Emulsil ® Emulsion 35B (35%)

Description

Emulsil ® Emulsion 35B (35%) is an oil-in-water emulsion containing 35 % silicone oil, which is diluted for use, generally in a proportion of one part of **Emulsil ® Emulsion 35B (35%)** to 20 to 200 parts of water. Its characteristics are as follows :

- Practically no tendency to cream, neither during storage no in use.
- Perfect stability in contact with hard water or zinc (i.e. in galvanized metal containers).
- Excellent heat stability after dilution.
- Very good wetting power.

Advantages

Emulsil ® Emulsion 35B (35%) offers the following advantages:

Heat stable

It does not decompose at normal moulding temperatures, and therefore leaves no sooty or other deposits on the moulds or moulded articles. It imparts an attractive finish to the moulded articles and keeps the moulds perfectly clean.

Hydrophobic and chemically inert

Emulsil ® Emulsion 35B (35%) is hydrophobic and chemically inert. It thus protects the surface of the mould agains corrosion during and after moulding.

Immiscibility with the moulding material

It is immiscible with nearly all types of natural and synthetic rubbes and plastics. It wets the surface, forming a continuous film which prevents the material from adhering even to the sides of the mould.

Oxydation resistant

This property enables **Emulsil ® Emulsion 35B (35%)** to improve the ageing characteristics of certain rubber articles, such as bags, mats, etc.

Nature and general uses

Emulsil ® Emulsion 35B (35%) was specially formulated to lubricate moulds so as to make mould-release easier in the rubber and plastics industries.

Nature and general uses

Examples :

Removing tyres from moulds

Use one part of **Emulsil ® Emulsion 35B (35%)** for 30 to125 parts of water, depending on the moulding mixture, the tyre tread and curing time. Spray onto the hot mould before each moulding step. Avoid applying too much emulsion.

Lubricating curing bags

Use one part of **Emulsil ® Emulsion 35B (35%)** for 35 parts of water. Some manufacturers add one part of glycerine to one part of **Emulsil ® Emulsion 35B (35%)** before dilution. Apply by dipping or spraying.

Removing rubber soles, heels and mats from moulds

Dilute one part of **Emulsil ® Emulsion 35B (35%)** with 30 to 150 parts of water. Spray on to the mould. In the manufacture of mats, the use of **Emulsil ® Emulsion 35B (35%)** reduces rejects due to tearing and, by making mould-release quicker, reduces the total curing cycle time.

Removing miscellaneous rubber articles from moulds

Use one part of **Emulsil ® Emulsion 35B (35%)** for 30 to 200 parts of water, depending on the composition of the moulding mixture, the complexity of the mould and curing time. Spray on to the mould. Substituting **Emulsil ® Emulsion 35B (35%)** for organic lubricants considerably reduces the frequency with which moulds need cleaning.

Removing plastics from moulds

As above, use one part of **Emulsil ® Emulsion 35B (35%)** for 30 to 200 parts of water, as required, and spray on. **Emulsil ® Emulsion 35B (35%)** is perfectly suitable for mould release of phenolic resins, urea-formaldehyde and melamineformaldehyde resins, acrylic resins, and polyethylene and polyvinyl chloride sheets. When sheets are being grained, it prevents them from sticking to the rollers.

When the moulding temperature is below 100°C, it is more convenient to use RHODORSIL OIL 47 V 350 instead of **Emulsil ® Emulsion 35B (35%).** It should be dispersed in a concentration of 0.5 to 2 % in a solvent such as white spirit, cyclohexane, pentane, xylene or RHODORSIL OIL 41 V 0,65.

Nature and general uses

Manufacturing nylon stockings

Applying **Emulsil ® Emulsion 35B (35%)**to the aluminium forms used for making nylon stockings makes it easier to remove the stockings and reduces wast due to snagged threads. Use one part of **Emulsil ® Emulsion 35B (35%)**for 5 to 10 parts of water. Preferably apply with a cloth to the hot form.

Manufacturing rubber-sheathed wires and cables

In cable-manufacturing, **Emulsil ® Emulsion 35B (35%)** is used to lubricate the surface of rubber-sheated wires and cables to prevent the risk of sticking, thus making subsequent operations easier. It is generally applied continuously by passing the wire through a very dilute bath of **Emulsil ® Emulsion 35B (35%).**

Characteristics

Nature..... Emulsion of dimethylpolysiloxane oil in water
Appearance... ..... Milky liquid
Colour... ..... Homogeneous milky white
Specific gravity at 25°C, approx.. ..... 1.0
Dry matter content, approx. (%)..... 40
Active material content, approx. (%)..... 35
Viscosity of base silicone oil at 25°C, approx. (mm2/s)..... 300
Type of emulsifier..... non-ionic
pH, approx.....6 - 8
Dispersible in water

Processing Concentration

To determine the exact concentration to be used in each particular case, it is advisable to make the first tests with an emulsion obtained by diluting one part of **Emulsil ® Emulsion 35B (35%)** with 30 parts of water. Simply add the necessary quantity of water to the emulsion and stir. If mould release or the surface finish of the moulded article are not satisfactory, the concentration of **Emulsil ® Emulsion 35B**

(35%) should be increased gradually. Simply add **Emulsil ® Emulsion 35B (35%)** until satisfactory results are obtained. Stirring is important during addition. If the concentration of 1 : 30 is satisfactory, add water gradually, stirring each time, to find the minimum concentration which still provides good mould release.

Application

Application by a spray gun is recommended. When set to give a very fine spray, a thin, even film is obtained. The emulsion can also be applied with a brush or a pad, but this is less economical. One application is generally sufficient for several mould releases, but many users prefer to apply a more dilute emulsion before each moulding.

Processing

Precautions

The emulsion should be applied :

1. On perfectly clean, grease-free moulds. Traces of moulded material or alkaline pickling solutions would prevent the silicone from spreading perfectly over the surface of the mould and would therefore cause surface defects.
2. To moulds heated to at least 110-120°C, to ensure instantaneous evaporation of the water, which must be eliminated before moulding.
3. Diluted - the use of undiluted or insufficiently diluted **Emulsil ® Emulsion 35B (35%)**would cause faulty moulding by impairing material solidification, without improving mould release.

Storage and shelf life

When stored in its original unopened packaging at a temperature of between +2 and + 30°C, **Emulsil ® Emulsion 35B (35%)** may be stored for up to 12 months from its date of manufacture (expiry date). Comply with the storage instructions and expiry date marked on the packaging.