KLEIBERIT®
ADHESIVES • COATINGS

Application

Cleaning of melting units and application equipment

PRODUCT INFORMATION

Safety

When is cleaning necessary?

Cleaning of bulk melters

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Cleaning of drum unloaders

Cleaning of application rollers

Cleaning of slot nozzles, slot coating head, and contact free systems.

Production pauses, without cleaning for longer periods.

Cleaning of press rollers, machine parts, transport rollers and tools.

Product format

Packaging formats of cleaners

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1. Safety

Cleaning should only be carried out by trained personnel with appropriate safety clothing! Heat resistant gloves and safety goggles must be worn for every procedure. Machine parts are very hot and this can very quickly lead to serious burns.
When working with adhesive systems which have to be heated appropriate ventilation systems are required.

Vapours created through heating have to be extracted. The machine suppliers cleaning advice must be followed. Any other instructions regarding handling should also be followed.

2. When is cleaning necessary?

- loss of the required coat width (blockage in the system)
- noticeable contamination of the machine through PUR hotmelt
- long down times / pauses of the machine i.e. holidays
- in any case the equipment should have a major cleaning at least once a year.

3. Cleaning of bulk melters

Standard cleaning with KLEIBERIT 761.6, KLEIBERIT 761.7 or KLEIBERIT 761.9

After work with the bulk melter is completed the application head has to be removed from the pipe. Allow the remaining adhesive to run out. Stuck on adhesive can be taken off with a long non metallic spatula (wood, teflon or plastic).
After removing the larger adhesive remains the tank should be half filled with KLEIBERIT 761.6, 761.7 or 761.9 melt the cleaner should be melted completely (for temperature please see enclosed data sheet 761.6, 761.7 or 761.9). During the melting process turn the pump on briefly several times to remove the last adhesive remains in the system as well as the hose. Adhesive remaining on the tank walls can be removed with the cleaner and a non metallic spatula (wood, teflon or plastics).
Now the pump needs to be run consciously to allow the entire cleaner to run through the system, this should remove all remaining adhesive. The cleaner should be pumped into a suitable container. When the cleaner has been completely pumped through the system, the tank should be filled up to approx. ¼ of its volume with KLEIBERIT 761.6, 761.7 or 761.9 again. The hose must now be reconnected to the applicator head. Once the cleaner has been molten completely, it needs to be run through the system to clean the pressure relief valve / by pass valve. Afterwards let the cleaner run through the nozzle. It is recommended to change the filters after cleaning is completed. After the filter change the system is ready to be loaded with new adhesive or to be turned off.

Major cleaning with KLEIBERIT 826.0

The bulk melter should have a major cleaning once or twice a year. This could be done during annual shut down or at the end of the year. A standard clean has to precede a major clean. After finishing the standard clean fill KLEIBERIT 826.0 into the tank (1 to 2, 4.5kg canister, depending on the tank volume). All areas of the system should then be heated to 180°C.
Once this temperature has been reached, place the hose end, without the applicator head into the tank. It is important that a sieve is attached to the hose end, to ensure all contamination can be removed from the system. Now the pump can be turned on. The KLEIBERIT 826.0 will circulate in the system. The cleaning / circulation process should last for 1-3 hours. Stubborn contamination of adhesive can be removed with a non metallic spatula (wood, teflon or plastic).
The cleaner can be filled back into the canisters after the cleaning process has finished. Generally, depending on the PUR remains in the system, the cleaner KLEIBERIT 826.0 can be used 2-4 times. After cleaning has been completed the sides of the tank can be wiped down with a paper towel or lint free cloth. To remove every trace of the KLEIBERIT 826.0 from the pump and hose, cleaner KLEIBERIT 761.6, 761.7 or 761.9 have to be filled into the system again. The machine is now ready to be switched off. Before use the next time it has to be ensured that no 826.0 has remained in the system. In any case purge the pump and the hose with adhesive before the applicator head is applied to the hose.

4. Cleaning of bag melters

Standard cleaning with KLEIBERIT 761.7 or KLEIBERIT 761.9

Where possible ensure all adhesive is being used before starting the cleaning process. Afterwards drive plunger out of the system and remove empty packaging carefully. Remove all visual adhesive remains from the pipe with a non metallic spatula (wood, teflon or plastic). Remove the applicator head from the hose and pump the remaining adhesive out of the system.
The granulate or block of KLEIBERIT 761.6, 761.7 or 761.9 can now be filled into the pipe. Melt the cleaner, and pump it via a hose into a suitable container. Depending on the manufacturer the pipe with the melting plate may be tilted so the reservoir can be cleaned directly.
This allows for the plate to be cleaned with a non metallic spatula (wood, teflon or plastic) from below.

