



Technical Data Sheet

Suppliers of:

- **Silicone Sealants**
- **Hybrid Sealants**
- **Waterproofing Membranes**
- **Polyurethane Sealants**
- **Construction Grouts**
- **Levelling Compounds**
- **Surface Sealers**
- **Sports Coatings**
- **Tools**
- **Primers & Admixtures**

Description & Classification

TIFLEX-GP is a multipurpose non-shrink Class A cementitious grout complying with requirements of SAA MP20 part 3. TIFLEX-GP is based on Portland cement, graded aggregate and chemical additives which impart controlled expansion whilst in the plastic state. The gaseous expansion system compensates for shrinkage and settlement in the plastic state. TIFLEX-GP is supplied as a ready to use dry powder requiring only the addition of a controlled amount of clean water to produce a free flowing non-shrink grout a gap thickness of 10mm to 120mm in a single application.

Recommended Uses:

- Caulking of joints and pipes.
- Precast and pre-stressed panels.
- Grouting of column bases & base in-filling.
- All general purpose grouting.
- Filling core holes, rod holes and defects in concrete.
- Fill in grout for hollow block walls.
- Joints between precast panels and other joints.
- Tilt slab panels.

Features & Benefits:

- Gaseous expansion system compensates for shrinkage and settlement whilst in the plastic state.
- Economical, low in place cost.
- Can be dry packed, rammed, trowelled, poured and pumped.
- Excellent flow characteristics when used in fluid consistency. Fills intricate cavities.
- Ready to use, pre-mixed, and requires only the addition of water.
- No metallic iron content to cause staining.
- Complete void filling resulting from gaseous expansion in plastic state.
- Lower water/cement ratio reduces drying shrinkage and increases durability and reduces permeability.

Performance Properties

Mixing Consistency

The table is a guide to the typical water addition requirements for various consistencies. Litres of water per 20kg bag.

| | Dry Pack | Trowellable | Flowable |
|-------|----------|-------------|----------|
| Range | 2.4 | 3.4 | 4.0 |

Typical Compressive Strength

Tested in accordance with AS1012.9 at 20°C and A S2073.

| Age | Dry Pack | Trowellable | Flowable |
|---------|----------|-------------|----------|
| 1 day | >30 Mpa | >14 Mpa | >11 Mpa |
| 7 days | >50 Mpa | >40 Mpa | >38 Mpa |
| 28 days | >70 Mpa | >55 Mpa | >50 Mpa |

Typical Flexural Strength

Tested in accordance to ASTM C348 at 20°C.

| Age | Trowellable | Flowable |
|---------|-------------|----------|
| 28 days | >9.0 Mpa | >8.5 Mpa |

Typical Bond Strength

Tested in accordance with ASTM C882.

| Age | Consistency | Strength |
|---------|-------------|----------|
| 28 days | Flowable | >7.0 Mpa |

Flow Characteristics

Tested in accordance with AS2073.

| | |
|-----------------|-----------------|
| Flow (Flowable) | 20 - 35 Seconds |
|-----------------|-----------------|



Manufactured for:

APTC Australia Pty Ltd

18 — 22 Pacific Drive

Keysborough Vic 3173

Tel: 1300 394 239

275 Macaulay Road

North Melbourne Vic 3051

Fax: 1300 394 279

www.aptcaust.com.au

Approximate Setting Times

| | Dry Pack | Trowellable | Flowable |
|--|----------|--------------|--------------|
| Initial Set | 3 hrs | 4.5 hrs | 5.5 hrs |
| Final Set | 4 hrs | 6.5 hrs | 8 hrs |
| Time for Expansion Start (Plastic State) | - | 15 - 25 mins | 15 - 30 mins |
| Time for Expansion Finish(Plastic State) | - | 1 - 2 hrs | 1 - 3 hrs |
| Unrestrained Expansion | - | 1 - 2% | 1 - 3 % |

Drying Shrinkage

| Time | Consistency | Shrinkage |
|---------|-------------|------------------|
| 56 days | Flowable | <750 Microstrain |

Yields

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content.

| | Dry Pack | Trowellable | Flowable |
|---|----------|-------------|----------|
| Litres/20kg bag | 10.0 | 10.2 | 10.6 |
| Approx. Fresh Wet Density KG/m ³ | 2290 | 2220 | 2200 |
| Approx bags required per m ³ | 100 | 98 | 94 |

Packaging

Tiflex-GP is supplied in a 20kg polylined bag.

Application Instructions:

Substrate & Surface Preparation:

The substrate surface must be clean, sound and free from oil, grease, curing compound or any loose materials. It must be mechanically abraded back to a sound concrete. Bolts or anchor holes must be clean and free from dust or loose material. This can be achieved by air blowing the hole clean.

