

# SAFETY DATA SHEET



according to regulation of European parliament and Council (ES) number 1907/2006  
according Committee regulation (EU) number 878/2020

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Product name: **FORTE OPRAVNÝ BETON**

## 1. Section 1: Identification of substance/mixture and of the company/undertaking

1.1 Product identifier: **FORTE OPRAVNÝ BETON**  
The product is not a nanoform, nor does it contain any nanoforms.  
UFI code: **N814-4GNQ-AD1H-JGS9**

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

1.2.1 Relevant identified use:  
Lifecycle phases: PW (wide range of use by professionals - basic)  
C (consumer use)  
Usage Name: SU0  
Other usage description: Quick-hardening material for work with concrete and concrete repairs. Concrete coating and filling mixture.  
Market description: PC1; PC9a; PC15  
Contributing Activity Name: Manual activities involving hand contact  
Contributing activities descriptor: PROC19  
More information: technical function of the product in this use: Quick-hardening material for work with concrete and concrete repairs. Concrete coating and filling mixture.  
quantity to be used: 0 - 10 t / yr  
No  
Regulatory status by specific use:  
limited number of devices for this use: No  
the subsequent period of use relevant to this use: 24 months  
an overview of environmental release categories for each life cycle stage: ERC2; ERC8c; ERC8f; ERC10a; ERC11a  
supplied as a mixture  
all other uses



1.2.2 Uses advised against:

1.3 Details about the supplier of the safety data sheet:  
Producer and supplier: **AUSTIS a. s.**  
Adress: **K Austisu 680, 154 00 PRAHA 5 - Slivenec**  
Telephone number: **+420 251 099 111**  
Fax: **+420 251 099 112**  
e-mail: [austis@austis.cz](mailto:austis@austis.cz)

1.4 Emergency telephone number: **+420 251 099 247** **+420 725 491 378**  
Centre of the Toxicologically information Na Bojišti 1, 120 00 Prague 2, **Tel.: +420 224 919 293**  
CZ

## 2. Section 2: Hazard identification

2.1 Classification of the substance or mixture  
Classification under Regulation 1272/2008/EU  
The mixture is classified as dangerous.  
Eye Dam. 1; H318  
STOT SE 3; H335  
Skin Irrit. 2; H315  
Skin Sens. 1; H317

2.2 Label elements  
Symbols:  
  
Signal word: **Dangerous**  
It contains a hazardous substance: Cement (Portland) clinker, dust from the production of Portland clinker  
Hazard Statement: H318: Causes serious eye damage.  
H335: May cause respiratory irritation.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.

Precautionary Statement:

P102: Keep out of reach of children.  
P261: Avoid breathing dust.  
P280: Wear protective gloves/protective clothing/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.  
P310: Immediately call a POISON CENTER or doctor.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P332+P313: If skin irritation occurs: Get medical advice/attention.  
P501: Dispose of contents/container in accordance with relevant national legislation.

2.3 Other hazards:

The mixture does not meet criteria to be classified as PBT or vPvB substances. The mixture is not endocrine disruptor, nor does it contain any.

Other risks:

unknown

### 3. Section 3: Composition / information on ingredients

Mixture of cement, graded quartz sand and refining chemicals.

3.2 Mixtures

Chemical name:	Silica	Portland cement
Content [%]:	50	20 - 50
Index number:	Not Assigned	Not Assigned
CAS:	14808-60-7	65997-15-1
EC number (EINECS):	238-878-4	266-043-4
REACH Registration number:	Not Assigned	Not Assigned
Classification according to Directive 1272/2008/EU:	not Assigned	Eye Dam. 1; H318 STOT SE 3; H335 Skin Irrit. 2; H315 Skin Sens. 1; H317
Specific concentration limits, M-factors:	Not Assigned Established Exposure limit EH40/2005 (WELs):	Not Assigned Established Exposure limit EH40/2005 (WELs):

Full text of H - phrases in Section 16

### 4. Section 4: First aid measures

4.1 Description of first aid measures

When providing first aid it is necessary to ensure safety of both victim and person rescuing. It is necessary to avoid chaotic behavior. Victim must be kept in mental and physical rest. Victim must be kept warm and must not get cold. Take original container with label or safety data sheet with information about substance or mixture with you in case of medical examination.

Inhalation: Break exposure, move to fresh air and protect the victim from cold. Provide medical treatment especially if coughing, shortness of breath or other symptoms persist.

