

Revision date: 28.02.2020
Replacement of version 0016 of 07.01.2019

Version: 0017



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

1.1 Product identifier

Trade name **AzurGel Super
ready-to-use Staining Solution**

Product number anam0020
Item code GF10003
Formulation AzurGel Super
Formulation number 11/05

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

Appropriate use:
The product is used for electrophoresis in analytical laboratories.

1.3 Details of the supplier of the safety data sheet

anamed Elektrophorese GmbH
Ringstraße 4
D-64401 Gross-Bieberau
Telephone: +49-6162-809840
e-mail-address of the competent person responsible for this Safety Data Sheet:
urban-finking.gefstoff@t-online.de

Technical contact:

anamed Elektrophorese GmbH
Frau Dr. Vera Kreis
Telephone +49-6162-809840
Fax +49-6162-8098420

1.4 Emergency telephone number

Poison Control Center Mainz (Giftinformationszentrum Mainz) or local poison centers
Telephone +49-6131 19 2 40

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The mixture does not meet the criteria for a classification as hazardous in accordance with the current version of Regulation (EC) No 1272/2008.

2.2 Label elements

Hazard pictogram(s):	No pictogram
Signal word(s):	No signal word
Product identifier:	Not required
Hazard statements:	Not required
Precautionary statements:	Not required

Supplemental hazard information:

According to Annex II Part 2 section 2.10 of the Regulation (EC) No 1272/2008 the label on the packaging of **mixtures not intended for the general public** shall bear the statement:

EUH210 – "Safety data sheet available on request".

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2.3 Other hazards

Possible health hazard if not used correctly. Irritant effect on eyes and skin cannot be ruled out.
The product is classified as slightly hazardous to water.
The mixture does not contain any substances classified as PBT/vPvB in a concentration of 0.1% or more.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

REACH registration number:

- Citric acid: 01-2119457026-42-XXXX
- Ethanol: 01-2119457610-43-XXXX

3.2.1 Characterisation

The product consists of an aqueous ready-to-use solution for gel staining containing several special substances.

3.2.2 Substances presenting a health/environmental hazard within the meaning of Regulation (EC) No 1272/2008

CAS No	EC No	Identification	% by weight	Classification
5949-29-1	201-069-1	citric acid monohydrate	1 - < 5	Eye Irrit. 2; H319

See subsection 2.2 for further details. Full text of the hazard statements see subsection 16.2.

3.2.3 Substances for which Union workplace exposure limits have been assigned and which are not already included under point 3.2.2 (see also Section 8.)

No substances.

3.2.4 Additional information

Citric acid: national occupational exposure limit values for Germany have been assigned in accordance with TRGS 900 for the anhydrous substance (see subsection 8.1).

The product contains < 5% ethanol.

National occupational exposure limit values for various member states and/or DNEL/PNEC values have been assigned for this substance (see subsection 8.1).

SECTION 4: First aid measures**4.1 Description of first aid measures****4.1.1 General information**

Change contaminated clothing and wash before reuse.
Emergency eyewash should be provided in the immediate working surroundings.

4.1.2 In case of inhalation

Remove the casualty into fresh air.
In the event of symptoms take medical treatment.

4.1.3 In case of contact with skin

In case of contact with skin rinse thoroughly with plenty of water.

4.1.4 In case of contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do.

4.1.5 In case of ingestion

If swallowed, rinse mouth with water (only if the person is conscious).
Do not induce vomiting.
Let water be swallowed in little sips (dilution effect).
Put victim at rest. Take medical treatment immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effect on eyes and skin cannot be ruled out.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No information available.

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SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
5.1.1 Suitable extinguishing media
Water spray jet, carbon dioxide, dry powder.
- 5.1.2 Unsuitable extinguishing media**
Full water jet.
- 5.2 Special hazards arising from the substance or mixture**
In the event of fire the following can be released: carbon oxides.
Risk of formation of toxic pyrolysis products.
- 5.3 Advice for firefighters**
Wear self-contained breathing apparatus.
Do not inhale explosion and combustion gases.
Cool endangered containers with water spray jet.
Fire residues and contaminated firefighting 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**
6.1.1 For non-emergency personnel
Ensure adequate ventilation. Use personal protective clothing.
Use respiratory protection if exposed to vapours.
Keep away from unprotected people.
- 6.1.2 For emergency responders**
For suitable fabric for personal protective clothing see Section 8.
- 6.2 Environmental precautions**
Do not discharge into the drains, the aquatic environment and soil.
- 6.3 Methods and material for containment and cleaning up**
Pick up with suitable material.
Dispose of absorbed material in accordance with the regulations.
Send in suitable containers for recovery or disposal.
Flush away residues with plenty of water.
- 6.4 Reference to other sections**
For personal protective equipment see also Section 8.
For disposal considerations see also Section 13.
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SECTION 7: Handling and storage

