

# CHEMICAL RELEASE AGENT FOR CONCRETE FORMWORK

# DISCRETE

## TECHNICAL DATA

### 1.0 DESCRIPTION

- 1.1 DISCRETE is a chemical release agent which reacts with the alkaline products of setting cement to form insoluble soaps. These soaps prevent any bond developing between the concrete and formwork and ensure a clean, even, blemish free surface with minimum voids.
- 1.2 The surface quality of concrete is controlled to a large extent by the release agent used on the formwork. Straight mineral or vegetable oils often cause surface pocking and water phased oil emulsions commonly give rise to staining and efflorescence. Some oils frequently make it difficult if not impossible, to achieve good bond of subsequent surface coatings, paints, rendering etc. The use of DISCRETE avoids these problems.
- 1.3 DISCRETE does not affect the natural bonding characteristics of paint, plaster, and other cementitious coatings. On surfaces not subjected to weathering, (e.g. interior) or where required by the coating manufacturer, wash the surface with water containing a little detergent, and/or brush down thoroughly.
- 1.4 A further characteristic of DISCRETE is that it affords protection to the formwork itself by inhibiting rust, and in the case of timber, impregnating the timber rendering it water repellent.
- 1.5 DISCRETE contains a transient red dye to ensure uniform application and maximum coverage.

### 2.0 PHYSICAL PROPERTIES

2.1 Colour	Transparent Red
2.2 Specific Gravity	0.84
2.3 Flashpoint	63°C
2.4 Viscosity	Low (Sprayable)
2.5 Toxicity	Contains Diesel. Avoid skin contact.
2.6 D.G. Classification	9 (Ecotoxic), UN 3082
2.7 Shelf Life	24 months in original unopened sealed containers
2.8 Coverage	Timber Formwork.....up to 20m <sup>2</sup> /litre Metal Formwork.....up to 30m <sup>2</sup> /litre

### 3.0 USES

DISCRETE is effective on all types of moulds and formwork as well as being suitable for tilt slab construction work. DISCRETE sprayed daily onto mixers, hoist buckets, wheelbarrows and all other equipment and machinery on which concrete may adhere, will keep the concrete soft and easily removed. Tests have shown that the spraying of mixers with this type of release agent has no effect on the concrete used.

# DISCRETE

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## TECHNICAL DATA Continued

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### 4.0 APPLICATION

- 4.1 Preferably by spray which will permit the rates of coverage to be obtained. Brush application may also be employed but the material should be well brushed out to obtain the most economic and effective results.
- 4.2 Being a chemical release agent, DISCRETE does not rely for its effectiveness on quantity, and is still active although the formwork may appear dry. Do not over apply to new and porous wood.
- 4.3 Formwork or pour area must be clean and free of dirt and other contamination that could interfere with the release or transfer to the surface of the concrete. Formwork is best treated before being erected, thus avoiding contamination of reinforcement. Should reinforcement become coated with DISCRETE by accident, it should be painted with cement slurry to react with the DISCRETE and this slurry should be brushed off immediately before the concrete is poured.
- 4.4 DISCRETE should be applied to the formwork prior to each use, but once applied, can be exposed to normal weather conditions for up to two weeks in the case of timber forms and up to three weeks in the case of steel forms. On exposure for longer periods than these, a further application of DISCRETE should be made.
- 4.5 To reduce build-up of residue on steel moulds in precast works DISCRETE may be diluted up to 50% with Kerosene. Where moulds are rusty or have a build up of old concrete, they should be liberally coated with DISCRETE and left overnight: before use they should be cleaned down and then scrubbed with a 50% mixture of DISCRETE and lighting Kerosene. This will clean the working faces and DISCRETE can be used in the usual way.
- 4.6 TILT SLAB CONSTRUCTION
  - 4.6.1 DISCRETE is an excellent release agent and bond breaker for tilt and lift slab work.
  - 4.6.2 If the surface on which the panels are to be poured is less than 14 days old it is essential that the surface first be coated with FRACURE Concrete Curing Compound. Refer FRACURE data sheet for details.
  - 4.6.3 Coat the whole working area with DISCRETE, construct the boxing and apply a further thin coating of DISCRETE to both boxing and floor immediately prior to placing reinforcing. Pour concrete as soon as practicable after application of second coat. Subsequent pours cast on the same site will need only one thin spray of DISCRETE.
  - 4.6.4 DO NOT walk on the casting surface when DISCRETE has been applied.
  - 4.6.5 If rain occurs before concrete is placed, check the casting surface and if any doubt, reapply a thin coating of DISCRETE.
  - 4.6.6 Ensure the casting surface is kept clean and free from dirt, dust, contamination, etc.



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# DISCRETE

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## TECHNICAL DATA Continued

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### 4.0 APPLICATION (continued)

#### 4.6 TILT SLAB CONSTRUCTION (continued)

4.6.7 If hardening or other surface treatments have been used on the floor slab do not use DISCRETE without first applying FRACURE Concrete Curing Compound. Alternatively obtain advice from the manufacturers. Some chemical floor treatments may react with DISCRETE and affect its bond-breaking capacity.

4.6.8 It is critical that these instructions are adhered to. Tilt slab release must be performed in conjunction with instructions and procedures found in tilt slab guideline documentation.

### 5.0 PACKAGING

4, 20 and 210 litres.

### 6.0 SAFETY & PRECAUTIONS

Read labels before use.

For non-standard concrete mixes, including those with special admixtures, pigments and other additives, test for release properties and final appearance.

Marks (including polishing or cleaning marks on steel forms, dents, etc.), contamination, etc. present on the form may show on the concrete surface once the concrete is released. Ensure the formwork is clean and free from contamination and surface defects before use and between uses.

DO NOT over apply. Over application may cause adverse effects to the concrete surface. Wipe up any puddles or excess material.

Refer to Material Safety Data Sheet for handling and first aid information. Wear protective gloves and clothing when applying. Avoid breathing vapours, especially if sprayed (do not atomise). Avoid skin contact.

For questions and applications not covered in this datasheet, contact supplier before use.