When on skin: Put away contaminated clothes and shoes, wash the contaminated spot with plenty of tepid water; if the skin is not irritated, soap can be used; seek doctor's advice, especially if the skin stays irritated.

Eye Contact: Rinse eyes with plenty of water (10 to 15 minutes). Keep your eyes opened (even by force if necessary). If the victim is wearing contact lenses remove them immediately. Seek medical attention.

Ingestion: Do not induce vomiting! Drink at least 0,5 liters of water with 5 to 10 tablets of crushed charcoal. In case of nausea contact the Toxicology Information Centre for need of medical treatment with information about composition of the mixture from the original container or SDS.

4.2 Most important symptoms and effects, both acute and delayed

The product may have adverse effects through inhalation and if swallowed. It can irritate skin, mucous membranes and eyes.

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

Symptomatic treatment

### 5. Section 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: not relevant

Unsuitable extinguishing media: not relevant

5.2 Special hazards arising from the substance or mixture: none

5.3 Advice for firefighters: none

### 6. Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Appropriate protective gloves, goggles, appropriate clothing, or respirator.

6.1.1 For workers except for those intervening in emergency cases - instructions in case of accidental spill and leak of substance or mixture:

a) use of appropriate protection (including personal protective equipment according to part 8 BL), in order to avoid any skin, eyes or personal clothing contamination;

- b) removing possible sources of ignition, providing proper ventilation, control of dust - not relevant
- c) emergency measures, for example necessary evacuation from dangerous area or consultation with an expert - not relevant
- 6.1.2 For workers intervening in emergency cases - instructions for appropriate materials of personal protective suits (see part 8 BL)
- 6.2 Environmental precautions: Prevent environmental pollution - leakage into drains, surface water, groundwater or soil.
- 6.3 Methods and materials for limitation of leaks and for cleaning:
- 6.3.1 Instructions for leak limitation of spilled substance or mixture
  - a) enclose the spilled mixture, cover the canalization;
  - b) seal the damaged package
- 6.3.2 Instructions for removal of spilled substance or mixture  
Absorb with appropriate agent, hand over to authorized person for disposal.
- 6.4 Reference to other sections: See also section 7., 8 and 13.

**7. Section 7: Handling and storage**

- 7.1 Measures for safe manipulation:
- 7.1.1 Recommendations:
  - a) Workers handling the product have to get familiar with health and safety rules for work and have to obey these rules. Secure escape routes (enclosing of leaked mixture, sealing of damaged packages and so on), for fire prevention (remove ignition sources, non-sparkling tools and so on) and limit the production of aerosol and dust.
  - b) Obey measures for prevention of manipulation with incompatible substances or mixtures (see part 10) in common areas.
  - c) Store in original closed packages in temperature from +5 to +25 °C, do not expose to temperature under 0 °C (not even in short term). Do not expose to direct sunlight or other heat sources.
  - d) Prevent the contamination of environment, i.e. leak into canalization, surface or underground water and soil.
- 7.1.2 Instructions for general hygiene of work:
  - a) Do not eat, drink or smoke on work areas.
  - b) After working with product wash your hands with soap and water, eventually use regeneration hand cream.
  - c) Before entering dining areas, remove contaminated clothing and protective equipment.
- 7.2 Conditions for safe storage of substances and mixtures including incompatible substances and mixtures: Store in dry and well-ventilated storages in original closed packages in temperatures from +5 to +25 °C, do not expose to temperature under 0 °C (not even in short term). Do not expose to direct sunlight or other heat sources. Prevent any contact with oxidizing substances, strong acids and bases. Do not store with food, drinks and feed. The product is not a flammable liquid according to ČSN 65 0201.
- 7.3 Specific end use: see part 1.2; coating procedure and recommendations are listed in technical list of the product, or in other product documentation.

