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

1.1 Product identifier

2-K Polyester Filler Flex Comp B (Hardener)

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

1.2.1 Relevant uses

Filler
Hardener

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 (EC) No 1272/2008]

Org. Perox. E: H242 Heating may cause a fire.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Eye Irrit. 2: H319 Causes serious eye irritation.
Aquatic Acute 1: H400 Very toxic to aquatic life.
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms

Signal word WARNING

Contains: Dibenzoyl peroxide

Hazard statements
H242 Heating may cause a fire.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234 Keep only in original container.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P235 Store in a well-ventilated place. Keep cool.
P391 Collect spillage.

2.3 Other hazards

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.

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
45 - < 55	Dibenzoyl peroxide
	CAS: 94-36-0, EINECS/ELINCS: 202-327-6, EU-INDEX: 617-008-00-0, Reg-No.: 01-2119511472-50-XXXX
	GHS/CLP: Org. Perox. B: H241 - Skin Sens. 1: H317 - Eye Irrit. 2: H319 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 10, M-Factor (chronic): 10
5 - < 10	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, Reg-No.: 01-2119456816-28-XXXX
	GHS/CLP: Acute Tox. 4: H302 - STOT RE 2: H373

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
Remove contaminated soaked clothing immediately and dispose of safely.
Adhere to personal protective measures when giving first aid.

Inhalation
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
IF you feel unwell: Immediately call a POISON CENTER.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

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

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.
Carbon monoxide (CO)
Carbon dioxide (CO2)

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Do not inhale explosion and/or combustion gases.

Cool containers at risk with water spray jet.
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.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).
Use breathing apparatus if exposed to aerosols.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
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

Avoid formation of aerosols.
Use only in well-ventilated areas.
Vacuuming in situ required.
Avoid contact with eyes and skin. Use personal protective equipment.
Place the container in an upright position and protect it against falling over.
Open and handle container with care.

Keep away from open flames, hot surfaces and sources of ignition.
Has a fire-promoting effect due to release of oxygen.
Take precautionary measures against static discharges.
Use explosion-proofed equipment/fittings and non-sparkling tools.
Handle with care - avoid shock, friction, impact.
Vapours can form an explosive mixture with air.

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

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store with amines
Do not store together with metals.
Do not store together with acids.
Do not store with alkalies.
Do not store with combustible materials.
Do not store together with food and animal food/diet.

Keep container in a well-ventilated place.
Keep container tightly closed.
Protect from heat/overheating and from sun.
Of dirt, rust, chemicals konz. Alkalis and conc. Keep away acids and accelerators (eg: heavy metal salts and amines).
Prevent drying-out.
Recommended storage temperature: +5 - +25°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 (EU)

Substance / EC LIMIT VALUES
Ethylene glycol
CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, Reg-No.: 01-2119456816-28-XXXX
Eight hours: 20 ppm, 52 mg/m³, H
Short-term (15-minute): 40 ppm, 104 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Ethylene glycol
CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, Reg-No.: 01-2119456816-28-XXXX
Eight hours: 20 ppm, 52 mg/m³, H
Short-term (15-minute): 40 ppm, 104 mg/m³

DNEL

Substance
Ethylene glycol, CAS: 107-21-1
Industrial, dermal, Long-term - systemic effects, 106 mg/m³
Industrial, inhalative, Long-term - local effects, 35 mg/m³
general population, dermal, Long-term - systemic effects, 53 mg/m³
general population, inhalative, Long-term - local effects, 7 mg/m³
Dibenzoyl peroxide, CAS: 94-36-0
Industrial, dermal, Long-term - local effects, 34 µg/cm²
Industrial, dermal, Long-term - systemic effects, 13,3 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 39 mg/m³
general population, oral, Long-term - systemic effects, 2 mg/kg bw/day

PNEC

Substance
Ethylene glycol, CAS: 107-21-1
freshwater, 10 mg/L
seawater, 1 mg/L
sediment (freshwater), 37 mg/kg
soil, 1,53 mg/kg
sewage treatment plants (STP), 199,5 mg/l (AF=10)
sediment (seawater), 3,7 mg/kg
Dibenzoyl peroxide, CAS: 94-36-0
soil, 0,003 mg/kg soil dw
sediment (seawater), 0,001 mg/kg sediment dw
sediment (freshwater), 0,013 mg/kg sediment dw
sewage treatment plants (STP), 0,035 mg/L
seawater, 0,002 µg/L
freshwater, 0,02 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. > 0,11 mm; Butyl rubber, >480 min (EN 374-1/-2/-3). > 0,11 mm; Nitrile rubber, >480 min (EN 374-1/-2/-3). FKM > 0,11 mm; >480 min (EN 374-1/-2/-3).
Skin protection	Protective clothing (EN 340)
Other	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. Avoid contact with eyes and skin. Do not breathe vapour/spray.
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	No information available.
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	pasty
Color	red
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	yes
Vapour pressure/gas pressure [kPa]	not determined
Density [g/cm³]	1,15 (20°C)
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	No information available.
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	No information available.
Kinematic viscosity	No information available.
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	0
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	SADT 50°C
Particle characteristics	No information available.

