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

1.1 Product identifier

Power Bond Primer black

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

1.2.1 Relevant uses

Adhesive
Binding agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Voelkel Industrie Produkte GmbH
Rudolf-Diesel-Strasse 11
86551 Aichach / GERMANY
Phone +49 (0) 8251 9047 5 0
Fax +49 (0) 8251 9047 5 99
Homepage www.vip-gmbh.com
E-mail info@vip-gmbh.com

Address enquiries to

Technical information info@vip-gmbh.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Flam. Liq. 2: H225 Highly flammable liquid and vapour.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Eye Irrit. 2: H319 Causes serious eye irritation.
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT SE 3: H336 May cause drowsiness or dizziness.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

Signal word DANGER

Contains: Butanone

HDI oligomers, isocyanurate

Diphenylmethanediisocyanate, isomeres and homologues

Hazard statements
H225 Highly flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336 May cause drowsiness or dizziness.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
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.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER / doctor.
P403+P235 Store in a well-ventilated place. Keep cool.

Special labelling
EUH204 Contains isocyanates. May produce an allergic reaction.
As from 24 August 2023 adequate training is required before industrial or professional use

2.3 Other hazards

Human health dangers
Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
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.

Environmental 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.
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 hazards
Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
65 - 70	Butanone
	CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336 - EUH066
5 - 10	2-Methoxy-1-methylethyl acetate
	CAS: 108-65-6, EINECS/ELINCS: 203-603-9, EU-INDEX: 607-195-00-7, Reg-No.: 01-2119475791-29-XXXX
	GHS/CLP: Flam. Liq. 3: H226
5 - 10	HDI oligomers, isocyanurate
	CAS: 28182-81-2, EINECS/ELINCS: 931-274-8, Reg-No.: 01-2119485796-17-XXXX
	GHS/CLP: Skin Sens. 1: H317 - Acute Tox. 4: H332 - STOT SE 3: H335
1 - 5	n-Butyl acetate
	CAS: 123-86-4, EINECS/ELINCS: 204-658-1, EU-INDEX: 607-025-00-1, Reg-No.: 01-2119485493-29-XXXX
	GHS/CLP: Flam. Liq. 3: H226 - STOT SE 3: H336 - EUH066
1 - 5	Xylene, mixture of isomers
	CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9
	GHS/CLP: Flam. Liq. 3: H226 - Acute Tox. 4: H312 H332 - Skin Irrit. 2: H315
0,1 - < 1	Diphenylmethanediisocyanate, isomeres and homologues
	CAS: 9016-87-9, EINECS/ELINCS: 618-498-9
	GHS/CLP: Carc. 2: H351 - Acute Tox. 4: H332 - STOT RE 2: H373 - Eye Irrit. 2: H319 - STOT SE 3: H335 - Skin Irrit. 2: H315 - Resp. Sens. 1: H334 - Skin Sens. 1: H317
	SCL [%]: >= 5: STOT SE 3: H335, >= 5: Eye Irrit. 2: H319, >= 5: Skin Irrit. 2: H315, >= 0,1: Resp. Sens. 1: H334

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.
In the event of symptoms seek medical treatment.

Inhalation Ensure supply of fresh air.
Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.
If unconscious, place in recovery position and seek medical advice.

Skin contact In case of contact with skin wash off immediately with soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Consult a doctor immediately.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions
Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide.
Dry powder.
Alcohol-resistant foam.
Water spray jet.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Hydrogen cyanide (HCN).
Carbon monoxide (CO)
Carbon dioxide (CO2)

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Only cool any containers at risk with jets of water spray if the containers are intact and impermeable.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.
High risk of slipping due to leakage/spillage of product.
Keep people away and stay on the upwind side.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation.
Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 7+8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide suitable vacuuming at the processing area.
Respiratory protection use.
Avoid contact with eyes and skin. Use personal protective equipment.
Avoid spilling or spraying in enclosed areas.
Open and handle container with care.

Keep away from open flames, hot surfaces and sources of ignition.
Do not smoke.
Vapours can form an explosive mixture with air.
Take precautionary measures against static discharges.
Use explosion-proofed equipment/fittings and non-sparkling tools.

Do not eat, drink, smoke or take drugs at work.
Contaminated work clothing should not be allowed out of the workplace.
Take off contaminated clothing and wash before reuse.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.