**8. Section 8: Exposure controls / personal protection**

- 8.1 Control parameters:  
Exposure limits EH40/2005 (WELs):  
Chemical name:
 

	Portland cement	inhalable	Silica, respirable	crystalline
	dust / respirable dust			
CAS:	65997-15-1		14808-60-7	
Long-term exposure limit [mg/m <sup>3</sup> ] (TWA/8 h)	10 / 4		0,1	
Short-term exposure limit [mg/m <sup>3</sup> ] (15 minut)	-		-	
- 8.2 Exposure controls  
Ensure adequate ventilation. Ensure protective equipment is worn while working with the product. Contaminated work clothes can be reused after thorough cleaning. Wash your hands and face with soap and water after use. Do not eat, drink or smoke while working with the product.
- 8.2.1 Appropriate engineering controls: Observe the usual precautions to protect the health and make sure the working space is well-ventilated.
- 8.2.2 Individual protection measures, such as personal protective equipment:  
Occupational exposure is governed by Directive 89/686/EEC therefore any use of personal protective equipment must be in accordance with this Regulation.
  - a) Eyes and face protection: Suitable safety goggles (EN 166), face shield.
  - b) Skin protection: Common safety clothing with long sleeve and shoes; take off the contaminated clothing and wash your skin with soap and water.
  - b-1) Hands protection: suitable protective gloves (made from rubber - according to EN 374), wash your hands with soap and water after work, use repairing hand cream.
  - c) Airways protection: with proper area ventilation not required. When spraying, face half-shield is recommended for gas filtration (EN 405) or quarter-shield with gas filter (EN 140, EN 141).
  - d) Heat hazard: Special attention must be paid to construction of personal protective measures, when specifying protective measures for protection against materials, which are considered to be heat hazard. Not relevant for this product.
- 8.2.3 Environmental exposure controls: Avoid contamination of surface and groundwater and soil.

**9. Section 9: Physical and chemical properties**

- 9.1. Information on basic physical and chemical properties
  - a) State: loose material
  - b) Color: gray
  - c) Odour: odorless

	Odor threshold:	Not specified
	d) Melting/Freezing point (temperature range) (°C):	Not specified
	e) Boiling point or initial boiling point and boiling range (°C)	Not specified
	f) Combustibility:	Not specified
	g) Explosion limits: upper limit (% volume):	Not specified
	lower limit (% volume):	Not specified
	h) Point of ignition:	Not specified
	i) Temperature of self-ignition:	Not specified
	j) Temperature of decomposition (°C):	Not specified
	k) pH (23 °C)	11,0 - 13,5 (when mixed with water)
	l) Kinematic viscosity:	Not specified
	m) Solubility (23 °C)	
	- with water:	up to 1,5 g/L with water
	- with fats:	Not specified
	n) Partition coefficient n - octanol/water:	Not specified
	o) Steam pressure (20 °C):	Not specified
	p) Density and/or relative density (20 °C):	approximately 1,7 - 1,9 g.cm <sup>-3</sup>
	q) Relative viscosity of steam (at °C):	Not specified
	r) Particles characteristics:	Not specified
9.2	Other information:	
9.2.1	Information about class of physical hazard:	is not relevant
9.2.2	Other safety characteristics	
	Evaporation rate:	Not specified
	Dynamic viscosity:	Not specified
	Explosive properties:	Not specified
	Oxidizing properties:	Not specified

## 10. Section 10: Stability and reactivity

	Product is stable under recommended storage and handling conditions.
10.1	Reactivity: Product is not reactive under recommended storage and handling conditions.
10.2	Chemical stability: Product is stable under recommended storage and handling conditions. The product contains a reducing agent with a limited duration of action
10.3	Possibility of hazardous reactions: unknown
10.4	Conditions to avoid: uncontrolled contact with water and acids.
10.5	Incompatible materials: water and acids
10.6	Hazardous Decomposition Products: Thermal decomposition: the mixture itself is a product of thermal decomposition, it is dangerous to inhale the dust after dispersing it into the atmosphere.

