

Safety data sheet

Page: 1/12

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.08.2024

Version: 2.0

Product: **Kollidon® 90 F**

(ID no. 30034978/SDS_GEN_ZA/EN)

Date of print 15.10.2025

1. Identification

Product identifier

Kollidon® 90 F

Chemical name: Polyvinylpyrrolidone

CAS Number: 9003-39-8

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

Relevant identified uses: pharmaceutical excipient

Details of the supplier of the safety data sheet

Company:

Emergency telephone number

National emergency number:

+27 11 203 2420

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

No need for classification according to GHS criteria for this product.

Label elements

Globally Harmonized System (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards

According to UN GHS criteria

The product is under certain conditions capable of dust explosion.

3. Composition/Information on Ingredients

Substances

Chemical nature

2-Pyrrolidinone, 1-ethenyl-, homopolymer
CAS Number: 9003-39-8

Hazardous ingredients (GHS)

According to UN GHS criteria

Formic acid

Content (W/W): > 0 % - < 1 %
CAS Number: 64-18-6
EC-Number: 200-579-1
INDEX-Number: 607-001-00-0

Flam. Liq. 3
Acute Tox. 3 (Inhalation - vapour)
Acute Tox. 4 (oral)
Skin Corr./Irrit. 1A
Eye Dam./Irrit. 1
H226, H314, H331, H302
EUH071

Specific concentration limit:

Skin Corr./Irrit. 2: 2 - < 10 %
Eye Dam./Irrit. 2: 2 - < 10 %
Skin Corr./Irrit. 1A: >= 90 %
Skin Corr./Irrit. 1B: 10 - < 90 %

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink 200-300 ml of water.

Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

Hazards: No hazards anticipated.

Indication of any immediate medical attention and special treatment needed

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder

Special hazards arising from the substance or mixture

harmful vapours, carbon oxides, nitrogen oxides

The substances/groups of substances mentioned can be released in case of fire. Dust explosion hazard.

Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Avoid the formation and build-up of dust - danger of dust explosion.

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing. Information regarding personal protective measures, see section 8.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Sweep/shovel up.

Dispose of absorbed material in accordance with regulations. Avoid raising dust.

7. Handling and Storage

Precautions for safe handling

Avoid dust formation. Provide exhaust ventilation if dust is formed.

Protection against fire and explosion:

The product is capable of dust explosion. Avoid dust formation. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Use explosion-proof apparatus and fittings.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Protect against heat.

Storage stability:

No specific storage temperature necessary.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

64-18-6: Formic acid

STEL value 20 ppm

TWA value 10 ppm

Exposure controlsPersonal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)

Hand protection:

Wear chemical resistant protective gloves.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

State of matter:	solid	
Form:	powder	
Colour:	white to cream	
Odour:	almost odourless	
Odour threshold:	not determined	
melting range:	>= 130 °C	
	The substance / product decomposes.	
Boiling point:	The product is a non-volatile solid.	
Flammability:	not highly flammable	(other)
Lower explosion limit:	50 g/m ³	(air)
	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Flash point:	not applicable	
Auto-ignition temperature:	425 °C	(DIN 51794)
Thermal decomposition:	425 °C (DSC (DIN 51007))	
	It is not a self-decomposable substance.	
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.	
pH value:	5.0 - 9.0	(Ph. Eur. 2.2.3)
	(water, 10 %(m), 20 °C)	

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.08.2024

Version: 2.0

Product: **Kollidon® 90 F**

(ID no. 30034978/SDS_GEN_ZA/EN)

Date of print 15.10.2025

(DIN EN ISO 2555 (RVT))

Viscosity, dynamic: 10,000 - 30,000 mPa.s
(20 %(m), 23 °C)

Solubility in water:
> 270 g/l
(23 °C)

Solubility (qualitative) solvent(s): organic solvents
soluble

Partitioning coefficient n-octanol/water (log Kow):
not determined

Information on: Polyvinylpyrrolidone

Partitioning coefficient n-octanol/water (log Kow): -3.4

Vapour pressure:

not applicable

Relative density:

No data available.

Density: 1.2 g/cm³
(20 °C)

Relative vapour density (air):

The product is a non-volatile solid.

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: Product is not explosive, however a dust explosion could result from an air / dust mixture.

