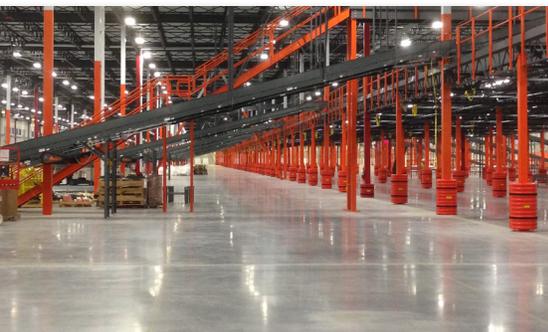




CHOOSING THE RIGHT JOINT FILLER

JOINT FILLER COMPARISON GUIDE

EUCLID CHEMICAL



PRIMARY APPLICATIONS

- Concrete construction & control joints
- Crack and joint repair for old floors
- Industrial and commercial floors
- Freezer floors

FEATURES AND BENEFITS

- Large shave-time window allows for greater flexibility in scheduling joint filling operations
- Tough performance reduces floor joint repairs and maintenance
- Suitable for filling cracks in older floors to reduce the rate of deterioration
- Adequate adhesion to concrete

THE EUCLID CHEMICAL JOINT FILLER LINEUP

- **Euco QWIKjoint UVR** is a fast setting, UV resistant, moisture-insensitive, semi-rigid polyurea joint filler. Used primarily for filling construction and control joints in industrial and commercial concrete floors.
- **Euco QWIKjoint UVR 65** is good for use in areas that will see lighter traffic such as pedestrian or light cart traffic. This is a good option to use in hospitals and schools
- **Euco QWIKjoint UVR 95** has a higher hardness level that makes it good for use in areas that will see heavier traffic such as heavy forklifts or heavy equipment.
- **Euco QWIKjoint 200** is a fast setting, semi-rigid, not moisture-sensitive polyurea control and construction joint filler. Used primarily for filling construction and control joints in industrial and commercial concrete floors where UV discoloration is not an issue.
- **Euco 700** is a semi-rigid epoxy joint filler that allows for limited temperature and humidity movement of concrete. This is good for use where there will be heavier traffic and UV discoloration is not an issue.
- **Dural 340 NS and Dural 340 SL** are semi-rigid epoxy joint filler and traffic loop sealants. Has excellent thermal shock resistance. Available in a non-sag version for vertical surfaces or sloped horizontal surfaces and a self-leveling version for horizontal surfaces.

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

	QWIKjoint UVR	QWIKjoint UVR 65	QWIKjoint UVR 95	QWIKjoint 200	Euco 700	Dural 340 NS/ Dural 340 SL
Chemistry	Two-part polyurea	Two-part polyurea	Two-part polyurea	Two-part polyurea	Two-part epoxy	Two-part epoxy
Shore D Hardness (ASTM D2240)	34 to 36	14 to 16	39 to 41	34 to 36	55	N/A
Shore A Hardness (ASTM D2240)	84 to 88	64 to 67	95 to 97	84 to 88	> 100	NS: 85 to 90 SL: 80 to 90
UV Resistant	Yes	Yes	Yes	No	No	No
Elongation @ 7 Days (ASTM D412)	220 to 260%	240 to 280%	210 to 250%	220 to 260%	55%	ASTM D638 95 to 105% 800 psi (5.5 MPa)
Tensile Strength @ 7 Days (ASTM D412)	660 psi (4.6 MPa)	480 psi (3.3 MPa)	930 psi (6.4 MPa)	660 psi (4.6 MPa)	690 psi (4.8 MPa)	
Tack Free	3 to 4 min	10 min	3 to 4 min	1 to 3 min	12 hours	5 to 6 hours
Pot Life	N/A	N/A	N/A	N/A	15 min	30 to 45 min
Gel Time (seconds)	25 to 30	45	31	25	N/A	50 to 60 min
Open to Traffic	1 to 2 hours	1 to 2 hours	1 to 2 hours	30 min	24 hours	24 hours
Packaging	22 oz (650 mL) cartridges 10 gal (37.9 L) unit	22 oz (650 mL) cartridges 10 gal (37.9 L) unit	22 oz (650 mL) cartridges 10 gal (37.9 L) unit	22 oz (650 mL) cartridges 10 gal (37.9 L) unit	2 gal (7.6 L) unit 10 gal (37.9 L) unit	4 gal (15.1 L) unit 10 gal (37.9 L) unit