As granulate the cleaner can also be filled directly into the reservoir. After the cleaning has been completed melt a small about of 761.6, 761.7 or 761.9. Reconnect the applicator head and flush the by-pass valve or pressure relief valve and flush the cleaner out through the applicator head.
The melter should then be turned off to allow it to cool sufficiently to remove remaining cleaner is necessary. Afterwards the system should be emptied via the hose. The melter can now be turned off, or be refilled with new adhesive.

Major cleaning with KLEIBERIT 826.0

The bulk melter should have a major cleaning once or twice a year. This could be done during annual shut down or at the end of the year.
A standard clean has to precede a major clean. After finishing the standard clean fill KLEIBERIT 826.0 into the tank (1 to 2 4.5kg canister, depending on the tank volume). All areas of the system should then be heated to 180°C.
Once this temperature has been reached, place the hose end, without the applicator head into the tank. It is important that a sieve is attached to the hose end, to ensure all contamination can be removed from the system. Now the pump can be turned on. The KLEIBERIT 826.0 will circulate in the system. The cleaning / circulation process should last for 1-3 hours. Stubborn contamination of adhesive can be removed with a non metallic spatula (wood, teflon or plastic).

The cleaner can be filled back into the canisters after the cleaning process has finished. Depending on the PUR remains in the system, the cleaner KLEIBERIT 826.0 can be used 2-4 times. After cleaning has been completed the sides of the tank can be wiped down with a paper towel or lint free cloth. To remove every trace of the KLEIBERIT 826.0 from the pump and hose, cleaner KLEIBERIT 761.6, 761.7 or 761.9 have to be filled into the system again. The machine is now ready to be switched off. Before use the next time it has to be ensured that no 826.0 has remained in the system. In any case purge the pump and the hose with adhesive before the applicator head is applied to the hose.

5. Cleaning of drum un-loader

5.1. Standard cleaning with KLEIBERIT 761.6, 761.7 or 761.9

Firstly raise the platen of the adhesive. Adhesive remaining on the platen can be scraped of with a non metallic spatula (wood, teflon or plastic).
Attach appropriate KLEIBERIT 761.6, 761.7 or 761.9 in a suitable packaging and start to melt the cleaner. Remove the application head from the hose. Purge the cleaner from the drum through the pump and the hose into an empty container i.e. a drum. As soon as the drum is empty a further another drum of cleaner can be used.

The pump can be switched of in certain intervals to allow the cleaner to can react with remaining adhesive to clean the inside of the system efficiently.
After the cleaning process it completed the drum with the cleaner can be left attached to the system. This allows the system to remain sealed and it can now be turned off or is ready for to be use with adhesive.

Major cleaning with KLEIBERIT 826.0

A major cleaning of the drum un-loader has to be preceded by a standard cleaning process. Ensure that any adhesive remains and any other contamination have been removed from the system.
Fill KLEIBERIT cleaner 826.0 into an empty and clean drum. Attach the drum to the system and heat all components to 180°C. Switch on the pump, and pump the cleaner through the hose into an empty drum. As soon as the drum with the cleaner is empty switch it with the now filled drum. This cycle should last between 1-3 hours.

This process should be monitored as the drums have to be switched over ever time the drum is empty. The pump should be turned off in certain intervals to ensure the cleaner can react with the contamination inside the system. Remove the drums when the cleaning process is completed and attach the drum with the KLEIBERIT 761.6, 761.7 or 761.9 to the system. Purge the remaining KLEIBERIT cleaner 826.0 completely out of the system. The system can now be turned of or is ready for use with adhesive.

Der Grundreinigung eines Fassschmelzers muss unbedingt eine Standardreinigung vorausgehen. Es sollte sichergestellt sein, das der grobe Klebstoff mitsamt Verschmutzungen aus dem System entfernt ist.

