

### Introduction

Safe handling and good storage of chemicals is essential. This note provides guidance on basic good practice with respect to chemical handling and storage. It is intended as a reference for designers and operators and should be read in conjunction with the MSDS for each product.

### Good Warehouse Practice

The shelf life of Avista products as supplied is 2 years when storage conditions follow good warehousing practice. This includes proper stock identification, isolation, segregation, and rotation in shaded and well ventilated stores. Containers should avoid exposure to direct sunlight by adequate shading. The chemicals should ideally be maintained at temperatures of between 5-30°C for maximum product life. Please seek specific advice if storage temperatures are outside this range.

Container handling should preserve the integrity of the container and any seals and closures.

Care should be taken in stacking pails and drums in order not to overburden the containers. (Guidance on maximum stacking numbers can be found on the packaging data sheets.)

Stores staff should be trained in chemical safety handling and be aware of safety procedures in the event of personal accident, fire, or chemical spillage. A copy of the MSDS should be kept in an accessible place.

All opened containers should be resealed if products are to be preserved for future use. It is particularly worth noting that powder cleaners should have the inner containment bags resealed, expelling as much air as possible.

All empty drums and pails should be removed and carefully washed out before disposal in accordance with local guidelines.

### Good Storage Practice

Stock tanks on site should be fabricated from compatible materials (see Avista datasheet material compatibility) and should be sited within bunded areas. Drums and tanks should be closed to prevent the ingress of airborne contamination, but suitably vented to allow adequate displacement during service. Chemical storage areas should avoid exposure to direct sunlight by adequate shading and ventilation should be sufficient to prevent build up of any vapours. The chemicals should ideally be maintained at temperatures of between 5-30°C for maximum product life.

### Diluted Product

When it is necessary to prepare dilute solutions in day tanks or dosing tanks additional care is required. Always use good quality water for dilution, (RO product water or distilled water free of chlorine) and clean, well maintained preparation tanks.

It is recommended that dilute solutions are made up on a weekly basis and that stock tanks should be cleaned out regularly (at least every 3 months) to minimise the risk from bacterial contamination.



Do not dilute stock antiscalant more than 9:1 (9 parts water, 1 part product) without taking advice from your Avista supplier. Do not dilute coagulant by more than 25:1.

### Further Information

Further information is available on the Product Data and Material Safety Data Sheets.

If you have any further questions then please do not hesitate to contact your Supplier.

### Hazards and Protective Equipment

The Material Safety Datasheet for each product should be consulted for detailed information on hazards associated with the chemicals. In general it should be noted that all products should be treated with care and the personnel protective equipment detailed in the table below should be worn when handling the materials.

Chemicals	Marking	General Hazards	Protective Equipment Requirements
Vitec 1000,2000,3000,4000,5000 RoQuest 3000 RoClean L403, L404, L607, L911, P703, P303, P111	Xi	R36/38 – irritating to eyes and skin Acidic/alkaline materials	Neoprene gloves, safety glasses (or goggles if splash hazard exists) Adequate ventilation
RoQuest 4000,500,6000 RoClean L211, L212, L811, P911	Xi, C	As above	PVC gloves, chemical protective clothing and goggles. Store in a bunded area Store below 35°C Keep away from oxidisers
RoClean P112	Xi, C	R34 – causes burns R37 – irritates respiratory system	As above AND if >5kg being handled a full face shield should be worn when handling
RoCide IS2, DB5, DB20	Xn, C	R20/22 – harmful if ingested  R41 – risk of serious damage to eyes R43 – Skin sensitiser Acidic materials	Ventilate to maintain atmospheric level lower than advised level  Wear PVC gloves, protective clothing and face protection.

Xi = irritant  
C=corrosive  
Xn=harmful

Issue21 –109/2008

