Safety Datasheets

999.00.002/003

999.00.004/005

999.00.006/007/019/020

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The information contained herein is based on the present state of knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a guarantee of the properties of the product

1 Compositions

In this document we describe the composition of our solutions, the precentages of each component contained, a CAS (Chemical Abstarcts Service) reference and the safety datasheet of each components contained.
It's the user responsibility to read the following information and take the correct precautions for the use of these substances.

1.1 Transparent gelatine (999.00.004 for 50ml and 999.00.005 for 250ml)

Composition for 1000ml:

Name	CAS n.	Unit	Quantity
Difco Gelatine	9000-70-8	gr	80
Glycerine 99,5%	56-81-5	ml	440
Liquid Phenol	108-95-2	ml	0,9
Distilled water	----	ml	as necessary

1.2 Gelatine with fuchsine (999.00.002 for 50ml and 999.00.003 for 250ml)

Composition for 1000ml:

Name	CAS n.	Unit	Quantity
Difco Gelatine	9000-70-8	gr	80
Glycerine 99,5%	56-81-5	ml	440
Liquid Phenol	108-95-2	ml	0.9
Basic Fuchsine	632-99-5	ml	1,5
Distilled water	----	ml	as necessary

1.3 Gelatine with fuchsine without Phenol (on request).

Composition for 1000ml:

Name	CAS n.	Unit	Quantity
Difco Gelatine	9000-70-8	gr	80
Glycerine 99,5%	56-81-5	ml	440
Basic Fuchsine	632-99-5	ml	1,5
Distilled water	----	ml	as necessary

1.4 Silicone pure(999.00.006 for 50ml and 999.00.007 for 250ml)

Composition for 1000ml:

Name	CAS n.	Unit	Quantity
Silicone fluid 1.000.000 cSt	9016-00-6	gr	20

For this silicone we will provide pure silicon in quantity sufficient for the different volume 50ml or 250ml.

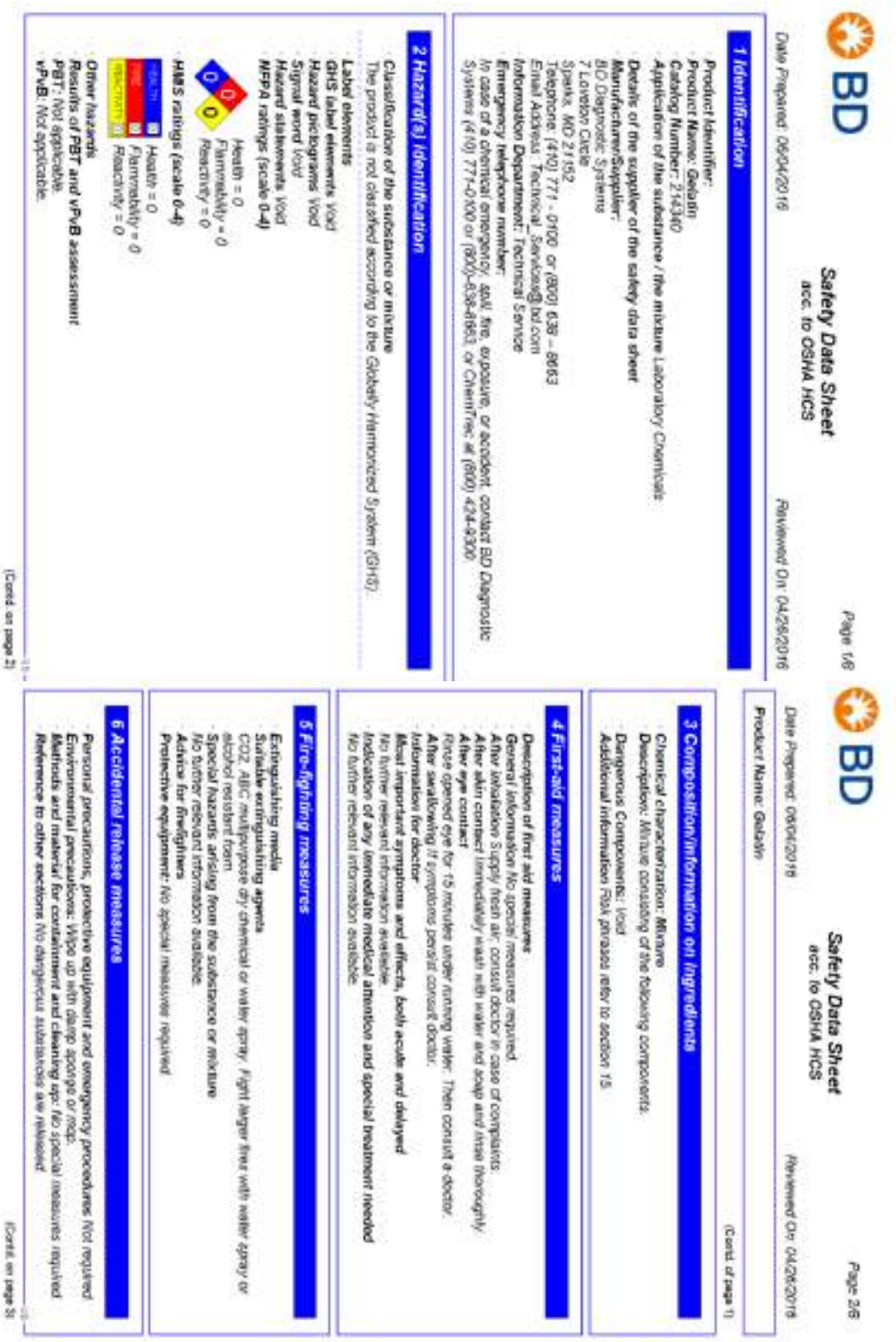
1.5 Silicone (999.00.0019 for 50ml and 999.00.020 for 250ml)

