

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 29-Apr-2010

Revision Date 22-Sep-2023

Revision Number 8

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

1.1. Product identifier

Product Description:	<u>o-Cresol</u>
Cat No. :	110550000; 110550010; 110550025; 110550050; 110550100; 110551000; 110555000
Synonyms	2-Hydroxytoluene; 2-Methylphenol
Index No	604-004-00-9
CAS No	95-48-7
EC No	202-423-8
Molecular Formula	C7 H8 O

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

Recommended Use Sector of use	Laboratory chemicals. SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category	PC21 - Laboratory chemicals
Process categories	PROC15 - Use as a laboratory reagent
Environmental release category Uses advised against	ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) No Information available
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1.3. Details of the supplier of the safety data sheet

Com	nanv
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UK entity/business name Fisher Scientific UK Bishop Meadow Road, Loughborough, Leicestershire LE11 5RG, United Kingdom

EU entity/business name

Thermo Fisher Scientific Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

o-Cresol

Based on available data, the classification criteria are not met

Health hazards

Acute oral toxicity Acute dermal toxicity Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation

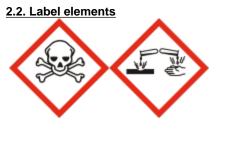
Environmental hazards

Chronic aquatic toxicity

Category 3 (H301) Category 3 (H311) Category 1 B (H314) Category 1 (H318)

Category 3 (H412)

Full text of Hazard Statements: see section 16



Signal Word

Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage

H412 - Harmful to aquatic life with long lasting effects

H301 + H311 - Toxic if swallowed or in contact with skin

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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 or shower P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS No	EC No	Weight %	GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
o-Cresol	95-48-7	EEC No. 202-423-8	<=100	Acute Tox. 3 (H301)

o-Cresol

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	Acute Tox. 3 (H311) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic Chronic 3 (H412)
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Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES 4.1. Description of first aid measures **General Advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. In the case of contact with eyes, rinse immediately with plenty of water and seek medical Eye Contact advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. **Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Inhalation Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. 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 Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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

Water mist may be used to cool closed containers. CO₂, dry chemical, dry sand, 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

The product causes burns of eyes, skin and mucous membranes. Combustible material. Containers may explode when heated.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Remove all sources of ignition.

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

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe (dust, vapor, mist, gas). Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.

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 containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Corrosives area. Store under an inert atmosphere.

Technical Rules for Hazardous Substances (TRGS) 510Class 6.1CStorage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

o-Cresol

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 **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Biological limit values

List source(s):

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

Workers; See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
o-Cresol 95-48-7(<=100)		DNEL = 0.68mg/kg bw/day		DNEL = 0.5mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
o-Cresol 95-48-7(<=100)		DNEL = 153mg/m ³		DNEL = 3.5mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
o-Cresol	PNEC = 0.1mg/L	PNEC = 0.58mg/kg	PNEC = 0.062mg/L	PNEC = 1.28mg/L	PNEC =
95-48-7(<=100)	-	sediment dw	-	-	0.0572mg/kg soil
					dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
o-Cresol	PNEC = 0.01mg/L	PNEC =			
95-48-7(<=100)	-	0.058mg/kg			
		sediment dw			

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. 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	Goggles (European standard - EN 166)
Hand Protection	Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene PVC				
Skin and body pro	tection Wear a	opropriate protective	gloves and clothing to p	prevent skin exposure.
(Refer to manufacturer/s Ensure gloves are suita sensitisation effects, als of cuts, abrasion.	ructions regarding perm supplier for information) ble for the task: Chemic	al compatability, Dex n the specific local co	terity, Operational conc	ovided by the supplier of the gloves. litions, User susceptibility, e.g. he product is used, such as the danger
Respiratory Protec	appropr To prote	iate certified respirate	ors.	exposure limit they must use ent must be the correct fit and be used
are ex		Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limit are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Particulates filter conforming to EN 143		
Small scale/Laborator	limits ar Recom	e exceeded or if irrita mended half mask:-	pean Standard EN 149 tion or other symptoms Particle filtering: EN14 ece Fit Test should be c	19:2001
Environmental exposu	ure controls Prevent system.	•	g drains. Do not allow r	naterial to contaminate ground water

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Solid	
Appearance Odor Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits	Amber phenolic No data available 30 - 32 °C / 86 - 89.6 °F No data available 191 °C / 375.8 °F Combustible liquid Not applicable No information available Lower 1.3 Vol%	@ 760 mmHg Solid
Flash Point Autoignition Temperature Decomposition Temperature	81 °C / 177.8 °F 555 °C / 1031 °F > 450°C	Method - No information available
рН	4.8	2% aq. sol
Viscosity Water Solubility	Not applicable 20 g/L (20°C)	Solid
Solubility in other solvents Partition Coefficient (n-octanol/wate	No information available	
Component o-Cresol	log Pow 1.95	

o-Cresol

o-Cresol

Vapor Pressure Density / Specific Gravity Bulk Density Vapor Density Particle characteristics

9.2. Other information

Molecular Formula Molecular Weight Explosive Properties Evaporation Rate 0.168 mmHg @ 20 °C 1.040 No data available Not applicable No data available

Solid

C7 H8 O 108.14 explosive air/vapour mixtures possible Not applicable - Solid

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known, based on information available	
10.2. Chemical stability	Air sensitive. Light sensitive.	
10.3. Possibility of hazardous reactions		
Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. None under normal processing.	
10.4. Conditions to avoid	Incompatible products. Heat, flames and sparks. Avoid dust formation. Exposure to air. Exposure to light. Keep away from open flames, hot surfaces and sources of ignition.	
10.5. Incompatible materials	Strong oxidizing agents. Bases.	

