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.

2. The process of claim 1 further comprising:

drying the solidified paraformaldehyde.

3. The process of claim 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.

4. The process of claim 2 further comprising:

transporting the solidified paraformaldehyde to a storage facility.

5. The process of claim 4 further comprising:

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

6. The process of claim 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.

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

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

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

10. The process of claim 1 further comprising:

transporting the solidified paraformaldehyde to a storage facility.

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

12. A process comprising:

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

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

14. The process of claim 12, wherein a source of the ammonia and/or ammonium hydroxide stabilizer is urea.

15. The process of 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.