Do not store together with oxidizing agents.
Do not store together with acids.
Do not store together with food and animal food/diet.
Keep away from water.

Keep container tightly closed.
Keep container in a well-ventilated place.
Keep in a cool place.
Protect from heat/overheating and from sun.
Protect from atmospheric moisture and water.
Recommended storage temperature: 4 - 40°C

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Long-term exposure: 200 ppm, 600 mg/m³, Sk, BmgV
Short-term exposure (15-minute): 300 ppm, 899 mg/m³
HDI oligomers, isocyanurate
CAS: 28182-81-2, EINECS/ELINCS: 931-274-8, Reg-No.: 01-2119485796-17-XXXX
Long-term exposure: 0,02 mg/m³, as NCO, Sen
Short-term exposure (15-minute): 0,07 mg/m³
2-Methoxy-1-methylethyl acetate
CAS: 108-65-6, EINECS/ELINCS: 203-603-9, EU-INDEX: 607-195-00-7, Reg-No.: 01-2119475791-29-XXXX
Long-term exposure: 50 ppm, 274 mg/m³, Sk
Short-term exposure (15-minute): 100 ppm, 548 mg/m³
Xylene, mixture of isomers
CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9
Long-term exposure: 50 ppm, 220 mg/m³, Sk, BMGV
Short-term exposure (15-minute): 100 ppm, 441 mg/m³
n-Butyl acetate
CAS: 123-86-4, EINECS/ELINCS: 204-658-1, EU-INDEX: 607-025-00-1, Reg-No.: 01-2119485493-29-XXXX
Long-term exposure: 150 ppm, 724 mg/m³
Short-term exposure (15-minute): 200 ppm, 966 mg/m³
Diphenylmethanediisocyanate, isomeres and homologues
CAS: 9016-87-9, EINECS/ELINCS: 618-498-9
Long-term exposure: 0,02 mg/m³, (as -NCO) Sen, 25/3

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Eight hours: 600 mg/m³
Short-term (15-minute): 300 ppm, 900 mg/m³
2-Methoxy-1-methylethyl acetate
CAS: 108-65-6, EINECS/ELINCS: 203-603-9, EU-INDEX: 607-195-00-7, Reg-No.: 01-2119475791-29-XXXX
Eight hours: 50 ppm, 275 mg/m³, H
Short-term (15-minute): 100 ppm, 550 mg/m³
Xylene, mixture of isomers
CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9
Eight hours: 50 ppm, 221 mg/m³, H
Short-term (15-minute): 100 ppm, 442 mg/m³
n-Butyl acetate
CAS: 123-86-4, EINECS/ELINCS: 204-658-1, EU-INDEX: 607-025-00-1, Reg-No.: 01-2119485493-29-XXXX

Eight hours: 50 ppm, 241 mg/m³
Short-term (15-minute): 150 ppm, 723 mg/m³

DNEL

Substance
Butanone, CAS: 78-93-3
Industrial, dermal, Long-term - systemic effects, 1161 mg/kg bw/day
Industrial, inhalative (vapor), Long-term - systemic effects, 600 mg/m³
general population, oral, Long-term - systemic effects, 31 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 412 mg/kg bw/day
general population, inhalative (vapor), Long-term - systemic effects, 106 mg/m³
n-Butyl acetate, CAS: 123-86-4
Industrial, inhalative (vapor), Acute - local effects, 600 mg/m³
Industrial, inhalative (vapor), Long-term - local effects, 300 mg/m³
Industrial, inhalative (vapor), Acute - systemic effects, 600 mg/m³
Industrial, dermal, Acute - systemic effects, 11 mg/kg bw/day
Industrial, inhalative (vapor), Long-term - systemic effects, 300 mg/m³
Industrial, dermal, Long-term - systemic effects, 11 mg/kg bw/day
general population, oral, Acute - systemic effects, 2 mg/kg bw/day
general population, inhalative (vapor), Acute - systemic effects, 300 mg/m³
general population, inhalative (vapor), Long-term - local effects, 35,7 mg/m³
general population, inhalative (vapor), Acute - local effects, 300 mg/m³
general population, inhalative (vapor), Long-term - systemic effects, 35,7 mg/m³
general population, oral, Long-term - systemic effects, 2 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 6 mg/kg bw/day
general population, dermal, Acute - systemic effects, 6 mg/kg bw/day
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
Industrial, dermal, Long-term - systemic effects, 153,5 mg/kg
Industrial, inhalative, Long-term - systemic effects, 275 mg/m³
general population, oral, Long-term - systemic effects, 1,67 mg/kg
general population, inhalative, Long-term - systemic effects, 33 mg/m³
general population, dermal, Long-term - systemic effects, 54,8 mg/kg
HDI oligomers, isocyanurate, CAS: 28182-81-2
Industrial, inhalative, Long-term - local effects, 500 µg/m³
Industrial, inhalative, Acute - local effects, 1 mg/m³

