Wave Soldering Process:
The solvents in use within the wave soldering process are Isopropylalcohol (IPA) and Senju Flux.
The use of these two solvents within this process are as follows:

Fluxing

Flux is applied to the underside of the Printed Circuit Board (PCB) to aid the wave soldering process. The purpose of the flux is to remove surface oxides, prevent oxidation of the soldering pads during the pre-heat and soldering process and improve wettability to ensure a strong low resistance solder joint.

The PCB travels through the fluxer and solderwave machine on a conveyor. Inside the fluxer machine there are three spray nozzles that move across the width of the PCB. As the PCB passes through the fluxer unit the nozzles moves along the width of the PCB and flux is sprayed on the underside of the PCB.
The flux is pumped from its original container to a reservoir tank in the fluxer and gravity fed to the spray nozzles. See picture below.

Isopropylalcohol (IPA)

IPA is used within two processes within the wave soldering process.

1) Cleaning of the pallets which are used to hold the PCB as they pass over the fluxer and wave soldering machine via conveyors. These pallets are removed from the machine on a daily basis and are placed into two baths each off which contains approx. 100 litres of IPA. This activity takes place in a location away from the main building at chemical shed number 7 as per “Emission and Monitoring/Sampling Points” drawing number 401_3. Approx annual usage of IPA (909K001) used for this particular cleaning process is 4.8T. This contaminated IPA is then disposed of as hazardous waste by our licensed contractor.

2) The remaining annual quantity (approx. 3.7T) of IPA (909K001 & 907K009) is used within the actual wave soldering production process to ensure that the conveyors on the solderwave machine are clean and free moving at all times. This material is manually filled into a reservoir on a daily basis and then pumped into a sub-reservoir that the conveyor passes through allowing the conveyor chain to be
cleaned and free to move. Some small quantities of contaminated IPA will remain within the reservoir and sub-reservoirs and is removed as hazardous waste by our licensed contractor.