Pre-Soaking:

It is essential to pre-soak the concrete substrate prior to application of TIFLEX-GP. Soak the substrates for a minimum of 1 hour prior to grouting. Immediately before grouting, the excess water should be removed, all water in anchor holes must be blown out and no traces of free water should be present during grouting.

Base Plate:

All traces of rust, oil or grease must be removed. It is essential to provide air pressure relief holes for venting.

Formwork:

It is essential that all formwork be constructed to facilitate rapid continuous and complete filling at the area to be grouted. It is essential that the formwork be constructed to be leak proof and water tight. Foam rubber strips or suitable sealants underneath the formwork are recommended. Formwork should allow gravity flow of grout between the base plate and foundation ensuring grout is kept in full contact with base plate and concrete substrate.

Unrestrained Surfaces:

As TIFLEX-GP is an expanding grout, unrestrained areas must be kept to minimum. It is advisable not to have any unrestrained areas.

Low Temperature Working:

Normal precautions for winter working with cementitious materials should then be adopted. At temperatures below 5°C the cure rate and strength development rate will be dramatically reduced. If early strength is required it is advisable to use heated water and condition TIFLEX-GP up to 30°C. Do not exceed these temperatures.

High Temperature Working:

At temperatures above 30°C, it is advisable to use water below 20°C when mixing grout. All materials must be kept cool and away from direct sunlight and area to be shaded by erecting shade screens. If ambient temperatures are excessive, perform grouting in early morning or late evening.

Mixing:

TIFLEX-GP is supplied in ready to use form requiring only the addition of fresh clean water. For optimum results TIFLEX-GP must be mixed with a mechanical forced action mixer with a high shear stirrer. It is essential that the mixing operation is continuous hence ensuring sufficient labour and mixing capacity available. DO NOT MIX BY HAND. The selected water content should be accurately measured into a mixing vessel. Slowly add the dry powder (TIFLEX-GP) while mixing. The mixing should continue for a maximum of 5 minutes until a uniform homogeneous consistency is obtained. DO NOT ADD ADDITIONAL WATER. Discard any material that has hardened or stiffened.

Placing:

It is essential that at ambient temperatures (approx 20°C) the grout is placed within 25 minutes of mixing as this will ensure the expansion process will be maximised. Flowable TIFLEX-GP can be placed in thickness ranging from 10mm to 120mm. Where a thickness of greater than 120mm is required, special procedures may be necessary. (Consult B&L Quality Products before proceeding). Avoid trapping air and water by placing grout from one side only. It is recommended that a suitable head box be used to ensure continuous flow of grout. Ensure entire area to be grouted is filled by bringing level to above underside of machine base plate and remain at this level throughout grout placement. The grout head must be maintained at all times so that a continuous grout front is achieved. Do not use mechanical vibrators to assist flow as this will cause segregation of aggregate. For large areas it is recommended that TIFLEX-GP be pumped. Contact B&L Quality Products for further advice.

Curing:

On completion of grouting the exposed area should be covered with wet hessian and plastic sheeting to prevent excessive moisture loss. Keep grout covered for a minimum of 24 hours. Remove formwork no sooner than 24 hours after completion of grouting and continue to cure with wet hessian, plastic sheeting and water. Lack of sufficient curing could result in plastic cracking and drying shrinkage on the surface. The surface should be protected for at least 7 days with either wet hessian or plastic sheeting.

Clean Up:

TIFLEX-GP should be removed from tools and equipment with clean water immediately after use.

Storage:

TIFLEX-GP has a shelf life of approx 8 months if kept in a dry environment completely away from moisture.

Health & Safety:

This product is classified as hazardous according to criteria of Work Safe Australia. Materials containing Portland Cement and sand now fall into this category. Continuous or extended contact with this product may cause irritation as well as respiratory issues such as bronchitis or silicosis.

- During use avoid inhalation of dust, contact with skin and eyes.
- Suitable protective clothing, dust masks, gloves and eye protection should be worn.
- Continual or extended contact with cement products can cause skin irritation.
- If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes.
- Material Data Safety Sheets (MSDS) are available on request from the office B&L Quality products. Read the MSDS and Product Data Sheet carefully before using any product.

Contact Poisons Information Centre on 13 11 26 or consult a medical advisor.

Warning:

The technical and recommended use of TIFLEX-GP™ is detailed to the best of our knowledge and experience, and must in every case be taken as merely indicative. All technical application and product data must be confirmed beforehand by the user/consumer before application of the adhesive to the tile and substrate. The user alone shall be fully responsible for the consequence of any misuse. If the intended use is in doubt, consult B&L Quality Products Pty Ltd for clarification of any issue.