



MAKROLON ET3117 550115

Version 2.1

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

1.1 Product identifier

MAKROLON ET3117 550115

Material number: 00952955

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

Use:

Production of moulded plastic articles

1.3 Details of the supplier of the safety data sheet

Covestro Deutschland AG
COV Global Product Safety
51365 Leverkusen

Tel.: +49 214 6009 8134
Email: ProductSafetyEMLA@covestro.com

1.4 Emergency telephone number

+1-703-527-3887 (Chemtrec)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

No classification in accordance with the Regulation (EC) No. 1272/2008.

2.2 Label elements

No labeling necessary according to the Regulation (EC) No. 1272/2008.

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.

SECTION 3: Composition/information on ingredients

Type of product: Mixture

3.2 Mixtures

Polycarbonate

No dangerous ingredients according to REACH-Regulation (EC) No. 1907/2006.

Candidate List of Substances of Very High Concern for Authorisation

This product contains no substances of very high concern in concentrations where an information obligation applies (REACH Regulation (EC) No. 1907/2006, Article 59).

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of skin contact: CONTACT WITH THE HOT MELT: Cool immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved. To obtain treatment for possible burns, and appropriate skin care, seek medical advice immediately.

The following information refers to the handling of the product at room temperature. In case of skin contact wash affected areas thoroughly with soap and plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

Notes to physician: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Therapeutic measures: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: sprayed water jet, extinguishing powder, Carbon dioxide (CO₂), Foam, Dry chemical

5.2 Special hazards arising from the substance or mixture

Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.

5.3 Advice for fire-fighters

Firemen must wear self-contained breathing apparatus.

Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Granules - slip hazard!

6.2 Environment related measures

Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Use mechanical handling equipment. Avoid dust formation.

6.4 Reference to other sections

For further disposal measures see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Under recommended processing conditions small amounts of residues of monomers and residual solvent may be emitted. Provided good ventilation and/or local exhaust systems are used, the Workplace Exposure Limit(s) stated in section 8 should not be exceeded.

In case of mechanical processing, dust must be removed by effective exhaust ventilation.

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work and use skin-protecting ointment. Change contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required.

Storage class (TRGS 510) : 11: Combustible Solids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures. In our experience the provision of effective fresh-air and exhaust ventilation equipment at the points where vapors may be generated will ensure compliance with the tolerance limits quoted below.

| Substance | CAS-No. | Basis | Type | Value | Ceiling Limit Value | Remarks |
|--|----------|----------|------------|-----------------------|---------------------|---|
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | EU ELV | TWA | 2 ppm 8 mg/m3 | | Indicative |
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | EU ELV | | | | Dermal absorption possible |
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | EU ELV | STEL | 4 ppm 16 mg/m3 | | Indicative |
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | TRGS 900 | | | | Listed. |
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | TRGS 900 | | | | Dermal absorption possible |
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | TRGS 900 | | 2 ppm 8 mg/m3 | 2 | |
| phenol; carbolic acid; monohydroxybenzene; phenylalcohol | 108-95-2 | TRGS 900 | STEL CL | | | Category II: substances with a resorptive effect. |
| chlorobenzene | 108-90-7 | TRGS 900 | | | | Listed. |
| chlorobenzene | 108-90-7 | TRGS 900 | | 5 ppm 23 mg/m3 | 2 | Y |
| chlorobenzene | 108-90-7 | EU ELV | TWA | 5 ppm 23 mg/m3 | | Indicative |
| chlorobenzene | 108-90-7 | EU ELV | STEL | 15 ppm 70 mg/m3 | | Indicative |
| chlorobenzene | 108-90-7 | TRGS 900 | STEL CL | | | Category II: substances with a resorptive effect. |
| 4-tert-butylphenol | 98-54-4 | TRGS 900 | | | | Listed. |
| 4-tert-butylphenol | 98-54-4 | TRGS 900 | | 0,08 ppm 0,5 mg/m3 | 2 | |
| 4-tert-butylphenol | 98-54-4 | TRGS 900 | | | | Dermal absorption possible |

| | | | | | | |
|---|---------|----------|------------|----------|---|--|
| 4-tert-butylphenol | 98-54-4 | TRGS 900 | STEL CL | | | Category II: substances with a resorptive effect. |
| bisphenol A; 4,4'-isopropylidenediph enol | 80-05-7 | TRGS 900 | | | | Listed. |
| bisphenol A; 4,4'-isopropylidenediph enol | 80-05-7 | TRGS 900 | STEL CL | | | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. |
| bisphenol A; 4,4'-isopropylidenediph enol | 80-05-7 | TRGS 900 | | 5 mg/m3 | 1 | Y |
| bisphenol A; 4,4'-isopropylidenediph enol | 80-05-7 | EU ELV | TWA | 2 mg/m3 | | Indicative |
| General limiting value of dust | | TRGS 900 | | 10 mg/m3 | 2 | inhalable fraction |
| General limiting value of dust | | TRGS 900 | | 3 mg/m3 | 2 | alveolar fraction |
| General limiting value of dust | | TRGS 900 | STEL CL | | | Category II: substances with a resorptive effect. |

8.2 Exposure controls

Respiratory protection

In case of dust formation use respiratory equipment with filter type particle filter P1 according to EN 143.