9.2 Other information

Solids content: 50%
Active oxygen content: 3,2 - 3,4%

SECTION 10: Stability and reactivity

10.1 Reactivity

Decomposes on heating.
Self Accelerating Decomposition at SADT (Self Accelerating Decomposition Temperature) 50 ° C.
Auto-ignition at high temperatures.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with alcohols, amines, aqueous acids and alkalies.
Reactions with reducing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Keep away from dirt, rust, chemicals, alkalis and acids as well as heavy metal salts and amines - Spontaneous decomposition.

10.6 Hazardous decomposition products

Benzoic acid.
Benzene.
Biphenyl.
Diphenyl.

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
Ethylene glycol, CAS: 107-21-1
LD50, oral, Rat, 7712 mg/kg bw
ATE, oral, 500 mg/kg (Acute Tox. 4)
Dibenzoyl peroxide, CAS: 94-36-0
LD50, oral, Rat, > 2000 mg/kg (ECHA)

Acute dermal toxicity

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

Substance
Ethylene glycol, CAS: 107-21-1
LD50, dermal, mouse, >3500 mg/kg bw

Acute inhalational toxicity

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

Substance
Ethylene glycol, CAS: 107-21-1
LC50, inhalative, Rat, >2.5 mg/L air, 6h
Dibenzoyl peroxide, CAS: 94-36-0
LC50, inhalative, Rat, > 24,3 mg/l/4h (ECHA)

Serious eye damage/irritation Irritant
Calculation method

Substance
Ethylene glycol, CAS: 107-21-1
Eye, non-irritating
Dibenzoyl peroxide, CAS: 94-36-0
Rabbit, irritant

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
dermal, non-irritating
Dibenzoyl peroxide, CAS: 94-36-0
Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation May cause an allergic skin reaction.
Calculation method

Substance
Ethylene glycol, CAS: 107-21-1
dermal, non-sensitizing
Dibenzoyl peroxide, CAS: 94-36-0
mouse, (LLNA), OECD 429, sensitising

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Substance
Dibenzoyl peroxide, CAS: 94-36-0
inhalative, no adverse effect observed

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
NOAEL, dermal, Dog, 2200 mg/kg bw/day, adverse effect observed
NOEL, oral, Rat, 150 mg/kg bw/day, OECD 408, adverse effect observed

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

Substance
Ethylene glycol, CAS: 107-21-1
in vitro, no adverse effect observed

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

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

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

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

11.2 Information on other hazards

Endocrine disrupting properties No information available.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Ethylene glycol, CAS: 107-21-1
LC50, (28d), fish, 1,5 g/L
LC50, (3d), fish, 72.86 g/L
EC50, (4d), Invertebrates, 3,536 - 13 g/L
EC50, (21d), Invertebrates, 33,911 g/L
EC50, (48h), Invertebrates, 100 mg/L
Dibenzoyl peroxide, CAS: 94-36-0
LC50, (96h), fish, 0,06 mg/L (ECHA)
EC50, (72h), Algae, 0,071 mg/L (ECHA)
EC50, (48h), Daphnia magna, 0,11 mg/L (ECHA)

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	No information available.
Biological degradability	CAS 94-36-0: 71%, 28d (OECD 301 D)

12.3 Bioaccumulative potential

CAS 94-36-0: log Pow=3,2
CAS 107-21-1: log Pow=-1,36

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
Do not discharge product unmonitored into the environment or into the drainage.

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.
For recycling, consult manufacturer.

Waste no. (recommended) 160903*

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	3108
Inland navigation (ADN)	3108
Marine transport in accordance with IMDG	3108
Air transport in accordance with IATA	3108

14.2 UN proper shipping name

Transport by land according to ADR/RID	Organic Peroxide type E, solid, Dibenzoyl peroxide
- Classification Code	P1
- Label	
- ADR LQ	0,5 kg
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D)
Inland navigation (ADN)	Organic Peroxide type E, solid, Dibenzoyl peroxide
- Classification Code	P1
- Label	
Marine transport in accordance with IMDG	Organic peroxide Type E, solid, Dibenzoyl peroxide
- EMS	F-J, S-R
- Label	
- IMDG LQ	0,5 kg
Air transport in accordance with IATA	Organic Peroxide Type E, solid, Dibenzoyl peroxide
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	5.2 (N)
Inland navigation (ADN)	5.2 (N)
Marine transport in accordance with IMDG	5.2
Air transport in accordance with IATA	5.2

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

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

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 (2021)
NATIONAL REGULATIONS (EU):	
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people. Annex XVII of the REACH Regulation, restriction 3. SEVESO III (Directive 2012/18/EU), Hazard categories in accordance with Regulation (EC) No 1272/2008: P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES E1 ENVIRONMENTAL HAZARDS
- VOC (2010/75/CE)	No information available.

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H373 May cause damage to organs through prolonged or repeated exposure.
H302 Harmful if swallowed.

H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H241 Heating may cause a fire or explosion.

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

Org. Perox. E: H242 Heating may cause a fire. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Aquatic Acute 1: H400 Very toxic to aquatic life. (Calculation method)
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none