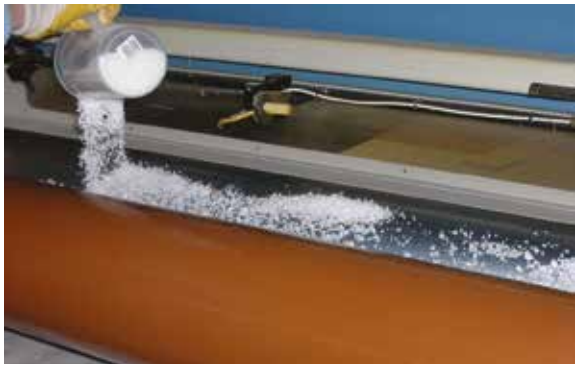
Nun kann in ein sauberes leeres Fass der entsprechenden Gebindegröße KLEIBERIT Reiniger 826.0 eingefüllt werden. Das Fass wird an das System angebracht und alle Komponenten auf 180°C erhitzt. Pumpe einschalten und Reiniger vom angeschlossenen Fass über den Schlauch in ein nebenstehendes leeres Fass pumpen. Ist das am System angeschlossene Fass leer, muss mit dem jetzt mit Reiniger gefülltem Fass getauscht werden.

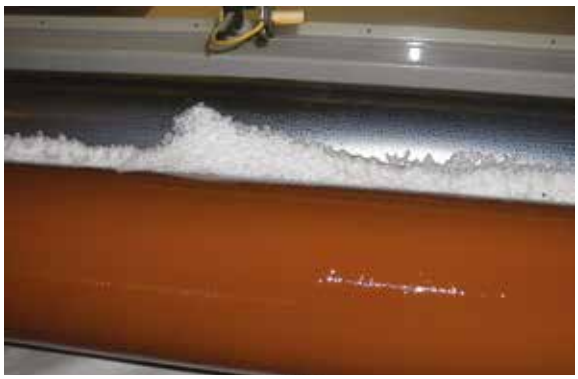
Zyklusdauer ca. 1-3 Stunden.
Während dieser Zeit, sollte die Reinigung ständig überwacht werden, da das Fass, wenn es leergepumpt ist, ausgetauscht werden muss. Die Pumpe muss in gewissen Abständen angehalten werden, damit der Reiniger die Verschmutzung anreagieren kann.
Nach dem Reinigungsprozess Fass entfernen und wieder das Fass mit KLEIBERIT Reiniger 761.7 oder 761.9 anschließen. Restlichen 826.0 komplett aus der Anlage entfernen. Nun kann die Anlage ausgeschaltet oder neuer Klebstoff angebracht werden.

6. Cleaning of application rollers

When working with PUR has finished the application system has to be emptied, if required remove remaining adhesive by reversing the system. Immediately afterwards allow KLEIBERIT cleaner 761.8 (see pictures) to melt and using the reverse allow the cleaner so remove all remaining PUR hotmelt. The rollers must be completely together.

Depending on the contamination this process has to be performed 1-2 times. The rollers should be run for 5-10 mins in reverse.
Afterwards remove the cleaner with a clean cloth (see pictures). Please note gloves must be worn and general safety instructions must be followed.
Cross linked PUR hotmelt can only be removed mechanically.





7. Cleaning of slot nozzles, slot coaters and contact free systems

The cleaning of slot nozzles, slot coaters and contact free systems is done with the same afore mentioned cleaners. The cleaner (761.6./.7/.9) is pumped through application unit via the cleaned melting system and the
hose. This cleans the application unit.

This cleans the unit, before the unit is beginning used again all remaining cleaner has to be purged out with the help of PUR adhesive.

7.1. Long production stops without cleaning

The variety of different application units and their manufacturers, and the variety of the different reactivity of the used adhesive make the experience values of the user and the specialist of Klebchemie essential. Generally speaking it is possible, for a closed system which is still loaded with adhesive, to be left without heating for 72 hours. Information provided by the equipment manufacturer as well as information provided by Klebchemie must be observed.

A Application units which are sealed air tight mechanically

When work stops the system is sealed whilst still hot. With a slot nozzle for example this is done via the width adjustment. The heat can now be turned off. To guarantee a seal the nozzle can be coated with KLEIBERIT 761.6/.7/.9 cleaner (block format). This coat must be removed before the next process is started.

B Application units which are not sealed mechanically

When works stops the application unit is sealed with KLEIBERIT 761.6/.7/.9 cleaner (block format). This can either be applied to the unit or the unit (still hot) can be pressed into the cleaner block. This ensures that the cleaner will seal the unit completely and not humidity can enter the system. Is the nozzle to big to be sealed by the block, an appropriate form can be filled with cleaner granulate and the unit can be pressed into this. Ensure that the head is completely coated.

7.2. Major cleaning / cleaning tips

Cleaning instruction of the equipment manufacturers have to be observed. Nozzles and heads which can be disassembled can also be "boiled" out with **KLEIBERIT 826.0 Cleaner.** It is recommended that after every major cleaning the seals are changed.

