Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 22.03.2024 Version number 32 (replaces version 31) Revision: 22.03.2024

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

· **1.1 Product identifier**

· **Trade name** **MC-DUR LF 480 - Komponente A**

· **Article number:** 663

· **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.

· **Application of the substance / the mixture** Epoxy impregnation

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:** MC-Bauchemie Müller GmbH & Co. KG
Am Kruppwald 1-8
D-46238 Bottrop
Tel.: +49(0)2041-101-0
Fax.: +49(0)2041-101-400
E-Mail: info@mc-bauchemie.de

MC-Bauchemie AG
Hagackerstr. 10
CH-8953 Dietikon
Tel.: +44-7400510
Fax : +44-7400533

· **Informing department:** msds@mc-bauchemie.de

· **1.4 Emergency telephone number:** Tel.: +49 / (0)700 24112112 (MCR)
Tel.: +1 872 5888271 (MCR)

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

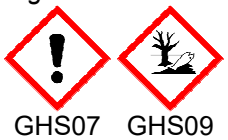
· **Classification according to Regulation (EC) No 1272/2008**

Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS07 GHS09

· **Signal word** Warning

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· **Hazard-determining components of labelling:** epoxide derivates
[[(2-ethylhexyl)oxy]methyl]oxirane
Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl) oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)] dioxirane
Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives
Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)
Phenol, methylstyrolised

· **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection / face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.

· **Additional information:** EUH205 Contains epoxy constituents. May produce an allergic reaction.

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

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture consisting of the following components.

· **Dangerous components:**

CAS: 1675-54-3 EINECS: 216-823-5	epoxide derivates Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205	60-80%

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CAS: 2461-15-6 EINECS: 219-553-6	[[(2-ethylhexyl)oxy]methyl]oxirane Skin Irrit. 2, H315; Skin Sens. 1, H317	≥1-<10%
CAS: 9003-36-5 EC number: 701-263-0	Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥2.5-<5%
CAS: 68609-97-2 EINECS: 271-846-8	Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives Skin Irrit. 2, H315; Skin Sens. 1, H317, EUH205	≥1-<5%
CAS: 933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl) oxirane (1:2) Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥2.5-<5%
EC number: 700-960-7	Phenol, methylstyrolised Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥2.5-<3%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information** Remove contaminated clothing immediately. Consult a doctor if symptoms occur. Move affected person to fresh air.

· **After inhalation** Supply fresh air; seek medical advice if symptoms occur.
If unconscious, place in recovery position and seek medical advice.

· **After skin contact** In case of contact with skin, wash carefully with plenty of soap and water. Consult a doctor in case of skin reactions.

· **After eye contact** Rinse opened eye for several minutes under running water.
Call a doctor immediately

· **After swallowing** Rinse mouth with water. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. If symptoms persist, consult a doctor.

· **4.2 Most important symptoms and effects, both acute and delayed** Advice for the doctor: Elementary aid, decontamination, symptomatic treatment.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents** CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

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· **5.2 Special hazards arising from the substance or mixture** Can be released in case of fire
Carbon monoxide (CO)
Nitrogen oxides (NOx)
(Traces)

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained breathing apparatus.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:** Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.

· **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

· **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 information on disposal.

*
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Open and handle containers with care.
Only use in well-ventilated areas (e.g. open construction, outdoor areas), in rooms without air exchange (e.g. closed rooms, underground car parks) ventilation measures are required.
are required.
Wear suitable personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Change contaminated or damaged gloves and contaminated clothing immediately and wash skin immediately. Mix slowly, partially covering the mixing container. Pour carefully and slowly when repotting. Observe the BGBau technical data sheet and practical guide for handling epoxy resins. Open and handle containers with care.

· **Information about protection against explosions and fires:** Ensure sufficient air exchange and/or extraction in the working areas. Take precautionary measures to avoid electrostatic discharges.

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· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:** No special requirements.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:** Keep container tightly closed in a well-ventilated place.
· **Storage class** 10

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with critical 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.

· **DNELs**		
CAS: 2461-15-6 [[(2-ethylhexyl)oxy]methyl]oxirane		
Dermal	DNEL	4.17 mg/kg bw/day (ArL)
CAS: 68609-97-2 Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives		
Oral	DNEL	1 mg/kg bw/Tag (ArL)
Dermal	DNEL	1.7 mg/kg bw/day (ArL)
Inhalative	DNEL	0.98 mg/m³ (ArL)

· **PNECs**	
CAS: 2461-15-6 [[(2-ethylhexyl)oxy]methyl]oxirane	
PNEC	0.0072 mg/l (Fresh water)
PNEC	57.16 mg/kg dwt (Bod)
	28.66 mg/kg dwt (Sediment)
	286.66 mg/kg dwt (Fresh water sediment)
CAS: 68609-97-2 Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives	
PNEC	0.00072 mg/l (Mew)
	0.0072 mg/l (Freshwater)
PNEC	80.12 mg/kg dwt (Bod)
	6.677 mg/kg dwt (Sediment)
	66.77 mg/kg dwt (Fresh water sediment)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.

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· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures**
Keep away from food, drink and animal feed.
Remove soiled, soaked clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with eyes and skin.

· **Breathing equipment:**
If workplace limit values cannot be complied with by ventilation measures or if rooms cannot be technically ventilated, respiratory protection must be worn: Use combination filter A1-P2 (brown/white) in rooms that cannot be ventilated. If oxygen deficiency is expected, use self-contained breathing apparatus. Observe wearing time limits according to §9 (3) GefStoffV in conjunction with BGR 190.