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

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

Product Information

(a) acute toxicity; Oral

Dermal Inhalation Category 3 Category 3 Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
o-Cresol	LD50 = 121 mg/kg (Rat)	LD50 = 1380 mg/kg (Rabbit)	LC50 > 1220 mg/m3 (Rat) 1 h

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization; Respiratory Skin	Based on available data, the classification criteria are not met Based on available data, the classification criteria are not met
(e) germ cell mutagenicity;	Based on available data, the classification criteria are not met
	Not mutagenic in AMES Test
(f) carcinogenicity;	Based on available data, the classification criteria are not met
	The table below indicates whether each agency has listed any ingredient as a carcinogen
(g) reproductive toxicity;	Based on available data, the classification criteria are not met
(h) STOT-single exposure;	Based on available data, the classification criteria are not met
(i) STOT-repeated exposure;	Based on available data, the classification criteria are not met
Target Organs	None known.
(j) aspiration hazard;	Not applicable Solid
Symptoms / effects,both acute and delayed	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
11.2. Information on other hazards	

11.2. Information on other hazards

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

SECTION 12: ECOLOGICAL INFORMATION

<u>12.1. Toxicity</u>	
Ecotoxicity effects	The product contains following substances which are hazardous for the environment.
	Contains a substance which is:. Toxic to aquatic organisms. Harmful to aquatic organisms,
	may cause long-term adverse effects in the aquatic environment.

LC50: 13 mg/L/96h (Pimephals	EC50: = 15.8 mg/L, 48h Static	65 mg/L EC50 = 96 h
prome)	(Daphnia magna)	Chronic NOEC: 1mg/L
LC50: 10 mg/L/96h (Leuciscus	EC50: = 9.5 mg/L, 48h (Daphnia)	-
idus)	magna)	
	prome) LC50: 10 mg/L/96h (Leuciscus	prome) (Daphnia magna) LC50: 10 mg/L/96h (Leuciscus EC50: = 9.5 mg/L, 48h (Daphnia

Component	Microtox	M-Factor
o-Cresol	EC50 = 22.6 mg/L 5 min	
	EC50 = 25.9 mg/L 15 min	
	EC50 = 26.5 mg/L 30 min	

12.2. Persistence and degradability Biodegradability 80% (30d)

o-Cresol

Persistence Degradation in sewage treatment plant	Persistence is unlikely. Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.	
12.3. Bioaccumulative potential	Bioaccumulation is unlikely	
Component	log Pow	Bioconcentration factor (BCF)
o-Cresol	1.95	10.7 dimensionless
<u>12.4. Mobility in soil</u>	The product is water soluble, and may spread in water systems . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils	
<u>12.5. Results of PBT and vPvB</u> assessment	Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).	
<u>12.6. Endocrine disrupting</u> properties Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors	
<u>12.7. Other adverse effects</u> 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		
Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose of i on waste and hazardous waste. Dispose of in	
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.	

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

Other Information	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN3455 CRESOLS, SOLID 6.1 8 II
ADR	
<u>14.1. UN number</u>	UN3455

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o-Cresol

14.2. UN proper shipping name	CRESOLS, SOLID
14.3. Transport hazard class(es)	6.1
Subsidiary Hazard Class	8
14.4. Packing group	II
IATA	
14.1. UN number	UN3455

14.2. UN proper shipping name	CRESOLS, SOLID
14.3. Transport hazard class(es)	6.1
Subsidiary Hazard Class	8
14.4. Packing group	Π
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
o-Cresol	95-48-7	202-423-8	-	-	Х	Х	KE-24792	Х	Х
Component	CAS No	TSCA	TSCA In notific Active-I	ation -	DSL	NDSL	AICS	NZIoC	PICCS
o-Cresol	95-48-7	Х	ACT	IVE	Х	-	Х	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	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
o-Cresol	95-48-7	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links

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

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -		
		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report		
		Notification	Requirements		
o-Cresol	95-48-7	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

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? 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 .

National Regulations

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

WGK Classification See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
o-Cresol	WGK1	

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

H412 - Harmful to aquatic life with long lasting effects

Legend

CAS - Chemical Abstracts Service EINECS/ELINCS - European Inventory of Existing Commercial Chemical 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	TSCA - United States Toxic Substances Control Act Section 8(b) Inventory 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
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	 TWA - Time Weighted Average IARC - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC) LD50 - Lethal Dose 50% EC50 - Effective Concentration 50% POW - Partition coefficient Octanol:Water vPvB - very Persistent, very Bioaccumulative

o-Cresol

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

Key literature references and sources for data

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

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

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)

Training Advice

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

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Creation Date	29-Apr-2010
Revision Date	22-Sep-2023
Revision Summary	SDS sections updated.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

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