Composition for 1000ml:

Name	CAS n.	Unit	Quantity
Silicone fluid 1.000.000 cSt	9016-00-6	gr	20
Diethyl Ether	60-29-7	ml	1000

2 Safety datasheet of single components.

2.1 Difco Gelatine



BD

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 06/04/2016 Reviewed On: 04/26/2016 Page 1/6

1 Identification

· **Product Identifier:**
· **Product Name: Gelatin**
· **Catalog Number: 214340**
· **Application of the substance / the mixture** Laboratory Chemicals
· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771 - 0100 or (800) 638 – 8663
Email Address: Technical_Services@ bd.com
· **Information Department:** Technical Service
· **Emergency telephone number:**
In case of a chemical emergency (spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **NFPA ratings (scale 0-4)**

Health = 0
Flammability = 0
Reactivity = 0

· **HMIS ratings (scale 0-4)**

HEALTH 0
FIRE 0
REACTIVITY 0

Health = 0
Flammability = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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Date Prepared: 06/04/2016 Reviewed On: 04/26/2016 Page 2/6

Product Name: Gelatin

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3 Composition/information on ingredients

· **Chemical characterization: Mixture**
· **Description:** Mixture consisting of the following components.
· **Dangerous Components:** Void
· **Additional information** Risk phrases refer to section 15.

4 First-aid measures

· **Description of first aid measures**
· **General information** No special measures required.
· **After inhalation** Supply fresh air; consult doctor in case of complaints.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for 15 minutes under running water. Then consult a doctor.
· **After swallowing** If symptoms persist consult doctor.
· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents**
CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Wipe up with damp sponge or mop.
· **Methods and material for containment and cleaning up:** No special measures required.
· **Reference to other sections** No dangerous substances are released.

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Product Name: Gelatin

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7 Handling and storage

Handling
Precautions for safe handling No special measures required.
Information about protection against explosions and fires:
No special measures required.

Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
Store away from oxidizing agents.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
No further data; see Section 7.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal Protective Equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands:

Chemical resistant gloves (i.e. nitrile, or equivalent).

Eye protection: Safety glasses
Body protection: Protective work clothing (lab coat).

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Date Prepared: 06/04/2016 Reviewed On: 04/26/2016 Page 4/8

Product Name: Gelatin

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9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Solid
	Powder
Color:	Beige
Odor:	Characteristic
Change in condition	Undetermined
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Flash point:	Not applicable
Flammability (solid, gaseous):	Product is not flammable.
Danger of explosion:	Product does not present an explosion hazard.
Density:	Not determined
Solubility in / Miscibility with	
Water:	Soluble
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: Incompatible material: strong oxidizers.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: No irritating effect.
on the eye: No irritating effect.
Sensitization: No sensitizing effects known.

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Product Name: Gelatin

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· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
The product is not subject to OSHA classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
· **NTP (National Toxicology Program)**
None of the ingredients is listed.
· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
Mobility in soil No further relevant information available.
· **Ecotoxical effects:**
· **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Smaller quantities can be disposed of with solid waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
This product is not considered a RCRA hazardous waste.

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Product Name: Gelatin

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· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to state and federal regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, ADN, IMDG, IATA**	Void
· **UN proper shipping name**	
· **DOT, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)**	
· **DOT, ADN, IMDG, IATA**	
· **Class**	Void
· **Packing group**	
· **DOT, IMDG, IATA**	Void
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	If "void" appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.
· **UN "Model Regulation":**	Void

15 Regulatory information

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

· **SARA Section 355 (extremely hazardous substances)**
None of the ingredients is listed.
· **SARA Section 313 (specific toxic chemical listings)**
None of the ingredients is listed.