- 7.1 Precautions for safe handling**
7.1.1 Advice on safe handling
The normal safety precautions for handling of chemicals must be observed.
Avoid contact with eyes and skin.
Comply with the minimum standards in accordance with TRGS 500¹.
- 7.1.2 Advice on general occupational hygiene**
Do not inhale vapours. Avoid contact with eyes and skin.
At work do not eat, drink, smoke or take drugs.
Change contaminated clothing and wash before reuse.
Wash hands before breaks and after work.
Use barrier skin cream.
Emergency eyewash should be provided in the immediate working surroundings.
- 7.2 Conditions for safe storage, including any incompatibilities**
7.2.1 Advice on protection against fire and explosion
None.
- 7.2.2 Requirements for storage rooms and vessels**
Keep container tightly closed. Keep in a cool place.
- 7.2.3 Advice on storage compatibility**
The information about joint storage given in Table 2 of TRGS 510¹ must be observed.
- 7.2.4 Further information on storage conditions**
None.
- 7.2.5 Storage class (for Germany only)**
LGK 12 (non-combustible liquids) in accordance with TRGS 510¹.
- 7.3 Specific end use(s)**
The product is only intended for the uses mentioned under subsection 1.2.
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SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

CAS number	Identification	Limit values	Remarks
64-17-5	ethanol	1000 ppm / 1900 mg/m ³ 1000 ppm / 1907 mg/m ³ 1000 ppm / 1880 mg/m ³ 1000 ppm / 1900 mg/m ³ 500 ppm / 1000 mg/m ³ 1000 ppm / 1900 mg/m ³ 1000 ppm / 1900 mg/m ³ 200 ppm / 380 mg/m ³ 1900 mg/m ³ 1000 mg/m ³ 1900 mg/m ³ 1000 ppm / 1900 mg/m ³ 500 ppm / 960 mg/m ³ 500 ppm / 1000 mg/m ³ 500 ppm / 960 mg/m ³ 260 mg/m ³ 1000 ppm / 1920 mg/m ³ 2000 ppm / 3800 mg/m ³ 3000 ppm / 5639 mg/m ³ 2000 ppm / 3800 mg/m ³ 1000 ppm / 1900 mg/m ³ 1300 ppm / 2500 mg/m ³ 5000 ppm / 9500 mg/m ³ 800 ppm / 1520 mg/m ³ 7600 mg/m ³ 1000 ppm 5000 ppm / 9500 mg/m ³ 1000 ppm / 1920 mg/m ³ 1000 ppm / 1910 mg/m ³ 1000 ppm / 1900 mg/m ³ 1000 ppm / 1920 mg/m ³ 1900 mg/m ³	National limit values – eight hours Austria Belgium Czech Republic Denmark Estonia Finland France Germany Hungary Latvia Poland Romania Slovakia Sweden Switzerland The Netherlands United Kingdom National limit values – short term Austria Czech Republic Denmark Estonia Finland France Germany Hungary Ireland Romania Slovakia Spain Sweden Switzerland The Netherlands
77-92-9	citric acid	2 mg/m ³ (inhalable fraction and vapour) 2 mg/m ³ (inhalable fraction) 4 mg/m ³ (inhalable fraction and vapour) 4 mg/m ³ (inhalable fraction)	National limit values – eight hours Germany Switzerland National limit values – short term Germany Switzerland

DNEL values**Additional limit values for ethanol in accordance with the registration dossier:**

worker, long-term exposition: inhalation, systemic effect: 950 mg/m³
 worker, long-term exposition: dermal, systemic effect: 343 mg/kg_{bw}/d
 general population, long-term exposition: inhalation, systemic effect: 114 mg/m³
 general population, long-term exposition: dermal, systemic effect: 206 mg/kg_{bw}/d
 general population, long-term exposition: oral, systemic effect: 87 mg/kg_{bw}/d

PNEC values**Additional limit values for citric acid monohydrate in accordance with the information of the manufacturer/supplier:**

aquatic, fresh water: 0.44 mg/l
 aquatic, marine water: 0.044 mg/l
 aquatic, sewage treatment plant: 1000 mg/l
 sediment, fresh water: 34.6 mg/kg_{dw}
 sediment, marine water: 3.46 mg/kg_{dw}
 soil environment: 33.1 mg/kg_{dw}

