



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

1.1. Product identifier

Name of product WEICON F2 Hardener
Code-Nr. 102002

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

Uses advised against

Remark

Do not use for private purposes (household).

Recommended intended purpose(s)

2-Component Epoxy Resin - Hardener Component

1.3. Details of the supplier of the safety data sheet

Distributor

WEICON GmbH & Co. KG
Königsberger Str. 255, DE-48157 Münster
Phone : +49(0)251 / 9322 - 0, Fax : +49(0)251 / 9322 - 244
E-Mail : msds@weicon.de
Internet : www.weicon.de

Advice

Produktsicherheit / Product-Safety-Department
Phone : +49(0)251 / 9322 - 0
Fax : +49(0)251 / 9322 - 244
E-mail (competent person):
msds@weicon.de

1.4. Emergency telephone number

EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel:
++44 1865 407333 (English)
TRANSPORT EMERGENCY CONTACT - UK, UAE, South
Africa (24h): Tel: ++44 1865 407333 (English)

Manufacturer

WEICON GmbH & Co. KG
Königsberger Str. 255, DE-48157 Münster

1.4. Emergency telephone number

GIFTNOTRUF/TRANSPORTNOTRUF - Deutschland (24h):
Tel: ++49 69 222 25285 (Deutsch, Englisch)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
--------------------------------------	-------------------	--------------------------

Skin Corr. 1C Eye Dam. 1	H314	
-----------------------------	------	--

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

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Skin Sens. 1	H317	
Repr. 1B	H360F	
Repr. 2	H361d	
STOT RE 2	H373	
Aquatic Acute 1	H400	
Aquatic Chronic 1	H410	

Hazard Statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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


GHS05



GHS07



GHS08



GHS09

Signal word

Danger

Hazard Statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P260	Do not breathe vapours/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 05.08.2019

revision 02.11.2018 (GB) Version 8.8

WEICON F2 Hardener

P310	Immediately call a POISON CENTER/doctor/...
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container to hazardous or special waste collection point.

Hazardous ingredients for labeling

2-piperazin-1-ylethylamine, 4,4'-isopropylidenediphenol, Fatty acids C18 unsat, reaction products with tetraethylenepentamine

Additional information

Remark

For industrial use only.

2.3. Other hazards

Information pertaining to special dangers for human and environment

Causes severe burns.

May impair fertility.

Results of PBT and vPvB assessment

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

SECTION 3: Composition/ information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Description

Polyamino amide.

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
80-05-7	201-245-8	4,4'-isopropylidenediphenol	7 - 13	Eye Dam. 1, H318 / Skin Sens. 1, H317 / Repr. 1B, H360F / STOT SE 3, H335 / Aquatic Chronic 2, H411
1226892-45-0	273-201-6	Fatty acids C18 unsat, reaction products with tetraethylenepentamine	60 - 99,9	Skin Corr. 1C, H314 / Eye Dam. 1, H318 / Skin Sens. 1A, H317 / Aquatic Acute 1, H400 M=10 / Aquatic Chronic 1, H410 M=1
140-31-8	205-411-0	2-piperazin-1-ylethylamine	3 - 7	Acute Tox. 4, H302 / Acute Tox. 3, H311 / Skin Corr. 1B, H314 / Skin Sens. 1, H317 / Aquatic Chronic 3, H412 / STOT RE 1, H372 / Repr. 2, H361 /

REACH

CAS No	Name	REACH registration number
80-05-7	4,4'-isopropylidenediphenol	01-2119457856-23
1226892-45-0	Fatty acids C18 unsat, reaction products with tetraethylenepentamine	01-2119487006-38
140-31-8	2-piperazin-1-ylethylamine	01-2119471486-30

Additional advice

SVHC Candidate: CAS 80-05-7



SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

No mouth-to-mouth resuscitation by first aid.

Seek medical advice immediately.

In case of skin contact

In case of contact with skin wash off immediately with plenty of water.

Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds.

In case of eye contact

After eye contact, rinse opened eye for 15 minutes under running water. Transfer to hospital for specialist examination.

In case of ingestion

Do not induce vomiting.

Call for a doctor immediately.

Rinse out mouth thoroughly with water.

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

Physician's information / possible symptoms

vomiting

Respiratory complaints

Headache

Allergic symptoms

Skin burns

Nausea

Confusion

Gastrointestinal complaints

Physician's information / possible dangers

Risk of respiratory disorders

allergic reactions

Causes serious eye damage.

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

Treatment (Advice to doctor)

Keep under medical supervision for at least 48 hours.

Symptoms may not occur until several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Fire-extinguishing activities according to surrounding.