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Safety Datasheet

Product code: 999.00.002 – 999.00.003 – 999.00.004 – 999.00.005 – 999.00.006 – 999.00.007 -999.00.019 – 999.00.020

Date: 10/06/2020
Revision: 1.01
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Product Name: Gelatin

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· **TSCA (Toxic Substances Control Act)**
All ingredients are listed.
· **California Proposition 65 - Chemicals known to cause cancer**
None of the ingredients is listed
· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed
· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed
· **California Proposition 65 - Chemicals known to cause developmental toxicity:**
None of the ingredients is listed
· **Carcinogenic categories**
· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· **Department issuing SDS:**
Environmental Health & Safety
Created by Michael J. Spinazzola
· **Contact:** Technical Service Representative
· **Date of preparation / last revision** 06/04/2016 / -
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

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Product Name: Gelatin

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

2.2 Basic Fuchsine

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.02.2019 | Version number 8 | Revision: 13.02.2019

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

(Contd. of page 2)

Identification number(s)
EC number: 211-189-6

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation: In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Immediately wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse.
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing:
Do not induce vomiting; call for medical help immediately.
Call for a doctor immediately.
4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
Information for doctor: Show the doctor this Material Safety Data Sheet.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

General information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
5.1 Extinguishing media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
5.2 Special hazards arising from the substance or mixture
Nitrogen oxides (NOx)
In case of fire, the following can be released:
Sulphur dioxide (SO2)
Hydrogen chloride (HCl)
Carbon monoxide and carbon dioxide
In the absence of oxygen: Ammonia (NH3).
5.3 Advice for firefighters
Protective equipment: Do not inhale gases in case of fire or combustion.
Additional information Keep receptacles cool with water spray.

SECTION 6: Accidental release measures

General information: Use proper personal protective equipment as indicated in Section 8.
6.1 Personal precautions, protective equipment and emergency procedures
Avoid formation of dust.
If dust/ aerosols is formed, use personal protective equipment.
Ensure adequate ventilation
6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.02.2019 | Version number 8 | Revision: 13.02.2019

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

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6.3 Methods and material for containment and cleaning up:
Pick up mechanically.
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
For fine dusts use a vacuum cleaner.
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Provide suction extractors if dust is formed.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Keep unused containers tightly sealed.
Information about fire - and explosion protection:
The product is not flammable.
Keep respiratory protective device available.
7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.
8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: TLV not established.

DNELs		
Inhalative	DNEL (workers-local effects Acute)	48 mg/m3 (fishes)

Additional information: The lists valid during the making were used as basis.
8.2 Exposure controls
Personal protective equipment:
In case of making of powders or aerosol, use an aqualung with approved filter.
For a short period use a filtering apparatus suitable for the danger.
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Avoid contact with the eyes and skin.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.02.2019 Version number 8 Revision: 13.02.2019

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

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Respiratory protection:
Use suitable respiratory protective device only when aerosol or mist is formed.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device in case of insufficient ventilation.
The selected respiratory protection must comply with standard EN 136/140/143/145/149.
Protection of hands:
The selected protective gloves have to satisfy the specifications of REGULATION (EU) 2016/425 and the standard EN 374 derived from it.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

Rubber gloves
Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Thin, disposable gloves in PVC or PE.
Penetration time of glove material
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:

Tightly sealed goggles

Body protection: Protective work clothing
Limitation and supervision of exposure into the environment
In case of unintended release of the product: See section 6 of the Safety Data Sheet.
Risk management measures Keep good industrial hygiene.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
Molecular weight	337.85 g
Appearance:	
Form:	Crystalline powder
Colour:	Green
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/freezing point:	230 °C
Initial boiling point and boiling range:	Undetermined.
Flash point:	Not applicable.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.02.2019 Version number 8 Revision: 13.02.2019

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

(Contd. of page 4)

Respiratory protection:
Use suitable respiratory protective device only when aerosol or mist is formed.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device in case of insufficient ventilation.
The selected respiratory protection must comply with standard EN 136/140/143/145/149.
Protection of hands:
The selected protective gloves have to satisfy the specifications of REGULATION (EU) 2016/425 and the standard EN 374 derived from it.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

Rubber gloves
Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Thin, disposable gloves in PVC or PE.
Penetration time of glove material
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:

Tightly sealed goggles

Body protection: Protective work clothing
Limitation and supervision of exposure into the environment
In case of unintended release of the product: See section 6 of the Safety Data Sheet.
Risk management measures Keep good industrial hygiene.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Molecular weight 337.85 g
Appearance:
Form: Crystalline powder
Colour: Green
Odour: Odourless
Odour threshold: Not determined.
pH-value: Not applicable.
Change in condition
Melting point/freezing point: 230 °C
Initial boiling point and boiling range: Undetermined.
Flash point: Not applicable.