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(continued from 8.1 Control parameters)

Additional limit values for ethanol in accordance with the registration dossier:

aquatic, fresh water:	0.96 mg/l
aquatic, marine water:	0.79 mg/l
aquatic, intermittent release:	2.75 mg/l
aquatic, sewage treatment plant:	580 mg/l
sediment, fresh water:	3.6 mg/kg _{dw}
sediment, marine water:	2.9 mg/kg _{dw}
soil environment:	0.63 mg/kg _{dw}
secondary intoxication, food, oral:	380 mg/kg food

Preliminary measure of the concentration of ethanol with test tubes, e.g.:

Compur (549 210 Typ: 104 SA); Dräger (81 01 631 Typ: Alkohol 25/a); Auer (D5086818 Typ: Ethanol-100).

The methods for measuring chemical agents in workplace atmosphere must meet the general requirements of EN 482 and EN 689.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

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

See also subsection 7.1.

The effectiveness of suitable protective measures must be controlled.

Suitable assessment methods are described in the German TRGS 402¹.

8.2.2 Individual protection measures, such as personal protective equipment

Personal protective equipment needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled.

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer/supplier of the personal protective equipment.

8.2.2.1 Eye/face protection

Tightly fitting safety glasses in accordance with EN 166 (i.e. safety glasses with side shields).

8.2.2.2 Skin protection

Hand protection:

Protective gloves.

Suitable: protective gloves of butyl rubber (0.5 mm; breakthrough time ≥ 8 h);
protective gloves of fluorinated rubber (0.4 mm; breakthrough time ≥ 8 h).

Totally unsuitable: protective gloves of leather or textile.

Wear cotton undermitten if possible.

Under practical conditions, the maximum wearing period can be significantly lower.

The protective gloves to be used must comply with the specifications of the standard EN 374.

Body protection:

Closed work clothing.

8.2.2.3 Respiratory protection

With correct and proper use, and adequate ventilation of the working place, respiratory protection is not required.

In case of inadequate ventilation, and in case of formation of vapours/aerosols, wear respiratory protection.

Information on appropriate respirator protection is currently not available.

The limitations in wearing time according to the the DGUV Regel 112-190² (rule of the German employers' liability insurance association) for the use of respirators have to be observed.

8.2.2.4 Thermal hazards

Not relevant.

8.2.3 Environmental exposure controls

See Section 6.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	blue	
Odour:	odorless	
Odour threshold:	not relevant	
pH (as supplied):	not determined	
pH (of an aqueous solution):	not determined	
Melting point/freezing point (°C):	not determined	
Boiling point and boiling range (°C):	not determined	
Flash point (°C), closed cup:	not relevant	
Evaporation rate:	no data available	
Flammability (solid, gas):	not relevant	
Upper flammability or explosive limit:	not relevant	
Lower flammability or explosive limit:	not relevant	
Vapour pressure (20°C) (mbar):	no data available	
Vapour density (20°C):	no data available	
Density (g/cm ³):	not determined	
Relative density:	not determined	
Solubility in water:	miscible	
Soluble in:	not determined	
Partition coefficient: n-octanol/water:	- 1.72 (20°C)	(citric acid, anhydrous substance) (LOGKOW® database)
	- 0.30	(ethanol) (LOGKOW® database)
Auto-ignition temperature (°C):	no data available	
Decomposition temperature (°C):	no data available	
Viscosity:	no data available	
Explosive properties:	not explosive	
Oxidising properties:	not relevant	

9.2 Other information

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available for the mixture.

10.2 Chemical stability

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

When used as intended, no hazardous reactions known.

10.4 Conditions to avoid

When used as intended, no hazardous reactions known.

10.5 Incompatible materials

No information available for the product.

10.6 Hazardous decomposition products

When used as intended, no hazardous decomposition products known.
For hazardous combustion products see subsection 5.2.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

The mixture has not been tested.

