FN1 – FOAM FORMING CONCENTRATE

Designation: FN1 — Data Sheet No. 411

Product: Foam-making concentrate determined for technical foam production, which is used in cellular (foam) concrete manufacture according to manufacturing processes and by means of SIRONTEC equipment.

Utilization: The technical foam is produced from the foam-making concentrate in foam generators.
FN1 is not intended for production of foam by any other method.

Composition: Hydrolyzed proteins, stabilized with zinc and ferric salts.
Further data—see FN1 Safety Sheet.

Description: Dark brown fluid with very mild specific smell.

Physical and chemical characteristics:

pH value of undiluted FN1 at 20°C:	6,5 – 7,5
Solidification point:	about -15°C
Boiling point:	about +100°C
Density at 20°C:	about 1.124 g/cm^3
Solubility in water:	unlimited
SIRCONTEC FN1 is neither explosive nor flammable.	
SIRCONTEC FN1 is biodegradable, CBS value:	about 11200 mg/l (2% solution)

Processing: In the equipment of MS 1000 type – see the Data Sheet SIRCONTEC No. 011.1.
In the technical foam production, FN1 foam-making concentrate is mixed in determined concentration with water and air in the continual foam generator.
The technical foam is mixed with the prepared cement grout in a mixer.
The amount and properties of the technical foam as well as the amount and the properties of the cement grout are determined by respective manufacturing processes of SIRCONTEC company.

Recommended dosing (concentration):	2 – 4,5 % in pure water
Recommended volume weight of the technical foam:	45—85 g / l

Notes:
The used concentration has a significant influence on properties of the manufactured technical foam.
The used foam density has a significant influence on technological properties of the manufactured foam concrete.

Quality control:
Production of FN1 is controlled by EN ISO standards.
Quality control of the produced technical foam is governed by Testing procedures supplied by SIRCONTEC together with equipment.

Storage: Storage of FN1 is allowed in closed original vessels at temperatures above 0°C.
FN1 is to be stored separately from food and fodder.

Cleaning: Tools are cleaned with pure water. Rinse dirty surfaces with pure water.
Used containers are to be disposed of in a determined manner.

Safety and sanitary regulations:

When handling FN1 it is necessary to observe the basic health protection rules valid or manipulation with chemicals. At work it is necessary to protect eyes and skin. Rinse afflicted area with pure water. See doctor in case of complications. When eyes are afflicted, it causes conjunctiva irritation.
Wash hands after the work.
Protection of respiratory system is not necessary with adequate measure of inhalation.
It is recommended to protect hands with rubber or PVC gloves.
If consumed, evocate vomiting and see a doctor.
Avoid penetration into sewerage or ground, in the case of leakage use chemicals-bonding substances, sand or saw-dust.

Validity: from 1.12.2014

© SIRCONTEC s.r.o.
L. Svobodu 26
018 51 Nová Dubnica
Slovak Republic

Tel.: +421 903 502200
Fax: +421 32 7433782
E-mail: info@sircontec.com
www.sircontec.com

FS1 – SUPER-PLASTICISING ADMIXTURE

Designation: FS1 — Data Sheet No. 412

Product: Super-plasticizing admixture determined for foam concrete manufacture according to manufacturing processes and by means of SIRCONTEC equipment.

Utilization: SIRCONTEC foam concrete while using Portland cement classes CEM I and II, dry mixtures produced per SIRCONTEC instructions and foam-making concentrate FN1.
The purpose of utilization is achieving faster start-up of initial strength of the foam concrete.

Description: Softly creamy, almost brownish fluid with very mild specific smell.
The effect of achieving faster start-up of the initial strength depends on the ambient temperature, temperature of the structure and on the class of cement.
Further data—see Safety sheet FS1.

Physical and chemical characteristics:

pH value of undiluted FS1 at 20°C:	about 7
Solidification point:	about 0°C
Boiling point:	about +100°C
Density at 20°C:	about 1.03 g/cm^3
Solubility in water:	unlimited

SIRCONTEC FS1 is neither explosive nor flammable.

Processing: In the equipment of MS 1000 type – see the Data Sheet SIRCONTEC No. 011.1.

It is dosed together with gauging water:

Recommended dosing:	0,2 – 1,4 % of the cement weight—according to the required effect
Permissible amount:	1,6 ml/kg of cement

Quality control:
Production of FS1 is controlled by EN ISO standards.
Quality control of the produced foam concrete is governed by Testing procedures supplied by SIRCONTEC together with equipment.

