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SAFETY DATA SHEET

Creation Date 23-Aug-2012 Revision Date 10-Dec-2021 Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Neisseria meningtidis Group C Agglutinating Sera

Cat No. : R30166901

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Oxoid Ltd

Wade Road

Basingstoke, Hants, UK

RG24 8PW

Tel: +44 (0) 1256 841144

EU entity/business name Oxoid Deutschland GmbH

Postfach 10 07 53

D-46483 Wesel GERMANY

Tel: + 49 (0) 281 1520 Fax: 49 (0) 281 1521

E-mail address mbd-sds@thermofisher.com

1.4. Emergency telephone number

Chemtrec US: (800) 424-9300 Chemtrec EU: 001-703-527-3887 Chemtrec China: 400 120 4937

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

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Health hazards

Based on available data, the classification criteria are not met

Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements

Signal Word None

Hazard Statements

Precautionary Statements

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | EC No | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|------------------|-----------|-------------------|----------|--|
| Phenol | 108-95-2 | EEC No. 203-632-7 | 0.5 | Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Muta. 2 (H341) STOT RE 2 (H373) |
| Sodium hydroxide | 1310-73-2 | 215-185-5 | <0.5 | Skin Corr. 1A (H314) Eye Dam. 1 (H318) |

| Component | Specific concentration limits | M-Factor | Component notes |
|------------------|----------------------------------|----------|-----------------|
| | (SCL's) | | |
| Phenol | Eye Irrit. 2 (H319) :: 1%<=C<3% | = | = |
| | Skin Corr. 1B (H314) :: C>=3% | | |
| | Skin Irrit. 2 (H315) :: 1%<=C<3% | | |
| Sodium hydroxide | Skin Corr. 1A :: C>=5% | - | - |
| , | Skin Corr. 1B :: 2%<=C<5% | | |
| | Eye Irrit. 2 :: 0.5%<=C<2% | | |
| | Skin Irrit. 2 :: 0.5%<=C<2% | | |

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

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4.1. Description of first aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. Seek immediate medical

attention/advice.

Skin Contact Wash off immediately with soap and plenty of water. Get medical attention immediately if

symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention.

Inhalation Remove to fresh air. Get medical attention if symptoms occur.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

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

No information available.

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

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

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Soak up with inert absorbent material. Clean contaminated surface thoroughly.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with skin, eyes or clothing. Do not breathe mist/vapors/spray. Ensure adequate ventilation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep at temperatures between 2° and 8 °C.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany) Class 12

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

| Component | The United Kingdom | European Union | Ireland |
|------------------|-----------------------------------|------------------------------------|-----------------------------------|
| Phenol | STEL: 4 ppm 15 min | TWA: 2 ppm (8h) | TWA: 2 ppm 8 hr. |
| | STEL: 16 mg/m ³ 15 min | TWA: 8 mg/m ³ (8h) | TWA: 8 mg/m ³ 8 hr. |
| | TWA: 2 ppm 8 hr | STEL: 4 ppm (15min) | STEL: 4 ppm 15 min |
| | TWA: 7.8 mg/m ³ 8 hr | STEL: 16 mg/m ³ (15min) | STEL: 16 mg/m ³ 15 min |
| | Skin | Skin | Skin |
| Sodium hydroxide | 2 mg/m³ STEL | | STEL: 2 mg/m ³ 15 min |

Biological limit values

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|----------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Phenol 108-95-2 (0.5) | | | | DNEL = 1.23mg/kg bw/day |

| | | Component | Acute effects local | Acute effects | Chronic effects local | Chronic effects |
|--|--|-----------|---------------------|---------------|-----------------------|-----------------|
|--|--|-----------|---------------------|---------------|-----------------------|-----------------|