7.3. Tray cleaning

The dedicated stainless steal tray (i.e. in the shape of a pizza pan) is filled with **KLEIBERIT 826.0 Cleaner** and then heated to approx. 160 °C. The nozzles can now be placed into the tray and will remain there, depending on contamination, for 1-3 hours.

7.4. Heated vessel cleaning

KLEIBERIT 826.0 is heated up in a dedicated heated stainless steel vessel (i.e. industrial deep fat fryer). Heat the cleaner to approx. 160 °C and then submerge the parts, i.e. nozzles. Leave the parts in the cleaner for several hours.

7.5. Cleaning of hot, metallic parts

Hot, metallic parts can be easily cleaned, e.g. of polyurethane, with **KLEIBERIT 822.2 Cleaner**. Hot slot nozzles, steel dosing rollers, and application rollers, etc. can be cleaned with 822.2.

Attention: Cleaning effective only as long as the parts to be cleaned are hot. KLEIBERIT 822.2 Cleaner can be applied with a cleaning cloth, spread and then wiped off.
Please observe the safety requirements (protective gloves, safety glasses, etc.)

8. Cleaning of press rollers, machine parts, transport rollers and tools

All machine parts requiring cleaning should be cooled down to room temperature. Depending on their size the parts can be coated with a brush or a clean cloth with **KLEIBERIT 820.0** or **823.3 cleaner**. The cleaner should be left for 30 to max. 60 mins.

The loosened PUR hotmelt remains should then be removed mechanically. Minor contamination can be removed mechanically without the soaking time.

9. Technical Information

Product	761.0	761.6	761.7	761.8	761.9	820.0	822.2	823.3	826.0
Viscosity in [mPa·s] at 120°C	110.000	5.000 - 10.000	11.000	-	60.000	–	–	–	–
Specific gravity in (g/m³)	approx. 0.98	approx. 0.98	approx. 0.98	approx. 0.98	approx. 0.9	approx. 0.83	approx. 0.96	approx. 0.84	–
delivered as ...	granulate/ cartridges/ aluminium tins/ pouch bag	block	granulate/ block	granulate/ block	granulate/ block	liquid	liquid	liquid	liquid
colour	mahogani	blue	blue	white	green	clear	clear	clear yellowy	clear / oily

10. Packaging format of cleaners

Packaging	761.0	761.6	761.7	761.8	761.9	820.0	822.2	823.3	826.0
HolzHer 0.2 kg can	x	x	x		x				
Alu bag in fiber drum 1.5 kg			x						
Alu bag in fiber drum 1.8 kg		x							
Alu bag in fiber drum 15 kg			x		x				
Alu bag in fiber drum 18 kg		x							
Stand-up pouch 0.22 kg			x						
Stand-up pouch 0.4 kg		x							
US pail (Ø 285 mm) 15 kg			x						
US pail (Ø 285 mm) 18 kg		x							
Pail (Ø 280 mm) 15 kg			x						
Pail (Ø 280 mm) 18 kg		x							
Aluminium cartridge (200 ml) 0.1 kg			x						
Aluminium cartridge (310 ml) 0.25 kg			x						
PE bag 20 kg			x						
Drum 150 kg			x		x				
Plastic pail 20 kg				x					
Fiber drum 136 kg				x					
Bottle 0.756 kg (toluene free)						x			
Bottle 0.756 kg						x			
Canister 4.5 kg (toluene free)						x			
Canister 4.5 kg						x		x	x
Export can 20 kg						x			
Can 24 kg						x			
Can 22 kg (toluene free)						x			
Bottle 1 kg							x		
Canister 5 kg							x		
Bottle 0.65 kg								x	
Can 32 kg									x
Drum 215 kg									x

KLEIBERIT® Adhesives worldwide

KLEIBERIT Adhesives (Head Office)
KLEBCHEMIE M. G. Becker GmbH & Co. KG
Weingarten/Germany

KLEIBERIT Adhesives UK
Coalville, Leicestershire, UK

KLEIBERIT Chimie S.a.r.l.
Reichstett, France

KLEIBERIT Adhesives USA Inc.
Waxhaw, North Carolina, USA

KLEIBERIT Adhesives of Canada Inc.
Toronto, Ontario, Canada

KLEIBERIT AUSTRALIA Pty Ltd.
Sydney, Australia

KLEIBERIT Russia
Moscow, Russia

KLEIBERIT Adhesives Japan
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Bejing, China

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Singapore, Singapore

KLEIBERIT Adhesives India Private Ltd.
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Istanbul, Turkey

KLEIBERIT Bel
Minsk, Belarus

KLEIBERIT-UKRAINE LLC.
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