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CARLO ERBA

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.02.2019 | Version number 8 | Revision: 13.02.2019

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

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Flammability (solid, gas):	Product is not flammable.
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Not determined.
Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with water:	Not determined.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity See 10.5
10.2 Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products:
Hydrogen chloride (HCl)
Carbon monoxide, Carbon dioxide.
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met.
Primary irritant effect:
Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye irritation.
Ingestion: It can be harmful if swallowed.
Inhalation:
May be harmful if inhaled. May cause respiratory tract irritation.
Harmful if inhaled. May cause respiratory tract irritation.
May cause respiratory irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Other information (about experimental toxicology): No further relevant information available.

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according to 1907/2006/EC, Article 31

Printing date 13.02.2019 | Version number 8 | Revision: 13.02.2019

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

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Additional toxicological information:
There is a suspect of carcinogenic activity: the animal experiments can not be easy extrapolated to humans. However handle the product with the right care.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity
Suspected of causing cancer.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure
May cause respiratory irritation.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
Method
Ecological information Not available
Other information: The product is hardly biodegradable.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Reutilize if possible or contact a waste processors for recycling or safe disposal.
Waste disposal key:
The European Union does not establish uniform rules for the disposal of chemical waste, which are special waste. Their treatment and elimination of the domestic legislation of each country. So, in each case, you should contact the relevant authorities, or those companies legally authorized for elimination of waste.
2014/955/UE: Council Decision of 18 December 2014 amending the list of wastes contained in Decision 2000/532/EC.
Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.
Uncleaned packaging:
The containers and packaging materials contaminated with dangerous substances or preparations, have the same treatment of products.
Directive 94/62/EC of the European Parliament and the Council of 20 December 1994 on packaging and packaging waste.
Recommendation:
Disposal must be made according to official regulations.

(Contd. on page 8)

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

(Contd. of page 7)

Wash with solvents to be incinerated.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

14.1 UN-Number **ADR, ADN, IMDG, IATA**	- Void
14.2 UN proper shipping name **ADR, ADN, IMDG, IATA**	- Void
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA **Class**	Void
14.4 Packing group **ADR, IMDG, IATA**	Void
14.5 Environmental hazards: **Marine pollutant:**	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
UN "Model Regulation":	Void

SECTION 15: Regulatory information

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

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.
National regulations:

Information about limitation of use: -
Waterhazard class: Water danger class 3 (Assessment by list): extremely hazardous for water.
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Q.A./Normative
References
ECDIN (Environmental Chem. Data and Information Network)
IUCLID (International Uniform Chemical Information Database)
NIOSH - Registry of Toxic Effects of Chemical Substances
Roth - Wassergefährdende Stoffe
Verschueren - Handbook of Environmental Data on Organic Chemicals
ChemDAT - Safety Data Sheets from E.Merck on CD-ROM
Merian - Metals and their compounds in the environment

(Contd. on page 9)

Trade name: (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylanilinehydrochloride

(Contd. of page 8)

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
RCR: Risk Characterisation Ratio
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Sources
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006, REACH, in latest valid version.
Regulation (EC) N° 1272/2008 of the European Parliament and of the Council of 16 December 2008, CLP, in the latest valid version.
Globally Harmonized System, GHS
ADR2019
*** Data compared to the previous version altered.**
The sections where alterations took place are marked with an asterisk in the left border.

2.3 Phenol

Sigma-Aldrich.

SAFETY DATA SHEET

Version 6.3
Revision Date 24.10.2019
Print Date 05.12.2019

GLOBAL BUSINESS - NO COUNTRY SPECIFIC DATA - NO GBL DATA

according to Regulation (EC) No. 1907/2006

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

1.1 Product identifiers

Product name : Phenol

Product Number : 16018
Brand : Sigma-Aldrich
REACH No. : 01-2119471329-32-XXXX
CAS-No : 108-95-2

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Merck Life Science S.r.l.
Via Monte Rosa 93
I-20149 MILANO

Telephone : +39 02 3341 7340
Fax : +39 02 3801 0737
E-mail address : servizotecnico@merckgroup.com

1.4 Emergency telephone number

Emergency Phone # : 800-789-767 (CHEMTREC Italia)
+39-02-4555-7031 (CHEMTREC chiamate internazionali)
+39 02-6610-1029 (Centro Antiveleni Niguarda Ca' Granda - Milano)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Skin corrosion (Sub-category 1B), H314
Serious eye damage (Category 1), H318
Germ cell mutagenicity (Category 2), H341
Specific target organ toxicity - repeated exposure (Category 2), Nervous system, Kidney, Liver, Skin, H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

Sigma-Aldrich - 16018

The life science business of Merck operates as MilliporeSigma in the US and Canada

Page 1 of 9

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word : Danger

Hazard statement(s)
H301 + H311 + H331 : Toxic if swallowed, in contact with skin or if inhaled.
H314 : Causes severe skin burns and eye damage.
H341 : Suspected of causing genetic defects.
H373 : May cause damage to organs (Nervous system, Kidney, Liver, Skin) through prolonged or repeated exposure.