## 11. Section 11: Toxicological information

11.1	Information about hazard classes according to (ES) č. 1272/2008	
	a) acute toxicity:	the classification criteria are not met based on available information
	- LD <sub>50</sub> , oral, rat (mg.kg <sup>-1</sup> ):	the classification criteria are not met based on available information
	- LD <sub>50</sub> , dermal, rat or rabbit (mg.kg <sup>-1</sup> ):	the classification criteria are not met based on available information
	- LC <sub>50</sub> , by inhalation, rat, for aerosols or particles (mg.kg <sup>-1</sup> ):	the classification criteria are not met based on available information
	- LC <sub>50</sub> , by inhalation, human, for quartz-sand dust (mg.kg <sup>-1</sup> ):	0,3 (for intermittent exposure for 10 years)
	b) corrosivity/skin irritation:	Causes skin irritation.
	c) serious eye damage / eyes irritation:	Causes serious eye damage.
	d) sensitivity of airways / sensitivity of skin:	May cause an allergic skin reaction.
	e) germ cells mutagenicity:	the classification criteria are not met based on available information
	f) carcinogenicity:	the classification criteria are not met based on available information
	g) toxicity for reproduction:	the classification criteria are not met based on available information
	h) toxicity for specific organs - single exposure:	May cause respiratory irritation.
	i) toxicity for specific organs - multiple exposures:	the classification criteria are not met based on available information
	j) hazards while inhaled:	the classification criteria are not met based on available information
	Human experience:	In the form of dust even after mixing with water seriously damages eyes, irritates the respiratory system and skin. For very sensitive people there is a risk of sensitization by prolonged skin contact.
	Tests on animals:	Not performed
11.1.1	Information for each hazard class or breakdown:	see above
11.1.2	Toxicological properties of mixture cement (CAS: 65997-15-1) and silica (CAS: 14808-60-7)	not available see part 8

11.1.3	If enough information from substance/mixture trials exist, it might be necessary to sum up results of used studies, for example according to exposure run	not relevant
11.1.4	If the classification criteria are not met for specific hazard class, information explaining the justification should be stated.	relevant concentration limits were not exceeded
11.1.5	Information about likely exposure run	no effects on human health are known
11.1.6	Symptoms corresponding to physical, chemical and toxicological features	no effects on human health are known
11.1.7	Belated and immediate effects and chronical effects of short/long term exposure	no effects on human health are known
11.1.8	Interactive effects	unknown
11.1.9	Lack of specific data	not relevant
11.1.10	Mixtures	see part 8
11.1.11	Mixtures information compared to substance information 1) Substances in the mixture can react with each other inside of a body and can cause different levels of absorption, metabolism and 2) It is necessary to consider, if concentration of each substance is sufficient to contribute to mixture's effects on health. For each substance a) if the information are doubled, they are listed only once for a substance as a whole, for example when two different substances are causing vomiting and diarrhea; b) if it is not likely the effects will appear with current concentrations, for example when weak irritating substance is dissolved in non-irritating solution to a level under certain concentration;  c) if the information about mutual effects of substances in the mixture are unavailable, no assumptions will be listed and instead effects on health of each substance will be listed.	Not relevant for this mixture. Not relevant for this mixture. see part 8
11.1.12	Additional data:	None
11.2	Other hazards information	
11.2.1	Features causing disruption of endocrinal system	Not relevant for this mixture.
11.2.2	Other information	None
<b>12.</b>	<b>Section 12: Ecological information</b>	
12.1	Toxicity Acute toxicity for water organisms: - LC <sub>50</sub> , 96 hours, fish (mg/kg): - LC <sub>50</sub> , 48 hours, fish (mg/kg): - IC <sub>50</sub> , 72 hours, algae (mg/kg): Toxicity to other environments:	Not set Not set Not set not determined, the mixture is poorly soluble in water, but if large quantities leak, the aquatic environment may strongly alkaline and therefore damage aquatic organisms
12.2	Persistence and degradability:	it is assumed that it is practically non-existent
12.3	Bioaccumulative potential:	Not set
12.4	Mobility in soil:	small even in unused state, in hardened state it is immobile
12.5	Results of PBT and vPvB	The mixture does not meet the criteria for classification as PBT or vPvB.
12.6	Features causing disruption of endocrinal system	Unknown for this mixture
12.7	Other adverse effects: Additional data:	See Section 2 The product must not leak into surface and groundwater. Notify competent authorities immediately in case of accident.
<b>13.</b>	<b>Section 13: Disposal considerations</b>	
13.1	Methods of waste management: (a) Appropriate methods of disposal of the substance or mixture and contaminated packaging: Risk of environmental contamination, follow the Waste Act (as amended) and the applicable Waste Disposal Regulations (as amended). Place the unused product and contaminated packaging in marked waste collection containers and hand it over for disposal to an authorised waste disposal person (specialised company) authorised to do so. Do not dispose of unused product down the drain. It must not be disposed of with municipal waste. Empty packaging may be used for energy recovery in a waste incinerator (except for metal) or disposed of in a landfill of the appropriate classification. Completely cleaned packaging may be handed over for recycling. Always comply with the relevant national legislation!  Translated with <a href="http://www.Deenl.com/Translator">www.Deenl.com/Translator</a> (free version) b) Physical / chemical properties that can affect ways of waste handling: unknown c) Avoid disposal through sewer: It is necessary to prevent leakage of both components and hardened mixture into drains. d) Special precautions for the recommended waste management: Avoid contact with skin, mucous membranes and eyes.	
<b>14.</b>	<b>Section 14: Transport information</b>	
14.1	UN number or ID number Required shipping label: ADR/RID/ADN:	Not specified Not specified