5.2. Special hazards arising from the substance or mixture

In case of fire formation of dangerous gases possible.

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Carbon dioxide (CO₂)



5.3. Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus.

Do not inhale explosion and/or combustion gases.

Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ensure adequate ventilation.

Remove persons to safety.

Use personal protective clothing.

Use breathing apparatus if exposed to vapours/dust/aerosol.

6.2. Environmental precautions

Inform pollution control authorities if product gets into the sewerage systems or open waters.

Do not seep away runed out product into ground or body of water.

Do not discharge into the drains/surface waters/groundwater.

Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).

After taking up the material dispose according to regulation.

Additional Information

Sort out leaky cans and dispose according to regulations.

6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

Open and handle container with care!

Take the usual precautions when handling with chemicals.

General protective measures

Avoid contact with eyes and skin

Do not inhale gases/vapours/aerosols.

It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin.

Hygiene measures

At work do not eat, drink and smoke.

Remove soiled or soaked clothing immediately.

Work in rooms with good ventilation.

Wash hands before breaks and after work.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking
Pay attention to general rules of internal fire prevention.

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

Keep in closed original container.

Advice on storage compatibility

Do not store with acids or alkalies.
Do not store together with animal feedstuffs.
Do not store together with food.
Do not store together with oxidizing agents.

Further information on storage conditions

Keep container tightly closed and store at cool and aired place.
Protect from heat and direct solar radiation.
Store at 5 to 40°C (=41 to 104°F).
Store in a dry place.

7.3. Specific end use(s)**Recommendation(s) for intended use**

See section 1.2

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****DNEL-/PNEC-values****DNEL worker**

CAS No	Substance name	Value	Code	Remark
140-31-8	2-piperazin-1-ylethylamine	10,6 mg/m ³	DNEL long-term inhalative (systemic)	
		10,6 mg/m ³	DNEL acute inhalative (systemic)	
		0,015 mg/m ³	DNEL long-term inhalative (local)	
		80 mg/m ³	DNEL acute inhalative (local)	

PNEC

CAS No	Substance name	Value	Code	Remark
140-31-8	2-piperazin-1-ylethylamine	250 mg/l	PNEC sewage treatment plant (STP)	
		0,0058 mg/l	PNEC aquatic, marine water	
		21,5 mg/kg	PNEC sediment, marine water	
		215 mg/kg	PNEC sediment, freshwater	
		0,058 mg/l	PNEC aquatic, freshwater	

Additional advice

The statutory local and national regulations have to be observed.

8.2. Exposure controls**Respiratory protection**

If ventilation insufficient, wear respiratory protection.
Short term: filter apparatus, combination filter A-P1

**Hand protection**

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: Butyl rubber; 0,7 mm; 480min; 60min, "Butoject 898" from KCL; Email: Vertrieb@kcl.de

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: Nitrile rubber; 0,4mm; 480min;60min.

Chemical protective gloves must be chosen carefully in view of their design and depending on the dependence on the concentration and amounts of dangerous goods used in the specific working tasks.

Eye protection

tightly fitting goggles

protective shield

Other protection measures

protective clothing

Appropriate engineering controls

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

liquid

Colour

blue

Odour

hardly noticeable

Odour threshold

not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	11	20 °C			500 g/l
boiling point	> 200 °C				
melting point	not determined				
Flash point	147 °C			DIN 51758	Pensky-Martens Closed Cup
Vapourisation rate	not determined				
Flammable (solid)	not applicable				
Flammability (gas)	not applicable				
Ignition temperature	> 200 °C				estimate
Self ignition temperature					The product is not self-igniting.
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	0,1 hPa	20 °C			



Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 05.08.2019

revision 02.11.2018 (GB) Version 8.8

WEICON F2 Hardener

	Value	Temperature	at	Method	Remark
Relative density	0,98 g/cm ³	25 °C			
Vapour density	not determined				
Solubility in water		20 °C			more or less insoluble
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	> 200 °C				
Viscosity dynamic	450-900 mPa*s	25 °C			

Oxidising properties

No information available.

Explosive properties

no

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Reactions with strong acids and alkalies.

Reactions with strong oxidising agents.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

Substances to avoid

Alkali (lye), concentrated

Acid, concentrated

Oxidising agent, strong

10.6. Hazardous decomposition products

Gases/vapours, toxic

Carbon monoxide and carbon dioxide.

