

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) according to Regulation (EU) 2015/830



F22.0002
Version 1.1

Flexonal VR80 980
Revision date Jun 2, 2022

Print date Jun 2, 2022

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

1.1 Product identifier

F22.0002 Flexonal VR80 980

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

Manufacture of plastics products, including compounding and conversion

1.3 Details of the supplier of the safety data sheet

Supplier

Bachmann Kunststoff Technologien GmbH

Rudolf-Diesel-Str. 2
63322 Rödermark
Deutschland

Telephone: +49 6074 94394
Telefax: +49 6074 98544
E-mail:
service@bktgermany.com
Website: www.bktgermany.com

Department responsible for information

E-mail (competent person) service@bktgermany.com
Telephone +49 6074 94394
Only available during office hours.

1.4 Emergency telephone number

Emergency telephone number +49 6131 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

- * Acute Tox. 4 inhalative; Acute toxicity; H332 Harmful if inhaled.
- * Carc. 2; Carcinogenicity; H351 Suspected of causing cancer.
- * Eye Irrit. 2; Serious eye damage/eye irritation; H319 Causes serious eye irritation.
- * Resp. Sens. 1; Sensitisation to the respiratory tract; H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- * STOT RE 2; STOT-repeated exposure; H373 May cause damage to organs through prolonged or repeated exposure.
- * STOT SE 3 Irritation to respiratory tract; STOT-single exposure; H335 May cause respiratory irritation.
- * Skin Irrit. 2; Skin corrosion/irritation; H315 Causes skin irritation.
- * Skin Sens. 1; Skin sensitisation; H317 May cause an allergic skin reaction.

2.2 Label elements Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms



Signal word

Danger **Hazard statements**

H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H335	May cause respiratory irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

Precautionary statements

P260	Do not breathe vapours.
P280	Wear protective gloves and eye/face protection.
P284	In case of inadequate ventilation wear respiratory protection.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

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Hazard components for labelling

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate
4,4'-Methylenediphenylmethandiisocyanat, oligomere Reaktionsprodukte mit 2,4'-Diphenylmethandiisocyanat, [(methylen)bis(oxy)]dipropanol und oxydipropanol
diphenylmethane-2,4'-diisocyanate; o-(p-isocyanatobenzyl)phenyl isocyanate Methylenediphenyldiisocyanat, Homopolymerisat

Supplemental hazard information

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description product based on 4,4'-methylenediphenyl diisocyanate

Hazardous ingredients

CAS No. EC No. Index No.	Substance name REACH No. Classification according to Regulation (EC) No 1272/2008 [CLP]	weight-%
* 101-68-8 202-966-0 615-005-00-9	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate 01-2119457014-47 Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Eye Irrit. 2 H319 / Acute Tox. 4 H332 / Resp. Sens. 1 H334 / STOT SE 3 H335 / Carc. 2 H351 / STOT RE 2 H373 Specific concentration limit (SCL)Eye Irrit. 2 H319: >= 5,00 / Skin Irrit. 2 H315: >= 5,00 / Resp. Sens. 1 H334: >= 0,10 / STOT SE 3 H335: >= 5,00	> 50,0
* 159168-82-8 500-439-2 -	4,4'-Methylenediphenylmethandiisocyanat, oligomere Reaktionsprodukte mit 2,4'-Diphenylmethandiisocyanat, [(methylen)bis(oxy)]dipropanol und oxydipropanol 01-2119492304-39 Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Eye Irrit. 2 H319 / Acute Tox. 4 H332 / Resp. Sens. 1 H334 / STOT SE 3 H335 / Carc. 2 H351 / STOT RE 2 H373 Specific concentration limit (SCL)Eye Irrit. 2 H319: >= 5,00 / Skin Irrit. 2 H315: >= 5,00 / Resp. Sens. 1 H334: >= 0,10 / STOT SE 3 H335: >= 5,00	25,0 < 50,0
* 39310-05-9 -	Methylenediphenyldiisocyanat, Homopolymerisat Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Eye Irrit. 2 H319 / Acute Tox. 4 H332 / Resp. Sens. 1 H334 - / STOT SE 3 H335 / Carc. 2 H351 / STOT RE 2 H373 Specific concentration limit (SCL)Eye Irrit. 2 H319: >= 5,00 / Skin Irrit. 2 H315: >= 5,00 / Resp. Sens. 1 H334: >= 0,10 / STOT SE 3 H335: >= 5,00	5,0 < 10,0
* 5873-54-1 227-534-9 615-005-00-9	diphenylmethane-2,4'-diisocyanate; o-(p-isocyanatobenzyl)phenyl isocyanate 01-2119480143-45 Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Eye Irrit. 2 H319 / Acute Tox. 4 H332 / Resp. Sens. 1 H334 / STOT SE 3 H335 / Carc. 2 H351 / STOT RE 2 H373 Specific concentration limit (SCL)Eye Irrit. 2 H319: >= 5,00 / Skin Irrit. 2 H315: >= 5,00 / Resp. Sens. 1 H334: >= 0,10 / STOT SE 3 H335: >= 5,00	2,5 < 5,0

Remark

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

Following inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

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Following skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection!

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

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3 Indication of any immediate medical attention and special treatment needed

No special measures are necessary.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media alcohol resistant foam, Carbon dioxide (CO₂), Powder, spray mist, (water),

Unsuitable extinguishing media

Strong water jet

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

Hazardous combustion products

In case of fire may be liberated: carbon monoxide, carbon dioxide, Nitrogen oxides (NO_x),

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ventilate affected area. Do not breathe vapours. Avoid contact with eyes and skin. Wear suitable gloves.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

For containment
Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

For cleaning up

Fouled surfaces must be immediately cleaned with suitable solvents, Useable as such (flammable): water 45 vol.% ethanol or ipropanol 50 vol. % ammonia solution (density= 0.88) 5 vol.%, Alternative (non-flammable): sodium carbonate 5 vol.% water 95 vol.%.

