CLAIMS

The invention claimed is:

1. A process comprising:

heating a formaldehyde solution comprising 30 wt% or more formaldehyde and 50 ppm to 1000 ppm of an ammonia and/or ammonium hydroxide stabilizer to a temperature ranging from 70°C to 130°C;

aging the formaldehyde solution for a sufficient amount of time to polymerize the formaldehyde and form paraformaldehyde; and

solidifying the paraformaldehyde.~~; and~~

~~contacting the formaldehyde solution before and/or during heating, the formaldehyde solution during aging, the paraformaldehyde, and/or the solidified paraformaldehyde with a gas comprising an ammonia and/or ammonia hydroxide stabilizer.~~

~~2. The process of claim 1, wherein the formaldehyde solution during heating further comprises 50 ppm to 1000 ppm of the ammonia and/or ammonium hydroxide stabilizer.~~

~~3. The process of any preceding claim, wherein the formaldehyde solution during aging further comprises 50 ppm to 1000 ppm of the ammonia and/or ammonium hydroxide stabilizer.~~

~~4. The process of any preceding claim, wherein solidifying the paraformaldehyde involves contacting the paraformaldehyde with gas comprising 10 ppm to 1000 ppm of the ammonia and/or ammonium hydroxide stabilizer.~~

~~5.~~2. The process of ~~any preceding~~ claim 1 further comprising:

drying the solidified paraformaldehyde.

~~6.~~3. The process of claim ~~5~~ 2 further comprising:

exposing the solidified paraformaldehyde during and/or after drying to a gas that comprises 10 ppm to 1000 ppm of the ammonia and/or ammonium hydroxide stabilizer.

~~7.~~4. The process of claim ~~5 or 6~~ 2 further comprising:

transporting the solidified paraformaldehyde to a storage facility.

~~8.~~5. The process of claim ~~7~~ 4 further comprising:

exposing the solidified paraformaldehyde during transporting or in the storage facility to ~~the~~ a gas that comprises 10 ppm to 1000 ppm of the ammonia and/or ammonium hydroxide stabilizer.

~~9.~~6. The process of claim ~~7 or 8~~ 4 further comprising:

storing the solidified paraformaldehyde for greater than 30 days at ambient to 50°C and maintaining an insolubles concentration in the solidified paraformaldehyde less than 150 ppm.

~~10.~~7. The process of ~~any preceding~~ claim 1, wherein aging the formaldehyde solution is for 0.1 hours to 3 hours.

~~11.~~8. The process of ~~any preceding~~ claim 1, wherein aging the formaldehyde solution is at 70°C to 130°C.

~~12.~~9. The process of ~~any preceding~~ claim 1, wherein an organic amine is not included in the process.

~~13.~~10. The process of ~~any preceding~~ claim 1 further comprising:

transporting the solidified paraformaldehyde to a storage facility.

~~14.~~11. The process of ~~any preceding~~ claim 1, wherein a source of the ammonia and/or ~~ammonia~~ ammonium hydroxide stabilizer is urea.

~~15.~~12. A process comprising:

exposing solidified paraformaldehyde to a gas comprising ~~10~~ 50 ppm to 1000 ppm of an ammonia and/or ammonium hydroxide stabilizer.

~~16.~~13. The process of claim ~~15~~ 12, wherein the solidified paraformaldehyde has an absence of an organic amine.

~~17.~~14. The process of ~~one of claims 15 and 16~~ claim 12, wherein a source of the ammonia and/or ~~ammonia~~ ammonium hydroxide stabilizer is urea.

~~18.~~15. The process of ~~one of claims 15-17~~ claim 12 further comprising:

storing the solidified paraformaldehyde for greater than 30 days at ambient to 50°C and maintaining an insolubles concentration in the solidified paraformaldehyde less than 150 ppm.

16. A process comprising:

heating a formaldehyde solution comprising 30 wt% or more formaldehyde to a temperature ranging from 70°C to 130°C;

aging the formaldehyde solution in the presence of 50 ppm to 1000 ppm of an ammonia and/or ammonium hydroxide stabilizer for a sufficient amount of time to polymerize the formaldehyde and form paraformaldehyde; and

solidifying the paraformaldehyde.

17. The process of claim 16 further comprising:

drying the solidified paraformaldehyde; and

exposing the solidified paraformaldehyde during and/or after drying to a gas that comprises 10 ppm to 1000 ppm of the ammonia and/or ammonium hydroxide stabilizer.

18. The process of claim 16, wherein an organic amine is not included in the process.