Storage: Storage of FS1 is allowed in closed original vessels at temperatures above 0°C.
FS1 is to be stored separately from food and fodder.

Cleaning: Tools are cleaned with pure water. Rinse dirty surfaces with pure water.
Used containers are to be disposed of in a determined manner. Disposal together with the municipal waste is not allowed.

Safety and sanitary regulations:

When handling FS1 it is necessary to observe the basic health protection rules valid or manipulation with chemicals. At work it is necessary to protect eyes and skin. Rinse afflicted area with pure water. See doctor in case of complications. When eyes are afflicted, it causes conjunctiva irritation.
Wash hands after the work.
Protection of respiratory system is not necessary with adequate measure of inhalation.
It is recommended to protect hands with rubber or PVC gloves.
If consumed, rinse your mouth thoroughly, drink sufficient amount of water (1/4—1/2 l) and see a doctor.
Avoid penetration into sewerage or ground, in the case of leakage use chemicals-bonding substances, sand or saw-dust.
In the case of random leakage of FS1, there are no dangerous decomposition products released.

Validity: from 1.12.2014

© SIRCONTEC s.r.o.
L. Svobodu 26
018 51 Nová Dubnica
Slovak Republic

Tel.: +421 903 502200
Fax: +421 32 7433782
E-mail: info@sircontec.com
www.sircontec.com

FP1 – AIR ENTRAINING ADMIXTURE

Designation: FP1 Data Sheet No. 413

Product: The admixture is used for polystyrene concrete production according to SIRCONTEC production procedures and in SIRCONTEC machines.

Use: For production of SIRCONTEC PsB 40, PsB 50 polystyrene concrete and other modifications.
It produces a homogenous mixture lightened with polystyrene particles and tiny air bubbles (cells).

Description: Light yellow liquid.
Cement milk is extremely lightened by creating optimum air bubbles in it .
FP1 is dosed with mixing water or using its own dosing device.
It is recommended not to exceed mixing time of a fresh mixture with the admixture 45 seconds.
The following affects the content of air bubbles: concrete composition, ambient temperature and temperature of the structure, consistency, cement type, total content of fine particles, mixing time and method. Creation of bubbles is slowed down especially at high temperature.
Taking the aforementioned effects into account, the admixture dose must be checked before use.

Physical and chemical properties:

Setting point:	about 0 °C
Boiling point:	about + 100 °C
Density at 20 °C:	about 1.01 g/cm^3
Water solubility:	unlimited

FP1 is not either explosive or inflammable.

Processing: On MS 1000 type machine – see the SIRCONTEC Data Sheet No. 011.1.

FP1 is dosed together with the mixing water.

Recommended dosage:	0.01—1.5 % of cement weight - acc. to a required effect
Permissible quantity:	15 ml/kg of cement

Quality control:
FP1 production is controlled by a system according to EN ISO.
Quality control of the produced polystyrene concrete being produced is controlled by Control Procedures supplied by SIRCONTEC together with the equipment.

Storage: FP1 can be stored in closed original containers at temperature above 0 °C.
FP1 must be stored separated from foodstuff and feedstuff.

Cleaning: Tools are cleaned with clean water. Rinse dirty surfaces with clean water.
Used packages should be liquidated in a prescribed manner. They must not be liquidated together with municipal wastes.

Safety and hygiene:

Basic rules for health protection during work with chemicals must be followed when using FP1.
Eyes and skin must be protected during work. When affected, rinse them with clean water. When complications are detected, search for a doctor. It irritates conjunctivae when eyes are affected.
Wash your hands after finishing the work.
Protection of respiratory paths is not required when using it adequately.
Rubber or PVC gloves are recommended for hand protection.
Rinse your mouth and drink sufficient quantity of water (1/4—1/2 l) and search for a doctor after digesting it.
Prevent it from leakage into a sewer and ground; if leaks occur, use substances binding chemicals, sand or sawdust.
When accidental leaks occur, no hazardous decomposition products are released from FP1.

Valid: from 1.12.2014

© SIRCONTEC s.r.o.
L. Svobodu 26
018 51 Nová Dubnica
Slovak Republic

Tel.: +421 903 502200
Fax: +421 32 7433782
E-mail: info@sircontec.com
www.sircontec.com

FA1 – ACRYLIC DISPERSION

Designation: FA1 Data Sheet No. 414

Product: Acrylic water dispersion solution.

Use: It is used to make an adhesive bridge and penetration paints preparing the sub base for further application.
It prevents moisture suction into sub base structures. It improves adherence of an applied lightweight concrete to a sub base.

Description: White liquid.
The sub base must be clean and without free particles, dust, grease, oil, and other dirt before application .
FA1 is diluted with drinking water before application with a roller, brush or by spraying to create a film preventing moisture suction from lightweight concrete to a sub base.
Lightweight concrete must be applied on non-dried penetration paint for maximum use of FA1 properties.

Physical and chemical properties:

Setting point:	about 0 °C
Boiling point:	about + 100 °C
Density at 20 °C:	about 1.01 g/cm^3
Water solubility:	in any ratio

FA1 is not either explosive or inflammable.

Processing:

Recommended dosage for penetration paint :	diluted in water in a ratio 1:4 to 1:5
Informative consumption:	about 1 l FA1 per 5 -10 m^2

Note:
FA1 consumption depends on sub base porosity and the number of paint layers.

Quality control:

FA1 production is controlled by a system according to EN ISO.
FA1 application quality control — see the Instructions on a consumer's package.

Storage: FA1 can be stored in closed original containers at temperature above 0 °C.
FA1 must be stored separated from foodstuff and feedstuff.

Cleaning: Tools are cleaned with clean water. Rinse dirty surfaces with clean water.
Used packages should be liquidated in a prescribed manner. They must not be liquidated together with municipal wastes.

Safety and hygiene:

Basic rules for health protection during work with chemicals must be followed when using FA1.
Eyes and skin must be protected during work. When affected, rinse them with clean water. When complications are detected, search for a doctor.
Rubber or PVC gloves are recommended for hand protection.
Wash your hands after finishing the work.
Protection of respiratory paths is not required when using it adequately.
Rinse your mouth and drink sufficient quantity of water (1/4—1/2 l) and search for a doctor after digesting it.
Prevent it from leakage into a sewer and ground; if leaks occur, use substances binding chemicals, sand or sawdust.
When accidental leaks occur, no hazardous decomposition products are released from FA1.

Valid: from 1.12.2014

© SIRCONTEC s.r.o.
L. Svobodu 26
018 51 Nová Dubnica
Slovak Republic

Tel.: +421 903 502200
Fax: +421 32 7433782
E-mail: info@sircontec.com
www.sircontec.com

FV1 – REINFORCING FIBRE

Designation: FV1 Data Sheet No. 415

Product: FV1 is a special synthetic fibre made from isotactic polypropylene.

Use: To create poly-dispersion micro reinforcement in a foam concrete environment to achieve higher tensile and flexural strengths and a reduced tendency of the foam concrete to produce micro cracks.

Composition: Polypropylene

Description: Fine staple giving the impression of white mass if it is in a pile.
Forms a dispersion in water easily.
Produces a homogenous mixture with other foam concrete components.

Physical and chemical properties:

Cross-section:	Circular
Length density:	5.0 - 8.0 dtex
Fibre diameter:	25 to 33 x 10^{-6} m
Length:	12 mm
Surface treatment:	Preparation for good dispersion in water
Resistant:	Against all inorganic acids and bases
	Against organic solvents
Ecology:	Ecology-friendly

Processing: In the MS 1000 machine type – see the SIRCONTEC Data Sheet No. 011.1, or similar.

Dosage: 0.8 - 2 kg per 1 m^3 of foam concrete

Reinforced foam concrete production procedure:
1. The whole FV1 dose is poured into the blender upon mixing water dosing.
2. Dray components are dosed in a sequence after short mixing of water with fibre.
3. Technical foam is filled into the blender when cement milk is produced.

Note:
When using FV1, the mixing water quantity must be adjusted so that the required liquidity of fresh foam concrete is achieved.

Reinforced foam concrete processing procedure:
Processing is simple, like for SIRCONTEC non-reinforced concrete.

Quality control:

FV1 production is controlled by a system according to EN ISO.
Quality control of foam concrete being produced is controlled by Control Procedures provided by SIRCONTEC together with the MS 1000 machine.

Packing: Polyethylene bags, cardboard boxes.
Weight about 20-25 kg per packing.

Storage: FV1 can be stored for 6 months in sealed packages stored in a locked room providing protection against weather effects and damages.
FV1 must be stored separated from foodstuffs and feedstuffs.

Valid: from 1.12.2014

© SIRCONTEC s.r.o.
L. Svobodu 26
018 51 Nová Dubnica
Slovak Republic

Tel.: +421 903 502200
Fax: +421 32 7433782
E-mail: info@sircontec.com
www.sircontec.com