Precautionary statement(s)
P201 : Obtain special instructions before use.
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330 : IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P301 + P330 + P331 : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 + P310 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Supplemental Hazard Statements : none

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.
Vesicant., Rapidly absorbed through skin.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms : Hydroxybenzene

Formula : C_6H_6O

Molecular weight : 94.11 g/mol

Component		Classification	Concentration
Phenol			
	CAS-No. : 108-95-2	Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Muta. 2; STOT RE 2; H301, H331, H311, H314, H318, H341, H373	>= 90 - <= 100 %
	EC-No. : 203-632-7		
	Index-No. : 604-001-00-2		
	Registration number : 01-2119471329-32-XXXX		
		Concentration limits: >= 3 %: Skin Corr. 1B, H314; 1 - < 3 %: Skin Irrit. 2, H315; 1 - < 3 %:	

Sigma-Aldrich - 16018

The life science business of Merck operates as MilliporeSigma in the US and Canada

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	Eye Irrit. 2; H319	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Handle and store under inert gas. Light sensitive.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 480 min
Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 120 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used as solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: clear, liquid Colour: colourless, light yellow
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 38 - 43 °C
f)	Initial boiling point and boiling range	180 °C at 1013 hPa
g)	Flash point	79 °C - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 8.6 %(V) Lower explosion limit: 1.8 %(V)
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	1,060 g/cm3
n)	Water solubility	completely miscible
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	605 °C
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong bases, Strong oxidizing agents, Strong acids

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB 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.

12.6 Other adverse effects
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 2821 IMDG: 2821 IATA: 2821

14.2 UN proper shipping name
ADR/RID: PHENOL SOLUTION
IMDG: PHENOL SOLUTION
IATA: Phenol solution

14.3 Transport hazard class(es)
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group
ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

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 referred to under sections 2 and 3.
H301 Toxic if swallowed.
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

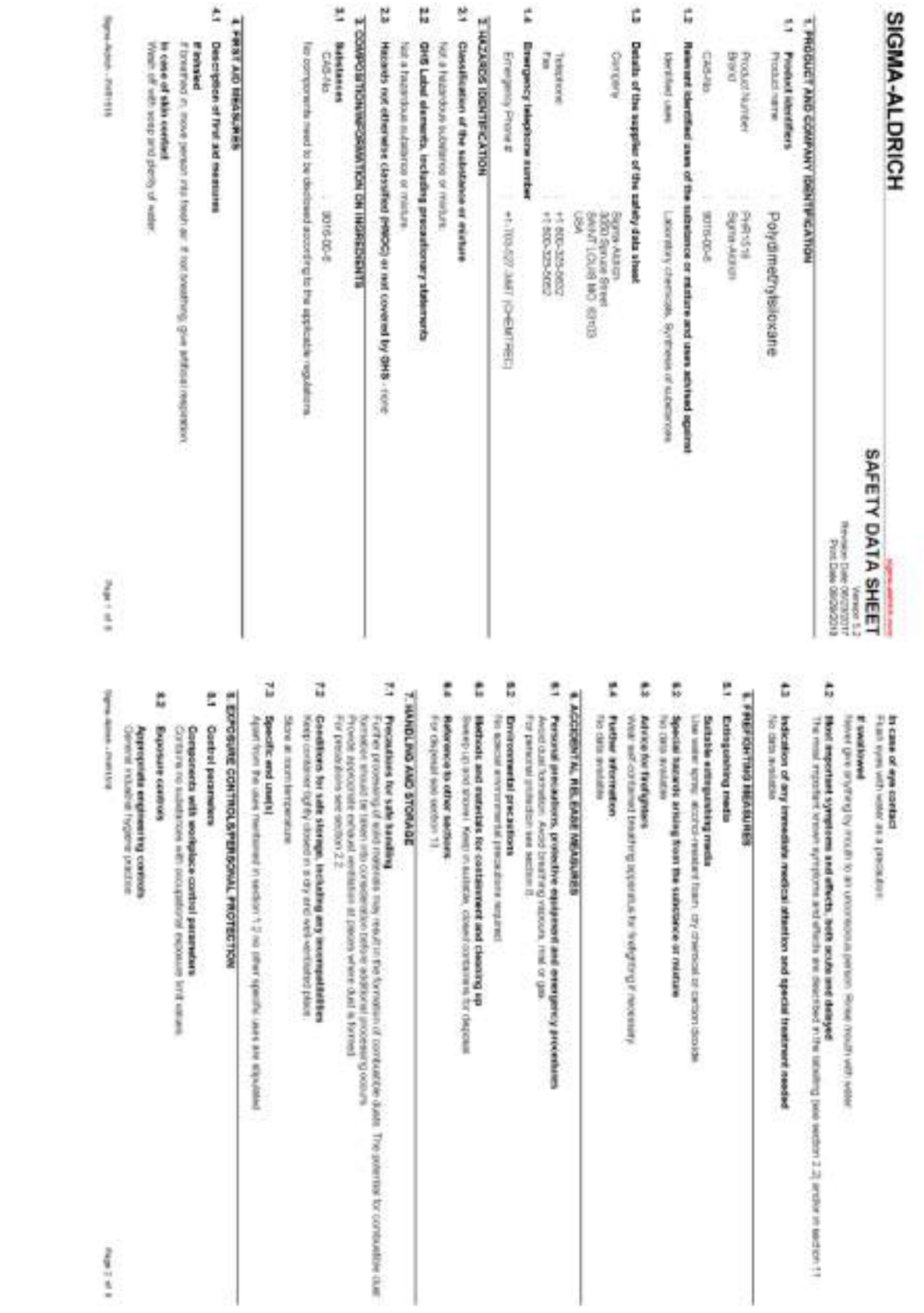
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mtbbrandinglg@sial.com.

