

Article No.: F22.0003
Print date: 22.07.2015
Version: 1-5

Flexonal PU 5880
Revision date: 15.05.2015
Issue date: 14.04.2015

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

1.1. Product identifiers

Article No. (manufacturer/supplier) F22.0003
Identification of the substance or mixture Flexonal PU 5880

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 (manufacturer/importer/downstream user/distributor)

Bachmann Kunststoff Technologien GmbH
Rudolf-Diesel-Str. 2 Telephone: +49 6074 94394
D- 63322 Rödermark Telefax: +49 6074 98544

Dept. responsible for information:

Information contact

E-mail (competent person)

service@bktgermany.com

1.4. Emergency telephone number:

Telephone: +49 6074 94394
Only available during office hours.

Emergency telephone number
toxication help, Mainz

+49 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

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

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Danger

Hazard statements

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

Precautionary statements

P260	Do not breathe vapour.
P261	Avoid breathing vapours.
P280	Wear protective gloves and eye/face protection.
P284	In case of inadequate ventilation wear respiratory protection.

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P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

contains:

4,4'-methylenediphenyl diisocyanate
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with
2,4'-diisocyanatodiphenylmethane, [(methylethylene)bis(oxy)]dipropanol and oxydipropanol
Methylenediphenyldiisocyanate, Homopolymer
o-(p-isocyanatobenzyl)phenylisocyanate

Supplemental Hazard information (EU)

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Product description / chemical characterization

Description product based on 4,4'-methylenediphenyl diisocyanate

Hazardous ingredients

Classification according to Regulation (EC) No. 1272/2008 [CLP]

EC No. CAS No. INDEX No.	REACH No. Chemical name classification	Wt % Remark
202-966-0 101-68-8 615-005-00-9	01-2119457014-47-XXXX 4,4'-methylenediphenyl diisocyanate Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1 H317 / Resp. Sens. 1 H334 / Carc. 2 H351 / STOT RE 2 H373 / STOT SE 3 H335	50 - 100
500-439-2 159168-82-8	01-2119492304-39-XXXX 4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane, [(methylethylene)bis(oxy)]dipropanol and oxydipropanol Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1 H317 / Resp. Sens. 1 H334 / Carc. 2 H351 / STOT RE 2 H373 / STOT SE 3 H335	25 - 50
39310-05-9	Methylenediphenyldiisocyanate, Homopolymer Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1 H317 / Resp. Sens. 1 H334 / Carc. 2 H351 / STOT RE 2 H373 / STOT SE 3 H335	5 - 10
227-534-9 5873-54-1 615-005-00-9	01-2119480143-45-XXXX o-(p-isocyanatobenzyl)phenylisocyanate Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1 H317 / Resp. Sens. 1 H334 / Carc. 2 H351 / STOT RE 2 H373 / STOT SE 3 H335	2,5 - 5

Additional information

Full text of classification: 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.

In case of inhalation

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

Following skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and

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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.

After ingestion

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

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

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

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

Symptoms

In case of eye contact: Irritation. After inhalation: Asthmatic complaints, Cough, Irritation. In case of skin contact: Irritation

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media

Foam, carbon dioxide, Powder, spray mist, (water)

Extinguishing media which must not be used for safety reasons:

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.

5.3. **Advice for firefighters**

Wear respiratory protection. Wear suitable protective clothing.

Additional information

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. Treat runoff as hazardous.

SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures**

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours. See protective measures under point 7 and 8.

6.2. **Environmental precautions**

Clear spills immediately. 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**

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 chapter 13). Fouled surfaces must be immediately cleaned with suitable solvents, Useable as such (flammable): water 45 vol.% ethanol or i-propanol 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 chapter 7 and 8).

SECTION 7: Handling and storage

People who suffer from skins problems, asthma, allergies, chronic or recurring respiratory illnesses must not be deployed in processes, which use this substance.

7.1. **Precautions for safe handling**

Advices on safe handling

Wear suitable protective clothing and eye/face protection. Wear protective gloves. May cause sensitization by skin contact. In case of inadequate ventilation wear respiratory protection. After sensitization even concentrations below the exposure limit values may cause asthma. Always close containers tightly after the removal of product. Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

Technical measures

Provide adequate ventilation as well as local exhaustion at critical locations.