PNEC

Substance
Butanone, CAS: 78-93-3
seawater, 55,8 mg/L
freshwater, 55,8 mg/L
sewage treatment plants (STP), 709 mg/L
sediment (freshwater), 284,74 mg/kg
sediment (seawater), 284,74 mg/kg
soil, 22,5 mg/kg
oral (food), 1000 mg/kg
n-Butyl acetate, CAS: 123-86-4

seawater, 0,018 mg/L (AF= 1000)
sewage treatment plants (STP), 35,6 mg/L (AF= 10)
sediment (freshwater), 0,981 mg/kg/ dw
sediment (seawater), 0,098 mg/kg/ dw
soil, 0,09 mg/kg/ dw
freshwater, 0,18 mg/L (AF= 100)
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
soil, 0,29 mg/kg
freshwater, 0,635 mg/l
seawater, 0,0635 mg/l
sewage treatment plants (STP), 100 mg/l
sediment (seawater), 0,329 mg/kg
sediment (freshwater), 3,29 mg/kg
HDI oligomers, isocyanurate, CAS: 28182-81-2
sediment (seawater), 26670 mg/kg sediment dw
soil, 53,183 g/kg
sediment (freshwater), 266701 mg/kg sediment dw
sewage treatment plants (STP), 88 mg/L
seawater, 12,7 µg/L
freshwater, 127 µg/L

8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation.
Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

Eye protection
Tightly fitting goggles (EN 166:2001).

Hand protection
The details concerned are recommendations. Please contact the glove supplier for further information.
>= 0,5 mm, Butyl rubber, >480 min (EN 374-1/-2/-3).

Skin protection
Protective clothing, antistatic (EN 340)

Other
Do not breathe vapour/spray.
Avoid contact with eyes and skin.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection
In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards
not applicable

Delimitation and monitoring of the environmental exposition
Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	black
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	79
Flash point [°C]	-4
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	0,92
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not applicable
Kinematic viscosity	not applicable
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature	> 300
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

The product is considered non-explosive; nevertheless explosive vapour/air mixture can be generated.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.
Vapours can form an explosive mixture with air.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Vapours can form an explosive mixture with air.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.
In the event of fire: See SECTION 5.

SECTION 11: Toxicological information

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

Acute oral toxicity

Product
Based on the available information, the classification criteria are not fulfilled.

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
LD50, oral, Rat, 49000 mg/kg
Butanone, CAS: 78-93-3
LD50, oral, Rat, 3300 mg/kg (Lit.)
n-Butyl acetate, CAS: 123-86-4
LD50, oral, Rat, 10760 mg/kg (OECD 423)
Xylene, mixture of isomers, CAS: 1330-20-7
LD50, oral, Rat, 2840 mg/kg (Lit.)
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
LD50, oral, Rat, > 5000 mg/kg
HDI oligomers, isocyanurate, CAS: 28182-81-2
LD50, oral, Rat, 2500 mg/kg bw

Acute dermal toxicity

Product
ATE-mix, dermal, > 5000 mg/kg

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
LD50, dermal, Rabbit, > 9400 mg/kg
Butanone, CAS: 78-93-3
LD50, dermal, Rabbit, > 5000 mg/kg (Lit.)
n-Butyl acetate, CAS: 123-86-4
LD50, dermal, Rabbit, >14112 mg/kg (OECD 402)
Xylene, mixture of isomers, CAS: 1330-20-7
LD50, dermal, Rabbit, 4350 mg/kg (IUCLID)
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
LD50, dermal, Rat, > 2000 mg/kg
HDI oligomers, isocyanurate, CAS: 28182-81-2
LD10, dermal, Rabbit, 2000 mg/kg bw