	IMDG:	Not specified
	ICAO TI:	Not specified
14.2	Proper name of United Nations for the shipment	
	ADR/RID/ADN:	Not specified
	IMDG:	Not specified
	ICAO TI:	Not specified
14.3	Transport hazard class(es):	
	ADR/RID/ADN:	Not specified
	IMDG:	Not specified
	ICAO TI:	Not specified
14.4	Packing group:	
	ADR/RID/ADN:	Not specified
	IMDG:	Not specified
	ICAO TI:	Not specified
14.5	Environmental hazards:	Not specified
14.6	Special precautions for user:	See Section 8
	Special provisions (ADR):	Not specified
14.7	Naval mass-transport according to instrument IMO:	Not applicable
	Notes:	None
	Additional data:	None

## 15. Section 15: Regulatory information

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture. Regulation of the European Parliament and Council Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals establishing European Chemicals Agency, as amended Regulation of the European Parliament and Council Regulation (EC) No 1272/2008 (CLP) as amended Commission directive (EU) No. 878/2020 EH40/2005 Workplace exposure limits (second edition, published 2011). Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended)	
15.2	Assessment of chemical safety of mixture:	Not performed

## 16. Section 16: Other information

Information stated in this safety data sheet is based on the current knowledge of EU legislation. It is a recommendation in terms of health and safety as well as recommendation related to ecological matters that are essential to safe usage of the product.

a) New edition.

b) key or legend for abbreviations and acronyms used in the safety data sheet:

LD <sub>50</sub>	The lethal dose for 50 % mortality of the test population relative to a control sample.
LC <sub>50</sub>	Lethal concentration for 50 % mortality of the test population relative to a control sample.
EC <sub>50</sub>	Effective concentration for 50 % mortality of the test population relative to a control sample.
EC <sub>10</sub>	Effective concentration for 10 % mortality of the test population relative to a control sample.
IC <sub>50</sub>	Inhibitory concentration to reduce the growth or growth rate of 50% of the test population relative to a control sample.
LL <sub>50</sub>	Lethal loading doses of test substance resulting in 50% mortality
EL <sub>50</sub>	Effective loading doses of test substance resulting in 50% mortality
PBT	Persistent, bioaccumulative and toxic substances.
vPvB	Very persistent and very bioaccumulative substances.
DNEL	Derived No Effect Level - derived concentration of the substance without adverse effects
DMEL	Derived Minimum Effect Level - derived minimum level at which the adverse effects
NOAEL	No Observed Adverse Effect Level - no negative effect was observed
PNEC	Predicted No Effect Concentration - an estimate of the concentration of the substance without adverse effects
NOELR	No Observed Effect Loading Rate - dosage rate without observed effect
NOEC	No Observed Effect Concentration - concentration without observed effect
NOEL	No Observed Effect Level - level without observed effect
LOEC	Lowest Observed Effect Concentration - lowest concentrations with observable effects
ADR	European Agreement concerning the international carriage of dangerous goods by road.
RID	Regulations concerning the international carriage of dangerous goods by rail.
IMDG	International maritime code of dangerous goods.
ICAO	The International Civil Aviation Organization.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labelling of Chemical substances.

c) important references to literature and data sources

Initial data sources are safety data sheets of the inherent (components).

d) in case of mixture, statement about evaluation method used for classification according to article 9 of directive (ES) number 1272/2008  
For evaluation purposes, principles of extrapolation were used. Calculation methods.

e) List of H-sentences, whose full form is not listed in other parts.

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Guidelines for training:

As required by national legislation.

Recommended restrictions on use (i. e. non-statutory recommendations by supplier):

Product should not be used for other purposes than specified (see section 1.2). Because specific conditions of use are beyond supplier's control, it is the responsibility of the user to adapt all the mentioned information to local law and regulations. Safety information describe the product with regard to safety and cannot be considered technical information about the product.