2.4 Pure Silicone



SIGMA-ALDRICH

SAFETY DATA SHEET

Version 5.2
Revision Date 06/23/2017
Print Date 06/26/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers
Product name: Polydimethylsiloxane
Product Number: 378615
Brand: Sigma-Aldrich
CAS-No.: 9016-00-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet
Company: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052

1.4 Emergency telephone number
Emergency Phone #: +1 703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements
Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
CAS-No.: 9016-00-6
No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of first aid measures
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact
Wash off with soap and plenty of water.
In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing vapours, mist or gas.
For personal protection see section 8.

6.2 Environmental precautions
No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Store at room temperature.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: clear, liquid Colour: colourless
b)	Odour	odourless
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	No data available
f)	Initial boiling point and boiling range	No data available 327 °C (621 °F) - closed cup
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	7 hPa (5 mmHg) at 20 °C (68 °F)
l)	Vapour density	No data available
m)	Relative density	0.000 g/cm3
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available

No data available

Inhalation: No data available

Inhalation: No data available

Dermal: No data available

Dermal: No data available

No data available

No data available

Skin corrosion/irritation
No data available

No data available

Serious eye damage/eye irritation
No data available

No data available

Respiratory or skin sensitisation
No data available

No data available

Germ cell mutagenicity
No data available

No data available

Carcinogenicity
Carcinogenicity - Rat - Implant
Tumorigenic/carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration Tumors. Endocrine Tumors.

IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available
No data available

Reproductive toxicity - Rat - Subcutaneous
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG

Sigma-Aldrich - PHR1516 Page 5 of 6

Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Poly(oxy(dimethylsilylene))	9016-00-6	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Poly(oxy(dimethylsilylene))	9016-00-6	

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating

Health hazard:	0
Chronic Health Hazard:	
Flammability:	1
Physical Hazard	0

NFPA Rating

Health hazard:	0
Fire Hazard:	1
Reactivity Hazard:	0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.2 Revision Date: 08/23/2017 Print Date: 09/29/2019

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2.5 Diethyl Ether

PanReac AppliChem
ITW Reagents

Safety data sheet
according to 1907/2006/EC, Article 31

Page 1/11
Printing date 06.07.2020
Revision: 06.07.2020
Version number 9

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

· **1.1 Product identifier**
· **Trade name: Diethyl ether**
· **Article number:** 2770
· **CAS Number:**
60-29-7
· **EC number:**
200-467-2
· **Index number:**
603-022-00-4
· **Registration number** 01-2119535785-29-XXXX
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· **Product category** PC19 Fuels
· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC16 Use of fuels
· **Environmental release category**
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC6b Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

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· **Application of the substance / the mixture**
Biochemistry
Chemical analytics
Laboratory chemical
· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
PANREAC QUIMICA S.L.U.
C/Garraf 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallés (Barcelona)
Tel. (+34) 937 489 400
Fax (+34) 937 489 401
e-mail: producto.safety@panreac.com
· **Further information obtainable from:** email: producto.safety@panreac.com
· **1.4 Emergency telephone number:**
Simple telephone number for emergency calls: 112 (EU)
Tel. (+34) 937 489 489