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| | (Inhalation) | systemic (Inhalation) | (Inhalation) | systemic (Inhalation) |
|--------------------|----------------------------|-----------------------|---------------------------|---------------------------|
| Phenol | DNEL = 16mg/m ³ | | | DNEL = 8mg/m ³ |
| 108-95-2 (0.5) | - | | | - |
| Sodium hydroxide | | | DNEL = 1mg/m ³ | |
| 1310-73-2 (<0.5) | | | _ | |

Predicted No Effect Concentration (PNEC)

See values below.

| Γ | Component | Fresh water | Fresh water | Water Intermittent | Microorganisms in | Soil (Agriculture) |
|---|------------------|-------------|-------------|--------------------|-------------------|--------------------|
| L | | | sediment | | sewage treatment | |
| ſ | Phenol | PNEC = | | PNEC = 0.031mg/L | 9 | PNEC = |
| 1 | 108-95-2 (0.5) | 0.0077mg/L | 0.0915mg/kg | | | 0.136mg/kg soil dw |
| L | | | sediment dw | | | |

| Component | Marine water | Marine water sediment | Marine water intermittent | Food chain | Air |
|------------------|--------------|-----------------------|---------------------------|------------|-----|
| Phenol | PNEC = | PNEC = | | | |
| 108-95-2 (0.5) | 0.00077mg/L | 0.00915mg/kg | | | |
| | | sediment dw | | | |

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|-------------------|-------------------|-----------------|-------------|-----------------------|
| Disposable gloves | See manufacturers | - | EN 374 | (minimum requirement) |
| - | recommendations | | | |

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

Large scale/emergency use In case of insufficient ventilation, wear suitable respiratory equipment

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls No information available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Amber

Odor No information available **Odor Threshold** No data available **Melting Point/Range** No data available Softening Point No data available **Boiling Point/Range** Not applicable Flammability (liquid) No data available Flammability (solid,gas) No information available **Explosion Limits** No data available

Flash Point Not applicable Method - No information available

Autoignition Temperature No data available

Decomposition Temperature No data available

pH 6.6 - 6.8

Viscosity

Water Solubility

Solubility in other solvents

No data available
No information available
No information available

Partition Coefficient (n-octanol/water)

Component log Pow Phenol 1.5

Vapor PressureNo data availableDensity / Specific GravityNo data availableBulk DensityNo data available

Vapor Density No data available (Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

No materials to be especially mentioned.

10.6. Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx). Hydrogen bromide.

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SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information Product does not present an acute toxicity hazard based on known or supplied information

(a) acute toxicity;

Oral No data available **Dermal** No data available Inhalation No data available

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|------------------|--------------------------|------------------------------|-----------------|
| Phenol | LD50 = 340 mg/kg (Rat) | LD50 = 630 mg/kg (Rabbit) | - |
| Sodium hydroxide | LD50 = 325 mg/kg (Rat) | LD50 = 1350 mg/kg (Rabbit) | - |

(b) skin corrosion/irritation; No data available

No data available (c) serious eye damage/irritation;

(d) respiratory or skin sensitization;

No data available Respiratory No data available Skin

None known

(e) germ cell mutagenicity; No data available

None known

(f) carcinogenicity; No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen

(g) reproductive toxicity; No data available **Reproductive Effects** None known. None known. **Developmental Effects** None known. **Neurological Effects**

No data available (h) STOT-single exposure;

(i) STOT-repeated exposure; No data available

No information available. **Target Organs**

No data available (j) aspiration hazard;

Symptoms / effects,both acute and No information available.

delayed

11.2. Information on other hazards

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Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects

. Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|------------------|--|---|--|
| Phenol | 4-7 mg/L LC50 96 h 32 mg/L LC50 96 h | EC50: 10.2 - 15.5 mg/L, 48h (Daphnia magna) EC50: 4.24 - 10.7 mg/L, 48h Static (Daphnia magna) | EC50: 0.0188 - 0.1044 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: 187 - 279 mg/L, 72h static (Desmodesmus subspicatus) EC50: = 46.42 mg/L, 96h (Pseudokirchneriella subcapitata) |
| Sodium hydroxide | LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss) | | <u>-</u> |

| Component | Microtox | M-Factor |
|------------------|--------------------------|----------|
| Phenol | EC50 21 - 36 mg/L 30 min | |
| | EC50 = 23.28 mg/L 5 min | |
| | EC50 = 25.61 mg/L 15 min | |
| | EC50 = 28.8 mg/L 5 min | |
| | EC50 = 31.6 mg/L 15 min | |
| Sodium hydroxide | - | |