6.4 Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture.

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Advices on safe handling

Avoid contact with skin, eyes and clothes. Personal protection equipment: see section 8 Follow the legal protection and safety regulations. Always close containers tightly after the removal of product. May cause sensitization by inhalation and skin contact. In case of inadequate ventilation wear respiratory protection. After sensitization even concentrations below the exposure limit values may cause asthma. Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

Advices on general occupational hygiene

When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities Requirements for storage rooms and vessels

Store in a dry place. Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers. Keep away from amines, alcohols and water.

Storage class

LGK10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions

Take care of instructions on label. Protect from heat and direct sunlight.

7.3 Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

CAS No.	Substance name	Source	Long-term /short-term (Spitzenbegrenzung)
101-68-8	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	TRGS 900	0,05 / 0,05(0,1) mg/m ³
5873-54-1	diphenylmethane-2,4'-diisocyanate; o-(p-isocyanatobenzyl)phenyl isocyanate	TRGS 900	0,05 / 0,05(0,1) mg/m ³

Additional information

Long-term: Long-term occupational exposure limit value short-term: short-term occupational exposure limit value

Biological limit values

No data available

8.2 Exposure controls

Provide good ventilation. This can be achieved with local or room suction. Street clothing should be stored separately from work clothing.

Personal protection equipment

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m³ (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m³ (0.5 % by vol.); class 3: maximum permitted contaminant concentration in inhaled air = 10000 mL/m³ (1.0 % by vol.) Die Tragezeitbegrenzungen nach GefStoffV in Verbindung mit den Regeln für den Einsatz von Atemschutzgeräten (BGR 190) sind zu beachten. Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

Suitable material: Butyl caoutchouc (butyl rubber)

- * Thickness of the glove material: $\geq 0,4$ mm
Breakthrough time: ≥ 480 min

Suitable material: NBR (Nitrile rubber)

- * Thickness of the glove material: $\geq 0,4$ mm
Breakthrough time: ≥ 480 min

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Observe the instructions and details for use, storage, maintenance and replacement provided by

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the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin.
Recommended glove articles: EN ISO 374

Skin protection

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Eye glasses with side protection

Body protection

When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

* Physical state	Liquid
Colour	cloudy

Safety characteristics

Odour	characteristic
Odour threshold	not determined
pH	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	> 200 °C
Evaporation rate at 20°C	not determined
Burning time	not applicable
Lower explosion limit at 20°C	not determined
Upper explosion limit at 20°C	not determined
Vapour pressure at 20°C	not determined
Density at 20°C	1,21 kg/l
Water solubility at 20°C	not determined
Partition coefficient: n-octanol/water	see section 12
Ignition temperature in °C	not determined
Decomposition temperature	not determined
Viscosity	123,97 mm ² /s
Explosive properties	not relevant
Oxidising properties	not relevant

9.2 Other information

not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

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Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Protect from moisture.

10.5 Incompatible materials

Brass,
Copper alloys.

10.6 Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: Carbon dioxide (CO₂), Carbon monoxide, smoke, Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if inhaled.
ATEmix calculated: (inhalative (vapours)) 11 mg/L

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Suspected of causing cancer.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

This mixture may cause acute irritation and/or sensitization of airways which lead to tightness in thorax, short-breath and asthmatic complaints.

SECTION 12: Ecological information

12.1 Toxicity

Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Other adverse effects

No information available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods Product/Packaging disposal

Do not empty into drains; dispose of this material and its container in a safe way. Waste disposal according to directive 2008/98/ EC, covering waste and dangerous waste.

Waste codes/waste designations according to EWC/AVV

* 070208* - other still bottoms and reaction residues

Other disposal recommendations

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1 UN number

not applicable

14.2 UN proper shipping name Land transport (ADR/RID)

No dangerous good in sense of these transport regulations.

Sea transport (IMDG)

No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

not applicable

14.4 Packing group

not applicable

14.5 Environmental hazards

Land transport (ADR/RID) not applicable

Sea transport (IMDG) not applicable

14.6 Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage. Advices on safe handling: see parts 6 - 8

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code No

transport as bulk according to IBC Code.

14.8 Additional information

Land transport (ADR/RID)

not applicable

Sea transport (IMDG)

not applicable

Air transport (ICAO-TI / IATA-DGR)

not applicable

SECTION 15: Regulatory information

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

EU legislation

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

Hazard categories / Named dangerous substances

This product is not classified according to Directive 2012/18/EU.

National regulations

Water hazard class slightly

hazardous to water (WGK 1)

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15.2 Chemical Safety Assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

REACH No.	Substance name
01-2119492304-39	4,4'-Methylenediphenylmethandiisocyanat, oligomere Reaktionsprodukte mit 2,4'Diphenylmethandiisocyanat, [(methylen)bis(oxy)]dipropanol und oxydipropanol
01-2119457014-47	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate
01-2119480143-45	diphenylmethane-2,4'-diisocyanate; o-(p-isocyanatobenzyl)phenyl isocyanate

SECTION 16: Other information

Relevant R-, H- and EUH-phrases (Number and full text)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H373	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

* Acute Tox. 4 inhalative	Calculation method.
Carc. 2	Calculation method.
Eye Irrit. 2	Calculation method.
Resp. Sens. 1	Calculation method.
STOT RE 2	Calculation method.
* STOT SE 3 Irritation to respiratory tract	Calculation method.
Skin Irrit. 2	Calculation method.
Skin Sens. 1	Calculation method.

Abbreviations and acronyms

See overview table at www.euphrac.eu

Indication of changes

* Data changed compared with the previous version