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Flam. Liq. 1 H224 Extremely flammable liquid and vapour.
Acute Tox. 4 H302 Harmful if swallowed.
STOT SE 3 H336 May cause drowsiness or dizziness.
· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS02 GHS07
· **Signal word** Danger
· **Hazard statements**
H224 Extremely flammable liquid and vapour.
H302 Harmful if swallowed.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Additional information:**
EUH019 May form explosive peroxides.
EUH066 Repeated exposure may cause skin dryness or cracking.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.

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· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**
· **CAS No. Description**
60-29-7 Diethyl ether
· **Identification number(s)**
· **EC number:** 200-467-2
· **Index number:** 603-022-00-4

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Position and transport stably in side position.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Involve doctor immediately.
· **After inhalation:**
Supply fresh air.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Seek immediate medical advice.
· **After skin contact:**
Call a doctor immediately.
Wash off with plenty of water.
Immediately rinse with water.
Immediately remove any clothing soiled by the product.
· **After eye contact:**
Rinse opened eye for several minutes under running water.
Seek medical treatment.
· **After swallowing:**
Do not induce vomiting; call for medical help immediately.
Risk of aspiration!
make victim drink water (maximum of 2 drinking glasses)
· **4.2 Most important symptoms and effects, both acute and delayed** Dizziness
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Water spray
Foam
CO_2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.
Vapours are heavier than air and may spread along floors.
Beware of backfiring.

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· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.
Wear fully protective suit.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Contain escaping vapours with water.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Avoid substance contact.
Do not inhale steams/aerosols.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents.
Clean up affected area.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Use only in well ventilated areas.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
· **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
Use only in explosion protected area.
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:**
Store away from oxidising agents.
Away from sources of ignition and heat.
· **Further information about storage conditions:**
Keep container tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Open receptacle only under localised extractor facilities.
Store receptacle in a well ventilated area.
Store only outside or in explosion proof rooms.

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Avoid contact with air / oxygen (formation of peroxide).
Store under lock and key and with access restricted to technical experts or their assistants only.
Accessible for authorised persons only.
Recommended storage temperature: < 15°C
Storage class: 3
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

60-29-7 Diethyl ether

IOELV Short-term value: 616 mg/m³, 200 ppm
Long-term value: 308 mg/m³, 100 ppm

DNELs

Oral	Long-term - systemic effects, general population	15.8 mg/kg
Dermal	Long-term - systemic effects, worker	44 mg/kg
	Long-term - systemic effects, general population	15.8 mg/kg
Inhalative	Acute - systemic effects, worker	616 mg/m3
	Long-term - systemic effects, worker	308 mg/m3
	Long-term - systemic effects, general population	54.5 mg/m3

PNECs

Aquatic compartment - freshwater	2 mg/L
Aquatic compartment - marine water	0.2 mg/L
Aquatic compartment - sediment in freshwater	9.14 mg/kg
Aquatic compartment - sediment in marine water	0.914 mg/kg
Terrestrial compartment - soil	0.69 mg/kg
Sewage treatment plant	4.2 mg/L

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing.
Do not eat, drink, smoke or sniff while working.
Avoid contact with the eyes and skin.
Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or long exposure use self-contained respiratory protective device only when aerosol or mist is formed.
Use suitable respiratory protective device only when aerosol or mist is formed.
Filter: AX
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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For the permanent contact gloves made of the following materials are suitable:
Recommended thickness of the material: ≥ 0.7 mm
Fluorocaoutchouc rubber (Viton)
Value for the permeation: Level ≥ 480 min
As protection from splashes gloves made of the following materials are suitable:
Recommended thickness of the material: ≥ 0.7 mm
Fluorocaoutchouc rubber (Viton)
Value for the permeation: Level ≥ 480 min
Eye protection:

Tightly sealed goggles

Body protection:
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Colour: Colourless
Odour: Sweetish
Odour threshold: Not determined.
pH-value: Not determined.
Change in condition
Melting point/freezing point: -116.3 °C
Initial boiling point and boiling range: 35 °C
Flash point: -40 °C
Flammability (solid, gas): Not applicable.
Ignition temperature: 170 °C
Decomposition temperature: Not determined.
Auto-ignition temperature: Not determined.
Explosive properties: May form explosive peroxides
Explosion limits:
Lower: 1.7 Vol %
Upper: 36 Vol %
Vapour pressure at 20 °C: 587 hPa
Density at 20 °C: 0.71 g/cm³
Relative density: Not determined.
Vapour density: Not determined.
Evaporation rate: Not determined.
Solubility in / Miscibility with
water at 20 °C: 12 g/l
Partition coefficient: n-octanol/water: 1.05
Viscosity:
Dynamic at 20 °C: 0.233 mPas