12.2. Persistence and degradability No information available

12.3. Bioaccumulative potential No information available

| Component | log Pow | Bioconcentration factor (BCF) |
|-----------|---------|-------------------------------|
| Phenol | 1.5 | No data available |

12.4. Mobility in soil No information available .

12.5. Results of PBT and vPvB

assessment

No data available for assessment.

12.6. Endocrine disrupting

properties

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant Ozone Depletion Potential This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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Waste from Residues/Unused Chemical waste generators must determine whether a discarded chemical is classified as a

hazardous waste. Consult local, regional, and national hazardous waste regulations to

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ensure complete and accurate classification.

Contaminated Packaging Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use

empty containers.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

14.1. UN number

Products

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

ADR Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

<u>IATA</u> Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required

14.7. Maritime transport in bulk Not applicable, packaged goods

according to IMO instruments

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No | EINECS | ELINCS | NLP | IECSC | TCSI | KECL | ENCS | ISHL |
|------------------|-----------|-----------|--------|-----|-------|------|----------|------|------|
| Phenol | 108-95-2 | 203-632-7 | - | 1 | X | X | KE-28209 | X | X |
| Sodium hydroxide | 1310-73-2 | 215-185-5 | - | - | Х | X | KE-31487 | X | Х |

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| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|------------------|-----------|------|---|-----|------|------|-------|-------|
| Phenol | 108-95-2 | X | ACTIVE | X | - | X | Х | X |
| Sodium hydroxide | 1310-73-2 | X | ACTIVE | Χ | - | Χ | Х | Х |

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

| Component | | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | |
|------------------|---|---|---|
| Phenol | - | Use restricted. See item 75. | - |
| | | (see link for restriction details) | |
| Sodium hydroxide | - | Use restricted. See item 75. | - |
| | | (see link for restriction details) | |

https://echa.europa.eu/substances-restricted-under-reach

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety |
|------------------|-----------|--|---|
| | | Accident Notification | Report Requirements |
| Phenol | 108-95-2 | Not applicable | Not applicable |
| Sodium hydroxide | 1310-73-2 | Not applicable | Not applicable |

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

Water endangering class = 1 (self classification)

| Component | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|------------------|--|---|
| Phenol | WGK2 | Class I: 20 mg/m³ (Massenkonzentration) |
| Sodium hydroxide | WGK1 | |

| Component | France - INRS (Tables of occupational diseases) |
|-----------|--|
| Phenol | Tableaux des maladies professionnelles (TMP) - RG 14 |

| Component | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|----------------------------|--|---|--|
| Phenol 108-95-2 (0.5) | Prohibited and Restricted Substances | | |

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| Sodium hydroxide | Prohibited and Restricted | |
|--------------------|---------------------------|--|
| 1310-73-2 (<0.5) | Substances | |

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H331 - Toxic if inhaled

H341 - Suspected of causing genetic defects

H373 - May cause damage to organs through prolonged or repeated exposure

Legend

CAS - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b)

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Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

> **ENCS** - Japanese Existing and New Chemical Substances AICS - Australian Inventory of Chemical Substances NZIoC - New Zealand Inventory of Chemicals

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50% NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air **Transport Association**

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate **VOC** - (Volatile Organic Compound)

TWA - Time Weighted Average

LD50 - Lethal Dose 50%

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Creation Date 23-Aug-2012 **Revision Date** 10-Dec-2021 Not applicable. **Revision Summary**

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet