TECHNICAL DATA SHEET - iPLUS EPOXY

CIPP Epoxy resin for the rehabilitation of main sewers

iPlus Epoxy

Product reference	iPlus Epoxy (A)	iPlus Epoxy (B)
Chemical base	Epoxy resin	Amine hardener
Aspect (CQP001-1/Visual)	Liquid	Liquid
Color (CQP001-1/Visual) *(Part-mixed)*	Lime Green	Lime Green Light Amber
Viscosity, 25°C (CQP538-5 / ISO 2555)	~4200 Mpa.S	~65 Mpa.s
Mixing ratio by weight Mixing ratio by volume		100:33 100:42
Density at 25°C (CQP006-3 / ISO 2811-1) *(Part-mixed)*	1,23 g/ml	0,96g/ml 1,15 g/ml
Potlife, 100ml, 23°C (CQP021-3 / BS 2782-m Met 835)		~400min
Curing conditions (Full cure)		2-3.5 h / 60°C (hot water) **or** 90-100°C (with steam)
Tensile strength (CQP036-2 / ISO 527-2)		70MPa
Tensile modulus (CQP036-2 / ISO 527-2)		3200MPa
Tensile elongation (CQP036-2 / ISO 527-2)		4,8%
Flexual strength (CQP027-2 / ISO 178)		125MPa
Flexual modulus (CQP027-2 / ISO 178)		3400MPa
Heat deflection temperature (CQP030-1 / ISO 75A) – ISO 11296-4		75°C
Shelf life	6 months AB	12 months A

CQP = Corporate Quality Procedure A) 12 - 35°C / stored in unopened container B) tir before use, packing IBC C) Curing condition: 25-80°C, 10°C/h + 16h 80°C

DESCRIPTION
iPlus Epoxy is an epoxy resin system designed for the rehabilitation of main sewers (waste and raining water pipes) according to the Cure In Place Pipe lining process (CIPP).

PRODUCT BENEFITS
- Curing process: steam or hot water (60°C)
- Good adhesion

AREAS OF APPLICATION
iPlus Epoxy is suitable for the impregnation of polyester felt liners for the rehabilitation of main sewers, side connection and in-house pipes.
This product is suitable for experienced professional users only. Tests under actual processing conditions must be performed to proof material compatibility.

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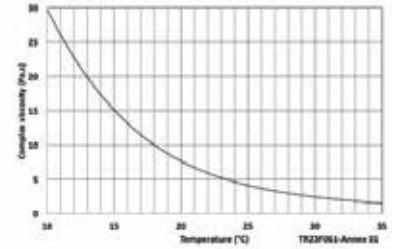
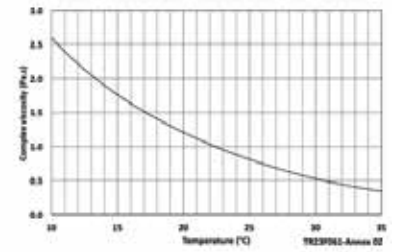
VISCOSITY vs. TEMPERATURE
(CQP029-4 / ISO 3219)

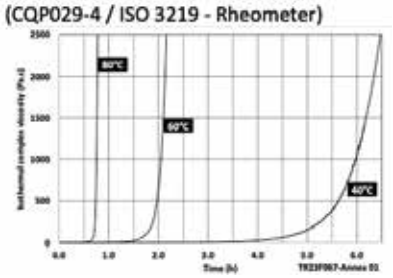
- Part (A), Resin



- Mix



GEL TIME: MIX VISCOSITY vs. TIME
(CQP029-4 / ISO 3219 - Rheometer)



METHOD OF APPLICATION
Before mixing the 2 components, stir part A component to homogenize it. The both parts must be mixed at 15-20°C acc. to the ratio indicated with a tolerance of ±2% by weight, for minimum 2 min. with a low- speed mechanical stirring tool or device to ensure homogeneity. It is important that the side and the bottom of the vessel are incorporated into the mixing process. Never overdose the hardener. Take care not to ncorporate air in the mix during this operation. The working time (reactivity) will be reduced by high temperature and increase by low temperature. Specialist firms have developed metering, mixing equipment. We will be pleased to advise customers on the choice of equipment for their need.

CURING
It's recommended to cure the product for minimum 2 to 3.5 hours:
• at 60°C with hot water
• at 95-100°C with steam
Depending on the diameter and length of the pipe, air pressure should be maintained (approx. 0.5 bar) during the refreshing of the pipe. Curing conditions must be adapted to specific local conditions (cold water circulation, polyester felt thickness, …)

CHEMICAL RESISTANCE
• Acetic acid (20%): Excellent
• Acetone: Not recommended
• Diesel fuel: Excellent
• Hydraulic fluid: Excellent
• Hydrogen peroxide (5%): Excellent
• Kerosene: Excellent
• Lactic acid: Good
• Methyl ethyl ketone: Fair
• Phosphoric acid (20%): good
• Sodium hydroxide (5%): Excellent
• Sulfuric acid (10%): Good
Information on specific chemicals is available on request from the Technical Department of Sika Industry.

REMOVAL
Uncured resin can be removed from tools and equipment with Sika® Reinigung-smittel 5 or another suitable solvent.
Once cured,
the material can be removed mechanical-ly or with solvent RZ 488. Hands and exposed
skin shall be washed immediately using industrial hand cleaner and water. Do not use solvents on skin.

STORAGE CONDITIONS
Products must be stored between 12°C – 35°C in a dry place and in their original unopened containers. Best before date is indicated on product labelling. Prior to use check the material for homogeneity and make sure to temper it to the processing temperature.

FURTHER INFORMATION
The information herein is offered for general guidance only. Advice on specific applications is available on

PACKAGING
CIPP's product range delivered under private label policy can be packaged in pre- weighed units, metal drums or IBC.

BASIS OF PRODUCT DATA
All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION
For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicolog-ical, and other safety related data.

DISCLAIMER
The information, and the recommenda-tions relating to the application and end-use of products, are given in good faith based on current knowledge and experience of the products when properly stored, handled, and applied under normal conditions in accordance with recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitabili-ty for the intended application and purpose. Insituform UK reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accept-ed subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned copies of which will be supplied on request.