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Kinematic:	Not determined.
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Forms explosive gas mixture with air.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
Warming. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
light
· **10.3 Possibility of hazardous reactions**
A risk of explosions and/or of toxic gas formation exists with the following substances:
azides, halogens, Halogen-halogen compounds, Non-metals, nonmetallic oxyhalides, Strong oxidizing agents, Chromium (VI) oxide, Halogen oxides, peroxide compounds, perchloric acid, perchlorates, nitric acid, nitrating acid, Oxygen, Ozone, Turpentine oils and / or turpentine oil substitutes, nitrates, metal chlorides
· **10.4 Conditions to avoid** Keep away from open flames, hot surfaces and sources of ignition.
· **10.5 Incompatible materials:**
oxygen
strong acids
oxidizing agent
Varios plastics
· **10.6 Hazardous decomposition products:** Peroxides

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if swallowed.
· **LD/LC50 values relevant for classification:**

· Components		Type	Value	Species
Oral	LD50	1,200 mg/kg (rat)		
Inhalative	LC50/4 h	97 mg/l (rat)		

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **After inhalation:** No irritant effect.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
May cause drowsiness or dizziness.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· Type of test	Effective concentration	Method	Assessment
EC50/48 h	1,360 mg/l (daphnia magna)		

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LC50/48 h	2,840 mg/l (fish)
LC50/96 h	2,560 mg/l (fish)
NOEC/72 h	100 mg/l (Algae)
NOEC (21 d)	100 mg/l (daphnia magna)

· **12.2 Persistence and degradability** The product is easily biodegradable.
· **12.3 Bioaccumulative potential** Does not accumulate in organisms.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	UN1155
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	DIETHYL ETHER (ETHYL ETHER)
· **14.3 Transport hazard class(es)**	
· **ADR**	
· **Class**	3 (F1) Flammable liquids.
· **Label**	3
· **IMDG, IATA**	
· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	I

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Product code: 999.00.002 – 999.00.003 – 999.00.004 – 999.00.005 – 999.00.006 – 999.00.007 -999.00.019 – 999.00.020

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· 14.5 Environmental hazards: Not applicable.
· 14.6 Special precautions for user Warning: Flammable liquids
· Hazard identification number (Kemler code): 33
· EMS Number: F-E,S-D
· Stowage Category E
· Stowage Code SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
· Transport/Additional information:
· ADR
· Limited quantities (LQ) 0
· Excepted quantities (EQ) Code: E3
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 300 ml
· Transport category 1
· Tunnel restriction code D/E
· IMDG
· Limited quantities (LQ) 0
· Excepted quantities (EQ) Code: E3
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation": UN 1155 DIETHYL ETHER (ETHYL ETHER), 3, I

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I Substance is not listed.
· Seveso category P5a FLAMMABLE LIQUIDS
· Qualifying quantity (tonnes) for the application of lower-tier requirements 10 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 50 t
· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemins de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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Flam. Liq. 1: Flammable liquids – Category 1
Acute Tox. 4: Acute toxicity – Inhal. – Category 4
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· Data compared to the previous version altered.

Annex: Exposure scenario

· Short title of the exposure scenario: Formulation and packing/repacking of substances and mixtures
· Sector of Use
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
· Product category PC13 Fuels
· Process category
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC16 Use of fuels
· Environmental release category
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
· Description of the activities / processes covered in the Exposure Scenario
See section 1 of the annex to the Safety Data Sheet.
· Conditions of use
· Duration and frequency 5 workdays/week.
· Physical parameters
· Physical state Fluid
· Concentration of the substance in the mixture Raw material.
· Used amount per time or activity ≤ 1 tons per day
· Other operational conditions
· Other operational conditions affecting environmental exposure No special measures required.
· Other operational conditions affecting worker exposure
Take precautionary measures against static discharge.
Keep away from sources of ignition - No smoking.
Indoor application.
Outdoor application.
· Other operational conditions affecting consumer exposure Keep out of the reach of children.
· Other operational conditions affecting consumer exposure during the use of the product
Not applicable.

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· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures**
Provide explosion-proof electrical equipment.
Ensure that suitable extractors are available on processing machines.
· **Personal protective measures**
Do not inhale gases / fumes / aerosols.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Measures for consumer protection**
Ensure adequate labelling.
Keep locked up and out of the reach of children.
· **Environmental protection measures**
· **Water** No special measures required.
· **Disposal measures**
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.