· **Hand protection**
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
You can find help with choosing gloves on the website https://www.bgbau.de/fileadmin/Gisbau/Projekte.pdf
For example, we recommend the Sol-vex 37-900 protective gloves from Ansell GmbH. The breakthrough time of the protective gloves can be found under point 8 "Penetration time of the glove material".
The selection of a suitable glove depends not only on the material, but also on other quality features and varies from manufacturer to manufacturer. As the product
is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.
Nitrile rubber
Recommended material thickness:≥ 0.4 mm

· **Penetration time of glove material**
The breakthrough times of the Sol-vex 37-900 protective gloves are around 8 hours.
The following applies to all other gloves:
The exact breakthrough time must be obtained from the protective glove manufacturer and adhered to.
Nitrile rubber
Material thickness: ≥ 0.40 mm
Penetration time: ≥ 480 min
Butyl rubber:
Material thickness: ≥ 0.5 mm
Penetration time: ≥ 480 min

· **Eye/face protection**
Tight-fitting safety goggles.
Safety goggles.

· **Body protection:**
Protective clothing
Suitable protective clothing should be worn when working with epoxy resins. In addition to normal work clothing (long trousers, long-sleeved shirt or T-shirt), disposable overalls, aprons, overshoes, sleeve protectors etc. may be necessary depending on the activity. Uncovered areas of skin should be avoided as far as possible, even in hot weather. If the work involves kneeling, the lower leg area should be protected by protective trousers.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Colour:**	Transparent
· **Smell:**	Characteristic
· **Melting point/freezing point:**	Not determined
· **Boiling point or initial boiling point and boiling range**	>200 °C (CAS: 25068-38-6 Propyl -2,2-diphenyl-4,4'dipropyloxirane polymers and homologues molecular weight < 700)
· **Lower and upper explosion limit**	
· **Lower:**	1.3 Vol %
· **Upper:**	13.0 Vol %
· **Flash point:**	95 °C
· **Auto-ignition temperature:**	184 °C (CAS: 25068-38-6 Propyl -2,2-diphenyl-4,4'dipropyloxirane polymers and homologues molecular weight < 700)
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **dynamic at 20 °C:**	2000 mPas
· **Solubility**	
· **Water:**	Not miscible or difficult to mix
· **Steam pressure at 20 °C:**	<0.1 hPa (CAS: 25068-38-6 Propyl -2,2-diphenyl-4,4'dipropyloxirane polymers and homologues molecular weight < 700)
· **Density and/or relative density**	
· **Density at 20 °C**	1.12 g/cm³
· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Self-inflammability:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive.
· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void

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· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

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SECTION 10: Stability and reactivity

· **10.1 Reactivity**	No further relevant information available.
· **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:**	No dangerous decomposition products known

*
SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
CAS: 1675-54-3 epoxide derivates		
Dermal	LD50	23000 mg/kg (rabbit)
CAS: 2461-15-6 [[(2-ethylhexyl)oxy]methyl]oxirane		
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rat)
CAS: 9003-36-5 Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
CAS: 68609-97-2 Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives		
Oral	LD50	17100 mg/kg (rat)

· **Skin corrosion/irritation**	Causes skin irritation.
· **Serious eye damage/irritation**	Causes serious eye irritation.
· **Respiratory or skin sensitisation**	May cause an allergic skin reaction.

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· **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** Based on available data, the classification criteria are not met.
· **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.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**		
CAS: 128-37-0	2,6-Di-tert-butyl-p-cresol	List II

*
SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 1675-54-3 epoxide derivates	
IC50	>42.6 mg/l (Bak)
LC50/96h	2 mg/l (Oncorhynchus mykiss)
EC50/48h	1.8 mg/l (Daphnia magna)
ErC50/72h	11 mg/l (Selenastrum capricornutum)
CAS: 9003-36-5 Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane	
LC50/96h	>100 mg/l (Daphnia magna)
EC50/96h	>100 mg/l (Leucidus idus)
CAS: 68609-97-2 Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives	
EbC50/72h	843 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	>5000 mg/l (Oncorhynchus mykiss)
	1800 mg/l (Lepomis macrochirus)
EC50	>100 mg/l (BEL)
NOEC	500 mg/l (Pseudokirchneriella subcapitata)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.

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· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:** Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

*
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

*
SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN3082

· **14.2 UN proper shipping name**
· **ADR, IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxide derivates)
· **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxide derivates), MARINE POLLUTANT

· **14.3 Transport hazard class(es)**

· **ADR**
· **Class** 9 (M6) Miscellaneous dangerous substances and articles.
· **Label** 9

· **IMDG, IATA**
· **Class** 9 Miscellaneous dangerous substances and articles.
· **Label** 9

· **14.4 Packing group**
· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**
· **Marine pollutant:** Yes
Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)
· **Special marking (IATA):** Symbol (fish and tree)

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· **14.6 Special precautions for user**	Warning: Miscellaneous dangerous substances and articles.
· **Kemler Number:**	90
· **EMS Number:**	F-A,S-F
· **Stowage Category**	A
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	3
· **Tunnel restriction code**	(-)
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE DERIVATES), 9, III

*
SECTION 15: Regulatory information

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

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

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· **Directive 2012/18/EU**
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

· **Department issuing data specification sheet:** Environment protection department.
· **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
ADR: Accord relatif au transport international 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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
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
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**