

## Technical Data Sheet

### Surfactant for Soil wetting agent -SANMORIN OT-70-

#### Product description

Organic acids gradually accumulate on the surface of soil-forming particles, eventually forming a water-repellent layer. Water repellency of soil can directly affect plant growth by causing puddling and surface runoff or, in the case of turfgrass and field crops, by limiting water infiltration and supply to the root zone of plants. Poor water infiltration into the soil is due to the surface tension of water droplets. Reducing surface tension allows water droplets to disintegrate and spread over the soil surface, wetting it completely without runoff. Surfactants are one of the best ways to reduce this surface tension.

SANMORIN OT-70 is a sulfosuccinate-type anionic surfactant with excellent penetration and surface tension lowering ability among surfactants. It demonstrates excellent wetting and penetrating power in applications such as soil wetting agents, agrochemical granules, and wet dispersion of pigments, etc.

#### Product Features

SANMORIN OT-70 has the following features;

- Superior wetting and penetrating power
- Excellent emulsifying and dispersing power

#### Typical properties

- Appearance: Pale yellow liquid
- pH: Approx. 6 (1wt% aqueous solution)
- Active ingredient: approx. 70wt% (evaporation residue after drying at 150°C for 90 minutes)

#### Direction for use

Used alone or in combination with other surfactants (except cationic surfactants) as wetting agents, penetrating agents, household and industrial detergents, emulsifiers and dispersants, etc.

Concentrations vary depending on the application and the type of agent used in combination, but the standard range is 0.05 to 10wt%.

#### Precautions

SANMORIN OT-70 is an anionic agent. If used in combination with a cationic agent, it may cause agglomerates and fail to perform as expected. Do not use in combination with cationic agents.

SANMORIN OT-70 may lose its effectiveness due to hydrolysis if used under strongly alkaline or acidic conditions. Do not use under strongly alkaline or acidic conditions.

## Performance Tests

### 1. Permeability

SANMORIN OT-70 shows excellent penetration, as shown in Figure-1.

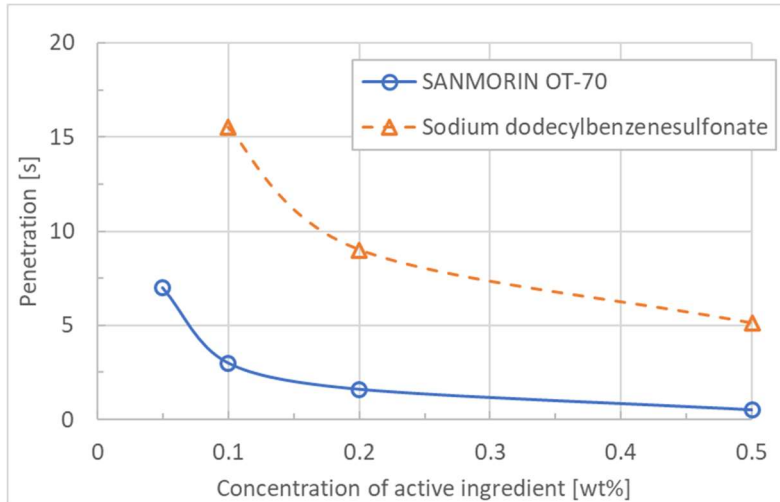


Figure-1. Relationship between Concentration and Penetration

#### <Sample preparation>

SANMORIN OT-70 and sodium dodecylbenzenesulfonate are diluted with water to a predetermined concentration (active ingredient) and used as samples.

#### <Measurement method>

A degreased cotton canvas strip (15 x 15 x 0.7 mm) is gently floated in the sample adjusted to 20°C, and the time required for the cotton canvas strip to submerge under the water and begin to sink is measured.

The shorter the time required, the better the permeability.

### 2. Surface tension lowering ability

SANMORIN OT-70 shows excellent surface tension lowering ability, as shown in Figure-2.

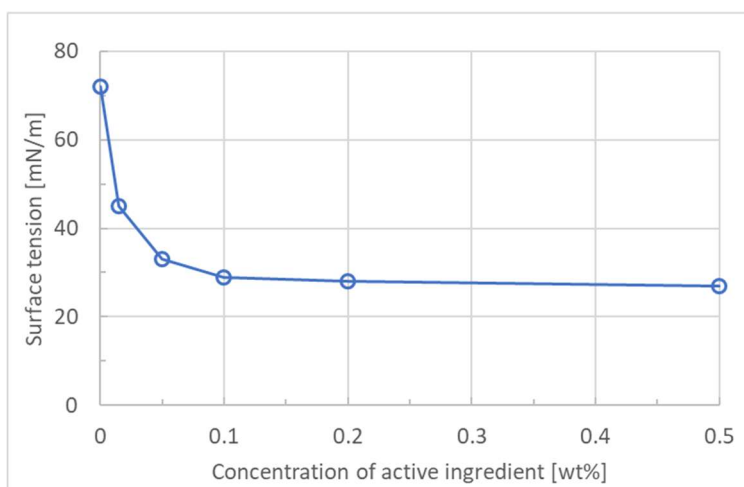


Figure-2. Relationship between concentration and surface tension

## <Sample preparations>

Samples are prepared by diluting SANMORIN OT-70 to the prescribed concentration (active ingredient) with water.

## <Measuring method>

The surface tension of the sample is measured at 25°C using a Wilhelmy-type automatic surface tension meter [CBVP-A3 type manufactured by Kyowa Interfacial Science Co., Ltd.]. The surface tension of the sample is measured at 25°C.

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