



THE INTERNATIONAL GROUP, INC.

WAX STORAGE AND HANDLING SUPPLEMENT TO MSDS

The purpose of this supplement is to highlight certain precautions a customer should consider in the development of safe wax handling and storage procedures. This information is provided to help the customer develop their storage and handling procedures. It is the responsibility of the customer to ensure that their procedures comply with all of the codes and regulations governing their facility.

CONSERVING SHELF LIFE

The main factor affecting shelf life is oxidation. Waxes are susceptible to oxidation and precautions should be taken to help conserve the shelf life. Oxidation will darken the wax and give the wax an unpleasant, burnt odor. An anti-oxidant is typically mixed into the wax in the refining process to slow down the rate of oxidation. The anti-oxidant is gradually consumed over time. Proper storage and handling conditions will help the anti-oxidant and thereby conserve the shelf life of the wax. If all of the precautions are implemented you should expect an approximate 100 day shelf life for liquid waxes.

PRECAUTIONS TO MINIMIZE OXIDATION

- Avoid excessively hot storage temperatures. The recommended storage temperature for liquid waxes with anti-oxidant is 15 to 20 °F above the melt point. As a general rule of thumb, each 20° F increase in storage temperature will reduce the maximum shelf life by half.
- Avoid excessively hot heating elements. We typically use steam inside pipe coils. The maximum possible temperature of the outside of the coil exposed to the wax would be 350° F.
- Avoid a heat source at a wax – air interface. The coils on our storage tanks are at the bottom of the tank so that they are typically flooded by wax and not exposed to air.
- Avoid excessive light. Liquid waxes are typically stored in opaque tanks.
- Minimize oxygen exposure. For liquid waxes avoid operations that increase hot wax exposure to air. For example, do not bubble air into the wax or continuously splash the wax into the top of a container.
- Avoid exposing the wax to metals such as copper, brass or zinc as they promote oxidation. Any alloys containing significant amounts of these metals should also be avoided. Short term exposure is not usually a problem.
- Avoid mixing oxidized wax into good wax. Oxidized wax will promote oxidation and must be removed from the system.

RECEIVING SOLID WAXES

Solid materials are usually shipped palletized and your normal pallet handling procedures are typically suitable.

STORING SOLID WAXES

Solid waxes should be stored indoors in the original packaging at room temperature or lower and out of direct sunlight.

RECEIVING LIQUID WAXES

Liquid waxes are usually shipped by road in a tank wagon, ISOtainer, or by rail in a rail car. Please use caution as liquid waxes can solidify in transit and block vents and nozzles. Ensure the dome cap is open and unobstructed before heating either style of shipping vessel. It is common for wax to splash up into the dome cap of a rail car during transit forming a wax plug. A hole must be punched through the wax



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plug into the vapour space of the rail car before heating the rail car. Rail cars will typically need heating as some wax will have solidified in transit. We recommend heating the bulk wax, as measured in the center of the rail car, to about 50 °F above the melt point. This should ensure that all wax has melted and is ready to be pumped. If the tank wagon or rail car is equipped with pressure relief valves ensure these are free of wax before pressurizing the vessel.

The first few gallons of material unloaded should be removed for inspection for water and contaminants. Small quantities of water from condensation or water dropping out of solution as the wax cools can accumulate at the outlet.

It is recommended that wax be filtered during offloading. (Contact IGI for recommended Micron Filter bag sizes for products)

STORING LIQUID WAXES

For maximum shelf life follow the precautions listed under “PRECAUTIONS TO MINIMIZE OXIDATION”.

Particulate may accumulate in a tank and we recommend the wax be filtered before use as appropriate for your application. Water may accumulate in a tank and we recommend that you check for water periodically at your low point drain.