Hand protection

Suitable materials for safety gloves; EN 374:

Polyvinyl chloride - PVC (≥ 0.5 mm)

Contaminated and/or damaged gloves must be changed.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---------------------------------|
| Physical state: | solid at 20 °C at 1.013 hPa |
| Appearance: | granular |
| Colour: | blue |
| Odour: | odourless |
| Odour Threshold: | not established |
| pH: | not applicable |
| Softening point: | 130 - 160 °C |
| Boiling point/boiling range: | not established |
| Flash point: | not established |
| Evaporation rate: | not established |
| Flammability: | not established |
| Burning number: | not established |
| Upper/lower flammability or explosive limits: | not applicable |
| Vapour pressure: | not applicable |
| Relative vapour density: | not established |
| Density: | ca. 1,2 - 1,4 g/cm ³ |
| Bulk density: | 600 - 700 kg/m ³ |
| Miscibility with water: | not established |

| | |
|---|-----------------------|
| Water solubility: | practically insoluble |
| Surface tension: | not established |
| Partition coefficient (n-octanol/water): | not established |
| Auto-ignition temperature: | not applicable |
| Ignition temperature: | > 450 °C |
| Decomposition temperature: | >= 380 °C |
| Heat of combustion: | not established |
| Viscosity, dynamic: | not applicable |
| Viscosity, kinematic: | not established |
| Particle characteristics | |
| Particle size: | not established |

9.2 Other information

The indicated values do not necessarily correspond to the product specification. Please refer to the product information sheet or the technical information sheet for specification data.

| | |
|-----------------------|-----------------|
| Explosive properties: | not established |
| Dust explosion class: | not established |
| Oxidising properties: | not established |

SECTION 10: Stability and reactivity

10.1 Reactivity

This information is not available.

10.2 Chemical stability

Fumes evolved by overheating during improperly processing or by burning may be injurious to health.

10.3 Possibility of hazardous reactions

No hazardous reactions observed.

10.4 Conditions to avoid

This information is not available.

10.5 Incompatible materials

This information is not available.

10.6 Hazardous decomposition products

Caused by smouldering and incomplete combustion toxic fumes mainly consisting of CO and CO₂ may be developed.

Under recommended processing conditions small amounts of emissions may occur.

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures.

phenol; carboic acid; monohydroxybenzene; phenylalcohol

Index-No. 604-001-00-2

CAS-No.: 108-95-2

Classification (1272/2008/CE): Acute Tox. 3 Oral H301 Acute Tox. 3 Inhalative H331 Acute Tox. 3 Dermal H311 Skin Corr. 1B H314 Eye Dam. 1 H318 Muta. 2 H341 STOT RE 2 H373 Aquatic Chronic 2 H411

chlorobenzene

Index-No. 602-033-00-1

CAS-No.: 108-90-7

Classification (1272/2008/CE): Flam. Liq. 3 H226 Acute Tox. 4 Inhalative H332 Skin Irrit. 2 H315 Aquatic Chronic 2 H411

4-tert-butylphenol
Index-No. 604-090-00-8
CAS-No.: 98-54-4
Classification (1272/2008/CE): Skin Irrit. 2 H315 Eye Dam. 1 H318 Repr. 2 H361f Aquatic Chronic 1 H410

bisphenol A; 4,4'-isopropylidenediphenol
Index-No. 604-030-00-0
CAS-No.: 80-05-7
Classification (1272/2008/CE): Eye Dam. 1 H318 Skin Sens. 1 H317 Repr. 1B H360F STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

SECTION 11: Toxicological information

Toxicological studies on the product are not yet available.

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

Acute toxicity, oral

No data available.

Acute toxicity, dermal

No data available.

Acute toxicity, inhalation

No data available.

Primary skin irritation

No data available.

Primary mucosae irritation

No data available.

Sensitisation

No data available.

Subacute, subchronic and prolonged toxicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity/Fertility

No data available.

Reproductive toxicity/Developmental Toxicity/Teratogenicity

No data available.

Genotoxicity in vitro

No data available.

Genotoxicity in vivo

No data available.

