------------

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P5c	FLAMMABLE LIQUIDS
---------------------------------------------------------------------------------------------------------------------------------------------------------	-----	-------------------

Storage class (TRGS 510)	:	3, Flammable liquids
--------------------------	---	----------------------

Other regulations:

Take note of Dir 94/33/EC on the protection of young people at work.

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of H-Statements

H226	: Flammable liquid and vapour.
H301	: Toxic if swallowed.
H311	: Toxic in contact with skin.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H330	: Fatal if inhaled.
H336	: May cause drowsiness or dizziness.
H341	: Suspected of causing genetic defects.
H350	: May cause cancer.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Carc.	: Carcinogenicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Muta.	: Germ cell mutagenicity
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified;

Document

according to Regulation (EC) No. 1907/2006

AZ 10XT (220cP) PHOTORESIST

Version: 1.1

Product number: 583527

Revision Date: 21.12.2023

Print Date: 22.12.2023

NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm³).

Classification of the mixture:

Flam. Liq. 3

H226

STOT SE 3

H336

Classification procedure:

Based on product data or assessment

Calculation method

Disclaimer

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

REG_EU / EN