

1. Product Profile

StenSeal® PU JFR is a single component, cold applied, self-levelling, polyurethane based joint sealant. **StenSeal® PU JFR**'s elastomeric structure, produced by **Stenkim®**'s polymer technology, is suitable for heavy traffic conditions with high abrasion resistance and adhesion strength, excellent chemical resistance. **StenSeal® PU JFR** is resistant to jet blast, jet fuels, hydraulic fluids and oils and dynamic movements. It is resistant to UV radiation.

StenSeal® PU JFR is classified as TS5926 EN 14188-2 (Type D) and ASTM C 920 (Type S, Grade P, Class 25, Use T).

StenSeal® PU JFR is available in 14 kg packages or 600ml sausages.

2. Uses

StenSeal® PU JFR is produced especially for runways, park areas, terminals and ramps, cargo fields and roads at airports. It is also a very compatible and economic joint sealant for highways subject to all types of traffic, secondary roads, bridge connections, ramps, stadium, industrial floors, pavements, fuel oil stations, roads and concrete fields at petrochemical and other industrial facilities. It is suitable for horizontal outdoor joints.

3. Joint Design

Joint width must not be less than four times the expected movement or 8 mm. Up to 20 mm width, sealant depth must be equal to 80% of the width. For wider joints, sealant depth must be set to 16mm. For adjusting depth backer material must be used inside the joint.

4. Application

4.1. Surface Preparation

Joint surfaces must be clean and dry. Oil, grease, bitumen or sealant remains must be completely removed. Loose materials on the joint walls must be removed; broken joint walls must be repaired.

StenSeal® PU JFR is affected from water before curing like all other polyurethane materials. Therefore, the joints must be dry and the sealant must not contact water until chemical curing occurs.

Jet Fuel Resistant Single Component Cold Applied Polyurethane Sealant

Highlights

- Polyurethane based, single component
- Cold applied and self-levelling
- High abrasion resistance and adhesion
- Resistant to dynamic movements
- Resistant to jet blast, jet fuels, oils, diluted acids and bases, various chemicals
- Resistant to UV radiation
- Ready to use and easy to apply

4.2. Primer

StenSeal® PU JFR can be used in concrete joints without primer. However, in any case primer application minimizes the negative effects of possible contamination, concrete moisture and loose materials. Therefore; **StenAst® S** is recommended for all kind of surfaces.

4.3. Backer Material

A rod which preferably does not adhere to the sealant must be placed in the joint in order to attain the sealant depth determined according to the joint width. Closed cell polyethylene foam rods are suitable for this purpose. Diameter of the rod must be 10 – 25% larger than the joint width; the rod must be placed tight in the joint. Rods must not be damaged during placement. In wide joints, semi-rigid materials like polystyrene foam can be used instead of rod. In such cases, it is helpful to place a polyethylene tape over backing material in order to prevent adhesion to the sealant.

Joint Width - mm	8	10	12	14	16	18	20	24	28	32	36
Sealant Thickness - mm	6	8	9	11	12	14	16	16	16	16	16
Sealant Recess - mm	3	4	5	6	6	7	8	8	8	8	8
Backer Rod Diameter - mm	10	13	15	18	20	23	25	30	35	40	45
Minimum Backer Rod Depth -mm	9	12	14	17	18	21	24	24	24	24	24
Usage (meter / 14kg)	184	110	82	57	46	35	27	23	19	17	15

4.4. Application

Material filled into a refillable type application apparatus with piston (sealant gun – applicator) or an appropriate 600ml sausage application gun and a nozzle with a diameter enabling it to enter into the joint must be fitted to the apparatus and while the sealant is applied this tip must be moved forward by sliding over the backer rod in the joint. Thus, it is ensured that no gap is left under the sealant and sufficient amount of sealant is used. After the application sealant surface can be finished by means of a spatula. Since the material that comes in contact with the air will harden, it is necessary to use the opened buckets as soon as possible and keep them closed during the waiting period.

It is recommended to tape both sides of the joint before starting application on joints especially where the decorative look is important. In this manner material smeared outside of the joint during the application is removed by pulling off the tape after the application.

5. Cleaning

Application devices and other sealant smudged devices must be cleaned before the sealant cures. For that purpose, tools first wiped with cloth or oakum must be cleaned with **StenSolver CL** or aromatic solvents such as toluene and xylene.

6. Safety

Applicators and supervisors must read Material Safety Data Sheet (MSDS) carefully and observe the considerations written therein. Emptied packages must be handled in compliance with relevant regulations and laws.

7. Storage

The material must be kept in dry indoor storages. Recommended storage temperature is 10-25°C. Stored unopened in these conditions, the shelf life is 12 months.

8. Company Liability

The information contained in this document is based on site experience of and laboratory tests done by **Stenkim®** and meant to give general information. It is the purchaser's responsibility to ensure applicability of products to their use. All **Stenkim®** products are available in specified quality and conditions. The company accepts no liability whatsoever unless the transportation, storage, application conditions and customer use are overseen by **Stenkim®**.

Stenkim® reserves the right to update all information contained in this document without notice.

9. Technical Data

Property	Test Method	Result
Base Polymer		Single Component Polyurethane
Solids Content %		99
Color		Catalogue
Movement Capability	Expansion	25 %
Movement Capability	Contraction	25 %
Flow		Self-leveling
Tensile Elongation	TS 5926 EN 14188-2	850 %
Density	TS 5926 EN 14188-2	1.47±0.05 g/cm ³
Durometer Hardness (Shore)	ASTM D 2240	A15±5
Elastic Recovery	TS 5926 EN 14188-2	>90 %
Adhesion and Cohesion Properties	TS 5926 EN 14188-2	No damage
Hydrolysis Resistance	TS 5926 EN 14188-2	Passes
Change in Mass and Volume Change After Liquid Fuel Immersion (JET A-1)	TS 5926 EN 14188-2	Passes
Change in Mass and Volume Change After Liquid Fuel Immersion (Antifreeze)	TS 5926 EN 14188-2	Passes
Change in Adhesion and Cohesion Properties After Liquid Immersion (JET A-1)	TS 5926 EN 14188-2	Passes
Change in Adhesion and Cohesion Properties After Liquid Immersion (Antifreeze)	TS 5926 EN 14188-2	Passes
Self-Leveling	TS 5926 EN 14188-2	0.5 mm
Tack free time @20°C	TS 5926 EN 14188-2	2 hours
Cure Time for Light Trafficability @20°C		3 mm/day
RELATED STANDARDS: ASTM C-920, TS 5926 EN 14188-2, ISO 11600		

Stenkim® reserves the right to make changes in the values in this table at any time.