11.1.1 Acute toxicity

LD50 rat, oral	(mg/kg)	3000	(citric acid, anhydrous substance) (RTECS)
		10470	(ethanol) (OECD Test Guideline 401)
LD50 rat, dermal	(mg/kg)	> 2000	(citric acid, anhydrous substance)
			(OECD Test Guideline 402)
LC50 rat, inhalation	(mg/l/4h)	124.7; vapour	(ethanol) (OECD Test Guideline 403)

11.1.2 Skin corrosion/irritation

Irritant effect on skin (rabbit)		Slight irritations	(citric acid, anhydrous substance) (RTECS)
		Not irritating	(ethanol) (OECD Test Guideline 404)

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- 11.1.3 Serious eye damage/irritation**
Irritant effect on eyes (rabbit) Severe irritations (citric acid, anhydrous substance) (RTECS)
Eye irritation (ethanol) (OECD Test Guideline 405)
- 11.1.4 Respiratory or skin sensitisation**
The mixture is not classified.
Sensitisation test (Magnusson and Kligman): Negative (ethanol) (IUCLID)
- 11.1.5 Germ cell mutagenicity**
The mixture does not contain substances classified as germ cell mutagens.
- 11.1.6 Carcinogenicity**
The mixture does not contain substances classified as carcinogenic.
- 11.1.7 Reproductive toxicity**
The mixture does not contain substances classified as toxic for the reproduction.
- 11.1.8 Specific target organ toxicity (STOT)-single exposure**
The mixture does not contain substances classified as being a specific target organ toxicant after single exposure.
- 11.1.9 Specific target organ toxicity (STOT)-repeated exposure**
The mixture is not classified.
NOAEL rat (female), oral (mg/kg_{bw}/d) 1730 (ethanol) (OECD Test Guideline 404)
target organ: liver
NOAEL rat (male),
inhalation (mg/l/20d) > 20 (ethanol) (OECD Test Guideline 403)
- 11.1.10 Aspiration hazard**
The mixture does not contain aspiration toxicants.
- 11.1.11 Symptoms related to the physical, chemical and toxicological characteristics**
Irritant effect on eyes and skin cannot be ruled out if the product is not used correctly.
- 11.1.12 Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Irritant effect on eyes and skin cannot be ruled out if the product is not used correctly.

SECTION 12: Ecological information

- 12.1 Toxicity**
- Aquatic toxicity**
- | | | |
|---------------------|----------------|--|
| 96 h LC50 (fish) | 440 - 760 mg/l | (Leuciscus idus; golden orfe) (IUCLID)
(citric acid, anhydrous substance) |
| | 13000 mg/l | (Onchorhynchus mykiss; rainbow trout)
(ethanol) (OECD Test Guideline 203) |
| 48 h EC50 (daphnia) | 12340 mg/l | (Daphnia magna)
(ethanol) (ASTM-E729-80) |
| 72 h IC50 (algae) | 275 mg/l | (Chlorella vulgaris; green algae)
(ethanol) (OECD Test Guideline 201) |
- Behaviour in sewage works:**
Treat by state-of-the-art technology before discharging into drains.
- 12.2 Persistence and degradability**
The product has not been tested.
Citric acid:
biodegradation 98%/2d (OECD Test Guideline 302 B); readily biodegradable.
Ethanol:
biodegradation 97%/28 d (OECD Test Guideline 301 B); readily biodegradable.
- | | |
|---|---|
| Chemical oxygen demand (COD) | 685 mg/g (citric acid, anhydrous substance)
(external safety data sheet) |
| | 1990 mg/g (ethanol) (IUCLID) |
| Biochemical oxygen demand (BOD ₅) | 481 mg/g (citric acid, anhydrous substance)
(external safety data sheet) |
| | 2100 mg/g (ethanol) (external safety data sheet) |
| Total oxygen demand (TOD) | 686 mg/g (citric acid, anhydrous substance)
(external safety data sheet) |
| | 74% from TOD 5 d (ethanol) (IUCLID) |
| AOX-hint | Not to apply. |
- 12.3 Bioaccumulative potential**
- | | |
|---|--|
| Partition coefficient n-octanol/water: | - 1.72 (20°C) (citric acid, anhydrous substance)
(LOGKOW® database) |
| | - 0.3 (ethanol) (LOGKOW® database) |
| Ethanol: bioconcentration factor (BCF): | 3.2 mg/l |
- Low potential to bioaccumulate (log Pow < 3).
- 12.4 Mobility in soil**
The product has not been tested.
- 12.5 Results of PBT and vPvB assessment**
The mixture does not contain any substances classified as PBT/vPvB in a concentration of 0.1% or more.

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12.6 Other adverse effects

Ozone depletion potential No data available.

Photochemical ozone creation potential No data available.

Global warming potential No data available.

The product is classified as slightly hazardous to water.

Contains according to the formulation following heavy metals and compounds of EC-Directives 2006/11/EC and 80/68/EEC:

None.

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

Waste disposal according to official state regulations.

Consult the local waste disposal expert about waste disposal.