EPOXY VS. POLYUREA PROPERTIES

Shore (Durometer) Hardness

The Shore durometer measures the relative hardness of a material by pressing a tiny needle into its surface and recording a value between 1 and 100. Higher Shore hardness numbers indicate a greater resistance to indentation, and thus indicate harder materials. The Shore A scale is used for more rubbery materials; the Shore D scale is used for harder materials; both values are often published on joint filler literature.

Concrete industry standards, most notably ACI 302 (Guide for Concrete Floor and Slab Construction), requires that joint fillers have a minimum Shore A hardness of 80. Epoxy joint fillers and polyurea joint fillers both typically meet this requirement.

Elongation

Don't be misled by tensile elongation results. A polyurea joint filler with a Shore A of 80 may have a tensile elongation of 400%, but is able to expand only about 5-15% laterally (side-to-side) before splitting or losing adhesion along the concrete bond line. A Shore 80 epoxy joint filler epoxy with 25% elongation will usually tolerate 5-8% lateral expansion. Thus, the high elongation polyurea joint filler offers very little in expansion advantage over an epoxy.

Application Temperatures

Freezing temperatures will prevent epoxies from curing completely. Thus, epoxies should be used only when the installation temperature is above 32°F. Polyureas are the best choice for use over a wide range of temperatures, even below freezing, as most can be installed as low as -20°F.

Dispensing

Both epoxies and polyureas can be dispensed with meter-mix pump equipment. Epoxies can also be dispensed with manual bulk guns. Polyureas generally cannot be dispensed with manual bulk guns because their pot life (a few seconds) is too short. However, the short polyurea pot life coupled with the efficiency of a meter-mix pump application leads to faster turn-around time, reduced labor and cost savings.

Overfill-And-Shave Process

Epoxy and polyurea joint fillers are overfilled in joints then shaved flush with the floor. Joint filler overfill should not be razored off until the filler has cured sufficiently. Due to their quick cure time, polyureas can be shaved in the first few hours after placement; some fillers (such as QWIKjoint UVR) can be shaved as early as fifteen minutes in the right conditions. Epoxy joint fillers usually can't be shaved for 8-12 hours following placement. Same-day shaveability is the primary reason most installers prefer polyureas.

Polyureas and Epoxies Separate Differently

When filled joints expand (the concrete shrinks), epoxies tend to separate in a leap-frog manner, with the remaining bond jumping from side to side. Most polyureas tend to separate continually along only one side. Although this does not affect performance of either joint filler type, the separation manner of polyurea is less noticeable.

SERVICE AND SUPPORT

The Euclid Chemical Company is unique in our offering of superior products, unparalleled customer service and industry support. The Euclid Chemical team delivers a range of value-added resources and in-depth industry experience to architects, designers, engineers, building contractors and owners. Our experts are highly-trained professionals who are available in local offices across the Americas, and are active members on industry technical committees including American Concrete Institute (ACI), International Concrete Repair Institute (ICRI) and American Society for Testing and Materials (ASTM). Our experienced field team is available to support you and your projects using Euclid Chemical solutions and products manufactured under the stringent standards of our ISO 9000 certified quality system. The Euclid Chemical Company works hand-in-hand with customers:

- Supplying field evaluations, recommendations and application problem solving on a project-by-project basis.
- Assisting in product selection, specification, installation and related technology.
- Attending pre-design meetings, assisting in clarifying specifications, and recommending product selection.
- Supporting you by providing proper pre-installation instructions and methods for achieving quality results.