Oxidizing properties

Fire promoting properties: not fire-propagating

Self-heating substances and mixtures

Self heating ability: It is a substance capable of spontaneous heating according to UN transport regulations class 4.2. Based on test results packaging < 3m³ are exempted from the classification. (UN Test N.4 (self heating substances))

Corrosion to metals

Corrosive effects to metal are not anticipated.

Other safety characteristics

Bulk density: approx. 400 - 600 kg/m³ (DIN EN ISO 60)

Miscibility with water:
soluble

Evaporation rate:
The product is a non-volatile solid.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: Corrosive effects to metal are not anticipated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Dust explosion hazard.

Conditions to avoid

Avoid dust formation. Avoid electro-static charge. Avoid all sources of ignition: heat, sparks, open flame. See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

No substances known that should be avoided.

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.

Experimental/calculated data:

LD50 rat (oral): > 2,000 mg/kg (BASF-Test)

LC50 rat (by inhalation): > 5.2 mg/l 4 h (OECD Guideline 403)

Irritation

Assessment of irritating effects:

Not irritating to eyes and skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (Draize test)

Serious eye damage/irritation rabbit: non-irritant (Draize test)

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in studies with mammals.

Carcinogenicity**Assessment of carcinogenicity:**

In long-term animal studies in which the substance was given in high doses by feed, a carcinogenic effect was not observed.

Reproductive toxicity**Assessment of reproduction toxicity:**

Not expected to cause reproductive toxicity (based on composition).

Developmental toxicity**Assessment of teratogenicity:**

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure)**Assessment of STOT single:**

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**Assessment of repeated dose toxicity:**

None known

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) > 10,000 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

Microorganisms/Effect on activated sludge:

EC20 (0.5 h) > 1,995 mg/l, activated sludge, industrial (OECD Guideline 209, aerobic)

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Poorly eliminated from water.

Information on: 2-Pyrrolidinone, 1-ethenyl-, homopolymer

Elimination information:

< 10 % DOC reduction (15 d) (OECD Guideline 302 B) (aerobic, activated sludge, industrial) Poorly eliminated from water.

Bioaccumulative potential

Bioaccumulation potential:

Based on its structural properties, the polymer is not biologically available. Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: No data available.

Results of PBT and vPvB assessment

According to Regulation (EC) No.453/2010: The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Ecological data are determined by analogy.

13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

A waste code in accordance with the European waste catalog (EWC) cannot be specified, due to dependence on the usage.

Observe national and local legal requirements.

Contaminated packaging:

Uncontaminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Land transport

ADR

UN number or ID number: UN3088

UN proper shipping name: SELF-HEATING SOLID, ORGANIC, N.O.S. (1-ETHENYL-2-PYRROLIDINONE, HOMOPOLYMER)

Transport hazard class(es): 4.2

Packing group: III

Environmental hazards: no

Special precautions for user: Tunnel code: E

Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

RID

UN number or ID number: UN3088

UN proper shipping name: SELF-HEATING SOLID, ORGANIC, N.O.S. (1-ETHENYL-2-PYRROLIDINONE, HOMOPOLYMER)

Transport hazard class(es): 4.2

Packing group: III

Environmental hazards: no

Special precautions for user: Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Inland waterway transport

ADN

UN number or ID number: UN3088

UN proper shipping name: SELF-HEATING SOLID, ORGANIC, N.O.S. (1-ETHENYL-2-PYRROLIDINONE, HOMOPOLYMER)

Transport hazard class(es): 4.2

Packing group: III

Environmental hazards: no

Special precautions for user: Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Transport in inland waterway vessel

Not evaluated

Sea transport**IMDG**

UN number or ID number: UN 3088
UN proper shipping name: SELF-HEATING SOLID, ORGANIC, N.O.S. (1-ETHENYL-2-PYRROLIDINONE, HOMOPOLYMER)

Transport hazard class(es): 4.2
Packing group: III
Environmental hazards: no
Marine pollutant: NO

Special precautions for user: EmS: F-A; S-J
Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Air transport**IATA/ICAO**

UN number or ID number: UN 3088
UN proper shipping name: SELF-HEATING SOLID, ORGANIC, N.O.S. (1-ETHENYL-2-PYRROLIDINONE, HOMOPOLYMER)

Transport hazard class(es): 4.2
Packing group: III
Environmental hazards: No Mark as dangerous for the environment is needed
Special precautions for user: Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

Further information

Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Flam. Liq.	Flammable liquids
Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
EUH071	Corrosive to the respiratory tract.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.