CLAIMS

The invention claimed is:

1. 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 for a sufficient amount of time to polymerize the formaldehyde and form paraformaldehyde;

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. The process of any preceding claim further comprising:

drying the solidified paraformaldehyde.

6. The process of claim 5 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. The process of claim 5 or 6 further comprising:

transporting the solidified paraformaldehyde to a storage facility.

8. The process of claim 7 further comprising:

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

9. The process of claim 7 or 8 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. The process of any preceding claim, wherein aging the formaldehyde solution is for 0.1 hours to 3 hours.

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

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

13. The process of any preceding claim further comprising:

transporting the solidified paraformaldehyde to a storage facility.

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

15. A process comprising:

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

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

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

18. The process of one of claims 15-17 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.