Acute inhalational toxicity

Product
ATE-mix, inhalation (vapour), 129 mg/l

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
Conversion value, inhalation (vapour), 11 mg/l

Butanone, CAS: 78-93-3
LC50, inhalative, Rat, > 20 mg/l/4h (Lit.)
n-Butyl acetate, CAS: 123-86-4
LC50, inhalative, Rat, 23,4 mg/l (4h) (OECD 403)
Xylene, mixture of isomers, CAS: 1330-20-7
LC50, inhalative, Rat, 28 mg/l/4h (IUCLID)
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
LC0, inhalative, Rat, > 4345 ppm (6 h)
HDI oligomers, isocyanurate, CAS: 28182-81-2
LC50, inhalative, Rat, 390 - 543 mg/m³

Serious eye damage/irritation

Irritant
Calculation method

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
irritant
Butanone, CAS: 78-93-3
Rabbit, OECD 405, irritant
n-Butyl acetate, CAS: 123-86-4
Eye, Rabbit, OECD 405, non-irritating
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
no adverse effect observed
HDI oligomers, isocyanurate, CAS: 28182-81-2
Eye, Rabbit, OECD 405, non-irritating

Skin corrosion/irritation

Based on the available information, the classification criteria are not fulfilled.

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
Rabbit, OECD 404, irritant
Butanone, CAS: 78-93-3
no adverse effect observed
n-Butyl acetate, CAS: 123-86-4
dermal, Rabbit, OECD 404, non-irritating
Xylene, mixture of isomers, CAS: 1330-20-7
irritant
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
no adverse effect observed
HDI oligomers, isocyanurate, CAS: 28182-81-2
dermal, Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation

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

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
inhalative, sensitising
dermal, mouse, OECD 429, sensitising

Butanone, CAS: 78-93-3
no adverse effect observed
n-Butyl acetate, CAS: 123-86-4
dermal, Guinea pig, Study, non-sensitizing
Xylene, mixture of isomers, CAS: 1330-20-7
non-sensitizing
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
dermal, no adverse effect observed
HDI oligomers, isocyanurate, CAS: 28182-81-2
dermal, Guinea pig, OECD 406, sensitising

Specific target organ toxicity — single exposure

Vapours may cause drowsiness and dizziness.
Calculation method

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
inhalative, irritant
n-Butyl acetate, CAS: 123-86-4
No information available.
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
inhalative, no adverse effect observed

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
inhalative, adverse effect observed
Butanone, CAS: 78-93-3
NOAEC, inhalation (vapour), Rat, 5041 ppm, OECD 413
n-Butyl acetate, CAS: 123-86-4
NOAEL, oral, Rat, 196 mg/kg bw/day, Study, negativ
NOAEC, inhalative, Rat, 2400 mg/m³, Study, negativ
HDI oligomers, isocyanurate, CAS: 28182-81-2
NOAEC, inhalative, Rat, 3,3 mg/m³, OECD 413, adverse effect observed

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.

Substance
n-Butyl acetate, CAS: 123-86-4
Ames-test, negativ
Xylene, mixture of isomers, CAS: 1330-20-7
in vitro, negativ
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
in vitro, negativ

Reproduction toxicity

Based on the available information, the classification criteria are not fulfilled.

Substance
n-Butyl acetate, CAS: 123-86-4
NOAEC, inhalative, Rat, 9640 mg/m³, OECD 416, negativ

Xylene, mixture of isomers, CAS: 1330-20-7
inhalative, Rat, BMCL 10: 4698 mg/m³, no adverse effect observed
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
NOAEL, oral, Rat, 1000 mg/kg bw/d (Effect on fertility), no adverse effect observed
NOAEC, inhalative, Rat, 5400 mg/m³ (Effect on fertility), no adverse effect observed

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
adverse effect observed
Xylene, mixture of isomers, CAS: 1330-20-7
NOAEL, oral, Rat, 500 mg/kg bw/day, no adverse effect observed
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
NOAEC, inhalative, Rat, 11058 mg/m³, no adverse effect observed