Sewage disposal must be avoided.

Disposal operations/recovery operations according to Directive 2008/98/EC

Disposal operations: D 9 Physico-chemical treatment

Recovery operations: R 3 Recycling/reclamation of organic substances which are not used as solvents

Properties of waste which render it hazardous in accordance with Annex III of Directive 2008/98/EC

Not relevant.

13.1.1 Product / unused product

Waste disposal corresponding to European Waste Catalogue. Wastes must be classified with respect to their origin and depending on different processing steps. The waste codes mentioned as follows are only constituted as our recommendations. Referring to the particular case they should be completed or revised.

EC waste code: 16 05 09

Waste notation: Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

13.1.2 Contaminated packaging

Recommendation: Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent: Water

Packaging that cannot be cleaned:

EC waste code: 15 01 06

Waste notation: Mixed packaging

SECTION 14: Transport information**14.1 UN number**

No dangerous good in accordance with the UN Model Regulations (ADR/RID/ADN/IMDG/ICAO/IATA).

14.2 UN proper shipping name

Not relevant.

14.3 Transport hazard class(es)

Not relevant.

14.4 Packing group

Not relevant.

14.5 Environmental hazards

Not relevant.

14.6 Special precautions for user

Not relevant.

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

Not relevant.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1 Information regarding relevant Union safety, health and environmental provisions**

Regulation (EC) No 1907/2006:

The mixture does not contain substances classified as substances of very high concern (SVHC) in accordance with Article 57 of the regulation.

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15.1.2 Information regarding national laws/national measures that may be relevant (for Germany only)

Restriction of occupation:	Not relevant
Major-accident Ordinance:	Not relevant
Fire and explosion hazards:	Not relevant
Regulation on clean air (TA Luft):	Not relevant
Water hazard class:	WGK 1 – slightly hazardous to water (deduction of the WGK according to Annex 1 No 5.2 AwSV) ⁴ The German Ordinance on facilities for handling substances that are hazardous to water (AwSV) has to be observed

German Ordinance on Hazardous Substances
(in accordance with EC-Directive 98/24/EC): Article 6 must be observed
Articles 7, 8 and 14 must be observed as required

Technical Rules for Hazardous Substances¹: TRGS 400, 500, 510, 900
Rules of the employers' liability insurance association²: DGUV Regel 112-190, 112-192, 112-195

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for a substance in the product.

SECTION 16: Other information

- 16.1 Keeping (restrictions)** Not relevant
Supply University (college, academy), industry consumer
- 16.2 Full text of the hazard statements referred to under subsection 2.1 and point 3.2.2 of the Safety Data Sheet**
H319 Causes serious eye irritation.
- 16.3 Key to abbreviations and acronyms used in the safety data sheet**
- | | |
|------------|--|
| ADN: | Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure |
| ADR: | Accord européen relatif au transport international des marchandises dangereuses par route |
| AOX: | adsorbable organically bound halogens |
| ASTM: | American Society for Testing and Materials |
| AwSV: | Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
(Ordinance on facilities for handling substances that are hazardous to water) |
| DNEL: | Derived No-Effect Level |
| ICAO/IATA: | International Civil Aviation Organisation/International Air Transport Association-Dangerous Goods Regulations |
| IMDG-Code: | International Maritime Dangerous Goods-Code |
| IUCLID: | International Uniform Chemical Information Database
wassergefährdende Stoffe) |
| LGK: | Lagerklasse (storage class) |
| OECD: | Organisation for Economic Co-operation and Development |
| PBT: | persistent, bioaccumulative and toxic |
| PNEC: | Predicted No-Effect Concentration |
| RID: | Règlement international concernant le transport des marchandises dangereuses par chemin de fer |
| RTECS: | Registry of Toxic Effects of Chemical Substances |
| TRGS: | Technische Regeln für Gefahrstoffe (Technical Rules for Hazardous Substances) |
| vPvB: | very persistent and very bioaccumulative |
- 16.4 Literature references and sources for data**
- ¹ <http://www.baua.de>
² <http://www.arbeitssicherheit.de>
³ <http://www.umweltbundesamt.de>
- 16.5 Method used for the classification of the mixture**
The product does not meet the criteria for a classification as hazardous in accordance with the current versions of Directive 1999/45/EC and Regulation (EC) No 1272/2008.
- 16.6 Changes which have been made to the previous version of the safety data sheet**
Revised sections: 1.3, 8.1, 9.1, 12.2, 12.3, 15.1.1, 15.1.2, 16.4

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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