POLYWAP 9400 SHIELD PU SEAL 2 – K

E-CATALOG

TWO COMPONENT, POLYURETHANE BASED, SELF LEVELING HORIZONTAL JOINT SEALANT



DESCRIPTION FOR IT

It is a two component, polyurethane based, cold applied, chemically curing, self leveling, and elastomeric joint sealant that offers high working flexibility and strong adhesion, as well as resistance to dynamic movements. It is resistant to organic and inorganic acids and alkalis, oils, fuels, antifreeze, and a wide range of chemicals.

AREAS OF USE

POLYWAP 9400 SHIELD PU SEAL-2K, formulated to provide a smooth finish for horizontal joints, is suitable for a wide range of indoor and outdoor applications where both load bearing capacity and elasticity are required. It also meets aesthetic requirements through a variety of available color options. Typical application areas include highways, bridge joints, stadiums, industrial flooring, warehouses, bonded warehouses, port areas, dam platforms, supermarkets, shopping centers, pedestrian zones, sidewalks, airport runways, parking areas, terminals and ramps, cargo yards, and similar open or enclosed spaces and roadways subject to all types of traffic.

ADVANTAGES

It is a two component, polyurethane based product designed for cold application. It cures chemically and provides a smooth, self leveling finish. It offers high adhesion strength and is suitable for both indoor and outdoor applications. The material is resistant to dynamic movements and withstands oil, fuel, and various chemicals. It is also uv resistant. Standard catalog colors are available, and curing speed can be adjusted to meet specific user requirements.

JOINT DESIGN

Joint width must be at least 6 mm and no less than four times the anticipated movement. For joint widths up to 15 mm, the sealant depth should equal the width. For joints between 15 mm and 30 mm wide, the sealant depth should be 80% of the width. For even wider joints, the sealant depth should be set at 30 mm. A joint backing material must be used to achieve these depths. In new concrete areas, the design and sealing method of dummy joints whether formed during casting or cut afterwards are also critical for localizing cracks caused by shrinkage during and after the drying process. We recommend consulting our technical documentation regarding joint design.

Joint width – mm	8	10	12	14	16	18	20	24	28	32	36
Joint filler thickness – mm	8	10	12	14	14	14	16	19	20	20	20
Joint recess depth – mm	4	5	6	7	7	7	8	10	10	10	10
Backer rod diameter – mm	10	13	15	18	20	23	25	30	35	40	45
Minimum backer rod depth – mm	12	15	18	21	21	22	24	29	30	30	30

APPLICATION CONDITIONS

The application temperature (ambient and surface) must be between +3°C and +35°C. For outdoor applications, there must be no rain 24 hours prior to, during, and 24 hours after the application. The surface temperature must be at least 3°C above the current dew point temperature.

TOOLS USED

Hand mixer, caulking gun (applicator), spatula.

SURFACE PREPARATION

Joint surfaces must be clean and dry. Oil, grease, bitumen, or old joint materials must be completely removed. Loose material along the joint edges must be cleared away, and damaged joint edges repaired. Like all other polyurethane based materials, POLYWAP 9400 SHIELD PU SEAL-2K is affected by water before curing. Therefore, the joints must be dry, and the sealant must not come into contact with water until chemical curing has taken place.

BASE MATERIAL

To ensure the required joint filler depth determined based on the joint width a backer rod (preferably one that does not adhere to the filler material) should be inserted into the joint. Closed cell polyethylene foam rods are suitable for this purpose. The rod diameter should be 10–25% larger than the joint width, and the rod must be compressed during insertion. Care should be taken to avoid damaging the rods during installation. For wide joints, semi rigid materials such as polystyrene foam may be used instead of backer rods; in such cases, a polyethylene tape must be placed over the base material to prevent the filler from adhering to it.

MIXING

POLYWAP 9400 SHIELD PU SEAL-2K consists of two components, designated as A and B, which are packaged in the appropriate mixing ratio. To prepare the mixture, first open the container of component A and stir its contents for 2–3 minutes; then, pour the entire contents of component B into component A and mix for 4–5 minutes using a low speed drill (100–500 rpm) equipped with a suitable mixing paddle. During mixing, the mixer should be moved throughout the container to ensure thorough blending, while care must be taken to avoid incorporating air into the mixture.

APPLICATION

The quantity to be prepared should be determined based on the application site and the capacity of the application equipment, ensuring it can be used within the pot life. The mixed material must be used within its pot life. Under no circumstances should any solvent be used to thin the paste once its pot life has expired. Material that has exceeded its pot life must not be used.

RESTRICTIONS

It is not recommended for joints narrower than 5 mm. It should not be used in joints that are dirty, oily, bituminous, or wet; cleaning such joints prior to application is essential to ensure proper adhesion. Despite its high load bearing resistance, it can be damaged by studded tires, snow chains, or high heeled shoes. The ambient temperature during application must be between 5°C and 35°C. If application is required outside this temperature range, please consult the manufacturer's recommendations.

CONSUMPTION

Total consumption varies depending on the depth and width of the joints to be treated.

TOOLS CLEANING

Application tools and other equipment soiled with the sealant must be cleaned before the sealant hardens. Tools should first be wiped with a cloth or waste cotton and then cleaned using aromatic based solvents such as toluene or xylene.

PACKAGING

12 kg Set (Component A: 10 kg, Component B: 2 kg).

STORAGE AND SHELF LIFE

It should be stored in a dry, moisture free environment away from direct sunlight, at temperatures between +10°C and +25°C. The shelf life is 12 months from the date of manufacture, provided the packaging remains undamaged and unopened. Packaging must be protected from frost and heat. Pallets should not be stacked on top of each other during transport and storage.

STANDARD

EN 1504-2:2004 CE Certificate

WARNINGS AND RECOMMENDATIONS

Only the product's own liquid should be used when preparing the mixture; absolutely no foreign substances should be added. Furthermore, methane gas seeping from the soil may have accumulated inside the tanks. Precautions must be taken with this possibility always in mind.

FEATURES

FEATURE	METHOD	RESULT
Base Polymer		2 Component Polyurethane
Solid content %		100
Colour		Gray
Elongation at break	ASTM D 412	> % 7000
Density (A+B)	A+B	1,40±0,05 g/cm3
Hardness (Shore A)	ASTM D 2240	A30±5
Back stretch	EN 14188-2	>%98
Pot Life of the Mixture @20°C		2 hour
Pre hardening (Tack-Free) @20°C	EN 14188-2	6 hour
Time to Light Foot Traffic @20°C		24 hour
Time to Suit Heavy Traffic @20°C		2 days
Chemical Resistance Development Time @20°C		5 days