Precautions against fire and explosion:

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Not readily flammable. Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a dry place. Access only for authorised persons. Floors should be impervious, resistant to liquids and easy to clean. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. 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 Aminen, Alkoholen (incompatible materials to be indicated by the manufacturer).

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:

4,4'-methylenediphenyl diisocyanate

INDEX No. 615-005-00-9 / EC No. 202-966-0 / CAS No. 101-68-8

WEL, TWA: 0,02 mg/m³

WEL, STEL: 0,07 mg/m³

Remark: (as -NCO)

Additional information

TWA : long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Occupational exposure controls

Respiratory protection

Provide for sufficient ventilation, particularly in closed rooms. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used. 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.) Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: Butyl caoutchouc (butyl rubber) / NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time (maximum wearing time) > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374

Eye protection

Wear closely fitting protective glasses in case of splashes.

Protective clothing

Wear suitable protective clothing. Take off contaminated clothing and wash before reuse. Street clothing should be stored separately from work clothing.

Protective measures

Wash hands and face before breaks and after work and take a shower if necessary.

Environmental exposure controls

Do not allow to enter into surface water or drains.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical state liquid
Colour yellow
Odour odourless

Safety relevant basis data

	Unit	Method	Remark
Flash point:	> 200 °C		
Ignition temperature in °C:	n.b.		
Lower explosion limit:	n.a.		
Upper explosion limit:	n.a.		
Vapour pressure at 20 °C:	n.a.		
Density at 20 °C:	1,23 g/cm ³		
Water solubility (g/L):	Immiscible		

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

pH at 20 °C: not applicable
Viscosity at 25 °C: 150 mPa·s

9.2. Other information

none

SECTION 10: Stability and reactivity

10.1. Reactivity

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 chapter 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

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, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No data on preparation itself available.

11.1. Information on toxicological effects

Acute toxicity

Toxicological data are not available.

skin corrosion/irritation; Serious eye damage/eye irritation

Toxicological data are not available.

Respiratory or skin sensitisation

Toxicological data are not available.

Specific target organ toxicity

Toxicological data are not available.

Aspiration hazard

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Toxicological data are not available.

Practical experience/human evidence

Other observations:

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

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Remark

There is no information available on the preparation itself .

SECTION 12: Ecological information

overall evaluation

Classification according to Regulation (EC) No. 1272/2008 [CLP]

There is no information available on the preparation itself .

Do not allow to enter into surface water or drains.

12.1. Toxicity

Toxicological data are not available.

12.2. Persistence and degradability

Toxicological data are not available.

12.3. Bioaccumulative potential

Toxicological data are not available.

12.4. Mobility in soil

Toxicological data are not available.

12.5. Results of PBT assessment

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

12.6. Other adverse effects

none

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

List of proposed waste codes/waste designations in accordance with EWC

070208 other still bottoms and reaction residues

packaging

Recommendation

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

SECTION 14: Transport information

No dangerous good in sense of this transport regulation.

14.1. UN number

n.a.

14.2. UN proper shipping name

14.3. Transport hazard class(es)

n.a.

14.4. Packing group

n.a.

14.5. Environmental hazards

Land transport (ADR/RID)

n.a.

Marine pollutant

n.a.

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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

Additional information

Land transport (ADR/RID)

tunnel restriction code

Sea transport (IMDG)

EmS-No. n.a.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU legislation National

regulations Restrictions of

occupation

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

Other regulations, restrictions and prohibition regulations

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Skin Sens. 1 / H317	respiratory or skin sensitisation	May cause an allergic skin reaction.
Resp. Sens. 1 / H334	respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2 / H351	Carcinogenicity	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
STOT RE 2 / H373	Specific target organ toxicity (repeated exposure)	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).
STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.

Abbreviations and acronyms

n.a. = not applicable

n.b. = not determined

Additional information

Classification according to Regulation (EC) No. 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.