

Technical Datasheet

Arguclean CE 02 LD Cleaning Compound



Technical Description:

Compound containing a combination of cleaning additives. Arguclean CE 02 LD contains no chemically active substances which can lead to uncontrollable or even corrosive reactions in the extruder. Arguclean CE 02 LD contains physically functioning surfactants that remove contaminants from the metal surfaces.

Typical values (*):

| | |
|------------------|---|
| Appearance | white to slightly grey, opaque granules |
| Carrier | polyethylene |
| specific density | approx. 1,00 g/cm ³ |
| bulk density | approx. 0,57 g/cm ³ |

(*) The mentioned technical values are not intended as a delivery specification.

Applications:

Arguclean CE 02 LD is used for preliminary cleaning of extrusion units processing polyolefins and also for high-temperature coating extruder. It is used during colour and material change.
In addition, Arguclean CE 02 LD is a shut-down system for short-term and long-term stop mechanism, under operating temperature or lowered resting temperature or complete cooling.

Addition level:

Arguclean CE 02 LD is used up to 100 %.

Engineering Advice:

The active ingredient used in Arguclean CE 02LD develops an increased vapour pressure at a processing temperature of about 260 °C. The Arguclean CE 02 LD is neither reactive nor corrosive or abrasive. The Arguclean CE 02 LD does not stick to hot metal parts and can be rinsed out of the extruder and tool with successive polymers without residue.

Before starting the cleaning or the shutdown you have to remove the screen pack. This is not necessary for extrusion lines with screen changers. However, you should regularly change the screens during the cleaning process in order to avoid pressure increase.

The "Flush-and-Clean-Cycle" procedure is the most effective method of cleaning.

To achieve a good rinsing effect, set the screw rotation as follows:

- 1st minute at 30% of maximum screw rotation
- 2nd minute at 90% of maximum screw rotation
- 3rd minute at 50% of maximum screw rotation
- 4th minute at 15% of maximum screw rotation
- 5th minute at 70% of maximum screw rotation
- minutes 6-10 at 15-20% of maximum screw rotation
- minutes 11-15 -- repeat the cycling steps of the first 5 minutes

The specific screw rotations and times are not important, rather the flow patterns are interrupted and new speeds and shear rates arise. One minute at each speed is sufficient. At lower speeds, the polymer, which still sticks to the metal and corners, has the opportunity to combine with material that is in the mainstream. At higher screw rotations the velocity of Arguclean CE 02 LD on the walls is higher and more polymer can be pushed out.

A longer cleaning cycle is sometimes required for the cleaning of extrusion coating equipment. For blown film extruders more than two or three cleaning cycles are recommended.

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Cleaning with film extrusion:

In case you clean the extrusion line with Arguclean CE 02 LD after a production campaign you need to start with a combination of 50 % cleaning compound and 50 % of your own polymer. After having roughly extruded a "machine filling" of this blend, you have to continue the cleaning with 100 % Arguclean CE 02 LD. To achieve a good flush effect, you have to reduce or increase the screw rotation in regular intervals. Thereby it is essential that you always take care about the pressure restriction of your extrusion line.

Before starting a new production campaign, you have to wash out the cleaning compound by a machine filling of 50 % Arguclean CE 02 LD and 50 % of your own polymer. Afterwards you rinse with 100 % of the polymer you are going to use in your production to follow. This will prevent film breaks.

Cleaning without film extrusion:

Arguclean CE 02 LD should be dosed with 100 % and the screw rotation should be decreased in direction to zero. The cleaning compound should stay for a period of 5 to 10 minutes inside the extrusion line. After that period the screw rotation should be increased up to the maximum speed. The temperature profile should be regulated decreasing during cleaning of the extrusion line. If the tool (die head, flat sheet die etc.) is dismantled the temperature profile in the head area should be decreased to 120 °C.

Shutdown:

The extrusion line should be completely filled with 100 % Arguclean CE 02 LD. Afterwards it can be shut down. In case it won't be stopped and is held at standby -> 8 h - the temperature has to be decreased to 120 °C. During a retention time of several days the product can even be "frozen" in the extrusion line. In case of a restart the extrusion line should be heated up to 220 to 240 °C and the Cleaning Compound should be washed out with maximum screw rotation.

Authorization:

The above mentioned product is a raw material for the use in the plastic processing industry. The ingredients are suitable for the use in food contact applications in the European Union (EU), in Germany (GER) and in the United States of America (USA).

A detailed food contact statement for plastic applications is available separately. As we have no influence on the fabrication, the manufacturer is responsible for testing the finished product.

Packaging / Storage:

In 25 kg PE bags on pallets.

Arguclean CE 02 LD is to store under cool and dry conditions. A storage time of 12 months should not be exceeded by common room temperature. Higher temperatures, humidity, sunlight and further external influences and opened original containers could have a negative effect on the quality of the product and storage life.