Nitrous oxides (NO_x)

**Thermal decomposition**

Remark No decomposition if used as directed.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity/Irritation/Sensitization**

	Value/Validation	Species	Method	Remark
LD50 acute oral	4100 mg/kg	rat		ATE
LD50 acute dermal	> 2000 mg/kg		estimate	ATE
LC50 acute inhalation	> 170 mg/m ³ (6 h)	rat	dust/mist	CAS: 80-05-7
Skin irritation	corrosive	rabbit	OECD 404 Acute Dermal Irritation / Corrosion	
Eye irritation	corrosive	rabbit eye	OECD 405 Acute Eye Irritation/ Corrosion	
Skin sensitization	sensitizing	Guinea pig	OECD 406 Skin Sensitization	

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Chronic Toxicity	NOAEL > 1000 mg/kg (29 d) Repeated Dose 90-Day Oral Toxicity Study in Rodents OECD 410 Repeated Dose Dermal Toxicity: 21/28 day Staudy	CAS: 140-31-8		-
Mutagenicity	OECD 474 Mammalian Erythrocyte Micronucleus Test		CAS: 80-05-7	No experimental information on genotoxicity in vitro available.
Reproduction-Toxicity	Experimental value CAS: 80-05-7	Rat	OECD 416	Indications of toxic effects are available from reproduction studies in animals.
Carcinogenicity	Carcinogenicity Studies / 7d/week / 2 years CAS: 80-05-7			No indications of carcinogenic effects are available from long-term trials.

**Specific target organ toxicity (repeated exposure)**

May cause damage to organs, if longer exposed.

Toxicity test (Additional information)

Indications of genotoxic effects at humans are available from reproduction studies in animals.

Experiences made from practice

Risk of strong health injuries in case of long-term exposition.

Corrosive effect on skin and mucous membrane.

Sensitization through skin contact possible.

Causes corrosions.

Risk of strong eye injuries.

Additional information

The product is to be handled with the caution usual with chemicals.

Other hazardous properties may not be excluded.

The product has not been tested. The information is derived from the properties of the individual components.

! SECTION 12: Ecological information**12.1. Toxicity****Ecotoxicological effects**

	Value	Species	Method	Validation
Fish	LC50 0,19 mg/l (96 h)	Brachidanio rerio	OECD 203	CAS: 1226892-45-0
Daphnia	EC 50 0,18 mg/l (48 h)	Daphnia magna	OECD 202	CAS: 1226892-45-0
Algae	EC50 61,2 Mikro-g/l (72 h)	Green algae	OECD 201	CAS: 1226892-45-0
Bacteria	EC0 109,4 mg/l (3 h)	activated sludge	OECD 209	CAS: 1226892-45-0

12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
Biological degradability	1 - 2 % (48 d) CAS: 80-05-7			not degradable
Degradability	0 % (28 d) CAS: 140-31-8		OECD 301 F	not readily degradable

12.3. Bioaccumulative potential

No bioaccumulation

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**General regulation**

Very toxic to aquatic life with long lasting effects.

Do not allow uncontrolled leakage of product into the environment.

Product is not allowed to be discharged into the ground water or aquatic environment.

Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.

The ecotoxic effect of the product has not been tested. The information on this is given on the basis of details in the literature.



SECTION 13: Disposal considerations**13.1. Waste treatment methods****Recommendations for the product**

Remove in accordance with local official regulations.

Dispose of as hazardous waste.

Recommendations for packaging

Empty containers can be deposited after cleaning in accordance with the local waste regulations.

Dispose of according to the local waste regulations.

Packaging that cannot be cleaned should be disposed of like the product.

General information

Assignment to a waste code number / waste identification according to the EWC is to be carried out on a sector or process-specific basis.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	2735	2735	2735
14.2. UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyamidoimidazoline)	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyamidoimidazoline)	Amines, liquid, corrosive, n.o. s. (Polyamidoimidazoline)
14.3. Transport hazard class(es)	8	8	8
14.4. Packing group	III	III	III
14.5. Environmental hazards	Yes	Yes	Yes

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

Land and inland navigation transport ADR/RID

Hazard label(s) 8

tunnel restriction code E

Classification code C7

Marine transport IMDG

MARINE POLLUTANT

! SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC standard**

VOC content 0 %

15.2. Chemical Safety Assessment

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



! SECTION 16: Other information

Training advice

When grinding/processing the cured material, a dust containing quartz can be produced.

! Recommended uses and restrictions

National and local regulations concerning chemicals shall be observed.

For industrial use only.

Further information

Each user is responsible for the implementation of the national special regulations.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Please observe the following disclaimer! --- Our safety data sheets have been compiled according to effective EU-directives, WITHOUT taking into account the special national directives concerning the handling of hazardous substances.

Listed in: EINECS; TSCA; DSL; AICS; KECI (KR); INV (CN).

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.0

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H360F	May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H361	Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H372	Causes 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).
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.