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not 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 none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
EC50, (3h), Bacteria, > 100 mg/l (OECD 209)
LC0, (96h), fish, > 1000 mg/l
NOEC, (21d), Daphnia magna, > 10 mg/l
EC0, (72h), Scenedesmus subspicatus, 1640 mg/l (OECD 201)
EC0, (24h), Daphnia magna, > 500 mg/l
Butanone, CAS: 78-93-3
LC50, (48h), Leuciscus idus, > 100 mg/l (Lit.)
EC50, (48h), Daphnia magna, > 100 mg/l (Lit.)
n-Butyl acetate, CAS: 123-86-4
LC50, (96h), Pimephales promelas, 18 mg/l (OECD 203)
EC50, (48h), Daphnia magna, 44 mg/l
EC50, (72h), Desmodesmus subspicatus, 647,7 mg/l
IC50, Bacteria, 356 mg/l (40 h)
NOEC, Desmodesmus subspicatus, 200 mg/l
Xylene, mixture of isomers, CAS: 1330-20-7
LC50, (96h), Oncorhynchus mykiss, 8,2 mg/l (ECOTOX Database)
EC50, (24h), Daphnia magna, 75,5 mg/l (ECOTOX Database)
2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
LC50, (96h), Oncorhynchus mykiss, 134 mg/l (OECD 203)
EC50, (72h), Selenastrum capricornutum, > 1000 mg/l (OECD 201)
EC50, (48h), Daphnia magna, > 500 mg/l
NOEC, Oryzias latipes, 47,5 mg/l (14 d) (OECD 204)
NOEC, (21d), Daphnia magna, ≥ 100 mg/l (OECD 202)
EC10, Bacteria, > 1000 mg/l (0,5 h) (ISO 8192)
HDI oligomers, isocyanurate, CAS: 28182-81-2
EC50, (72h), Algae, 1 g/L
EL50, (48h), Crustacea, 127 mg/L
LL0, (96h), fish, 100 mg/L

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability CAS 108-65-6: > 90% - The product is readily biodegradable.
CAS 123-86-4: 83%, 28d - The product is readily biodegradable.
CAS 78-93-3 - The product is readily biodegradable.
CAS 28182-81-2 - The product is not biodegradable.
CAS 1330-20-7 - The product is readily biodegradable.

12.3 Bioaccumulative potential

CAS 108-65-6: Log Pow=0,56
CAS 123-86-4: Log Pow=1,81 - 2,3
CAS 9016-87-9: BCF<14, 42d
CAS 28182-81-2: BCF=141 L/kg ww
CAS 1330-20-7: BCF=25,9

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

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

Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Coordinate disposal with the disposal contractor/authorities if necessary.

Waste no. (recommended) 080501*
080409*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	1193
Inland navigation (ADN)	1193
Marine transport in accordance with IMDG	1193
Air transport in accordance with IATA	1193

14.2 UN proper shipping name

Transport by land according to ADR/RID	Methyl ethyl ketone, solution
- Classification Code	F1
- Label	
- ADR LQ	1 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D/E)
Inland navigation (ADN)	Methyl ethyl ketone, solution
- Classification Code	F1
- Label	
Marine transport in accordance with IMDG	Methyl ethyl ketone, solution
- EMS	F-E, S-D
- Label	
- IMDG LQ	1 l
Air transport in accordance with IATA	Methyl ethyl ketone, solution
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	3
Inland navigation (ADN)	3
Marine transport in accordance with IMDG	3
Air transport in accordance with IATA	3

14.4 Packing group

Transport by land according to ADR/RID	II
Inland navigation (ADN)	II
Marine transport in accordance with IMDG	II
Air transport in accordance with IATA	II

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for young people. Observe employment restrictions for mothers-to-be and nursing mothers. Annex XVII of the REACH Regulation, restriction 3, 74. SEVESO III (Directive 2012/18/EU), Hazard categories in accordance with Regulation (EC) No 1272/2008: P5c FLAMMABLE LIQUIDS
- VOC (2010/75/CE)	72,34 (665, 5 g/l)

15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure through inhalation.
H351 Suspected of causing cancer.
H315 Causes skin irritation.
H312+H332 Harmful in contact with skin or if inhaled.
H226 Flammable liquid and vapour.
H335 May cause respiratory irritation.
H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
EUH066 Repeated exposure may cause skin dryness or cracking.
H336 May cause drowsiness or dizziness.
H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Flam. Liq. 2: H225 Highly flammable liquid and vapour. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Calculation method)
STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)

Modified position

none