STOT evaluation – one-time exposure

No data available.

STOT evaluation – repeated exposure

No data available.

Aspiration toxicity

No data available.

11.2 Information on other hazards

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other information

According to our experience and information the product has no harmful effects on health if properly handled.

SECTION 12: Ecological information

Ecotoxicological studies of the product are not available.

Do not allow to escape into waterways, wastewater or soil.

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 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

The product is practically insoluble in water. In view of its consistency and insolubility in water, no ecological problems are to be expected if the product is properly handled. The product is not readily biodegradable.

SECTION 13: Disposal considerations

Dispose in accordance with applicable international, national and local laws, ordinances and statutes.

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

13.1 Waste treatment methods

After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

SECTION 14: Transport information**ADR/RID**

| | | |
|---------------------------------|---|---------------------|
| 14.1 UN number or ID number | : | Not dangerous goods |
| 14.2 UN proper shipping name | : | Not dangerous goods |
| 14.3 Transport hazard class(es) | : | Not dangerous goods |
| 14.4 Packing group | : | Not dangerous goods |
| 14.5 Environmental hazards | : | Not dangerous goods |

ADN

| | | |
|---------------------------------|---|---------------------|
| 14.1 UN number or ID number | : | Not dangerous goods |
| 14.2 UN proper shipping name | : | Not dangerous goods |
| 14.3 Transport hazard class(es) | : | Not dangerous goods |
| 14.4 Packing group | : | Not dangerous goods |
| 14.5 Environmental hazards | : | Not dangerous goods |

Dangerous goods classification for inland waterways tanker by request only.

IATA

| | | |
|---------------------------------|---|---------------------|
| 14.1 UN number or ID number | : | Not dangerous goods |
| 14.2 UN proper shipping name | : | Not dangerous goods |
| 14.3 Transport hazard class(es) | : | Not dangerous goods |
| 14.4 Packing group | : | Not dangerous goods |
| 14.5 Environmental hazards | : | Not dangerous goods |

IMDG

| | | |
|---------------------------------|---|---------------------|
| 14.1 UN number or ID number | : | Not dangerous goods |
| 14.2 UN proper shipping name | : | Not dangerous goods |
| 14.3 Transport hazard class(es) | : | Not dangerous goods |
| 14.4 Packing group | : | Not dangerous goods |
| 14.5 Environmental hazards | : | Not dangerous goods |

14.6 Special precautions for user

See section 6 - 8.

Additional information : Not dangerous cargo. Keep dry.

14.7 Maritime transport in bulk according to IMO instruments

Product is not transported by us in bulk.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.
not applicable

TA Luft List (Germany)

Type: 5.2.5 Organic Substances
Fraction of other substances: 100 %

Water contaminating class (Germany)

nw not water endangering
Identification number according to AwSV: 766

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been conducted for this substance / mixture resp. its components.

SECTION 16: Other information

Full text of the hazard statements of the CLP classification (1272/2008/CE) referred to under sections 2, 3 and 10.

| | |
|-------|--|
| H226 | Flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects. |
| H360F | May damage fertility. |
| H361f | Suspected of damaging fertility. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

Abbreviations and acronyms

| | |
|-----------|---|
| ADN | Accord européen relatif au transport international des marchandises Dangereuses par voie de Navigation intérieure |
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| ANSI | American National Standards Institute |
| ASTM | American Society of Testing and Materials (US) |
| ATE | Acute Toxic Estimate |
| AwSv | Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen |
| BCF | Bioconcentration Factor |
| CAS | Chemical Abstract Service |
| CLP | Regulation on Classification, Labelling and Packaging of Substances and Mixtures |
| CMR | Carcinogenic Mutagenic Reprotoxic |
| DIN | Deutsches Institut für Normung |
| DNEL | Derived No-Effect Level |
| EC... | Effect Concentration ... % |
| EWC | European Waste Catalogue |
| IATA | International Air Transport Association |
| IBC | Intermediate Bulk Container |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| ISO | International Organization for Standardization |
| IUPAC | International Union of Pure and Applied Chemistry |
| LOAEL | Lowest Observable Adverse Effect Level |
| LC... | Lethal Concentration, ...% |
| LD... | Lethal Dose, ...% |
| MARPOL | International Convention for the Prevention of Pollution From Ships |
| NOAEL | No Observed Adverse Effect Level |
| NOEL/NOEC | No Observed Effect Level/Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | persistent, bioaccumulative, toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire de marchandises Dangereuses |
| STOT | Specific Target Organ Toxicity |
| TRGS | Technische Regeln für Gefahrstoffe |
| vPvB | very Persistent, very Bioaccumulative |
| WGK | Wassergefährdungsklasse |

Further information

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.