Generated file by QChecklists
https://quollnet.com

Control Polymer Slurry: Viscosity, Density, Contamination

Control polymer slurry with an interactive checklist covering viscosity, density, contamination, and recyclability. Fully commentable and export as PDF/Excel with QR-secured records.

Project:	
Date:	
Filled by:	

Pre-Use Verification	
1	Confirm polymer product, grade, and batch against approved submittals; capture SDS and certificate; verify expiry date; photograph labels; acceptance: matches submittal; evidence: photos and batch numbers logged.
2	Inspect storage tanks, mixers, and hoses are clean, dry, and free of cement, soil, or hydrocarbons; acceptance: no residue or sheen; evidence: interior photos and supervisor initials.
3	Calibrate Marsh funnel, mud balance, pH meter, thermometer, and turbidimeter; record serial numbers and calibration dates; acceptance: in-date calibration; evidence: calibration certificates uploaded.

Viscosity Control	
4	Measure Marsh funnel viscosity at 20 ± 2 °C using 946 mL discharge; record seconds and temperature; acceptance: within specified range per approved project specifications; evidence: photo of reading and log entry.
5	Adjust polymer concentration per manufacturer instructions to reach target viscosity; document product, dose (mL/L), and mixing time; acceptance: next test within target; evidence: dosing record and mixer runtime.
6	Recheck viscosity after shear (mix 1 min) and 5 min rest for recovery; acceptance: recovery behavior within specified limits; evidence: before/after times and operator initials.

Density and Composition	
7	Measure density with calibrated mud balance; record kg/m³ and temperature; acceptance: within project range; evidence: mud balance photo and recorded value.
8	Measure pH using a calibrated meter; rinse with deionized water; record pH and temperature; acceptance: within manufacturer-recommended range; evidence: instrument screenshot or photo.
9	Measure slurry temperature; acceptance: within operational range stated in submittals; evidence: thermometer photo and value logged to 0.1 °C.
10	Determine suspended solids via field filtration/gravimetric kit; dry and weigh filter; record mg/L; acceptance: below project limit; evidence: filter photo and mass calculation.

Contamination Monitoring	
11	Test turbidity with turbidimeter; record NTU; sample from mid-depth with clean bottle; acceptance: below specified NTU limit; evidence: instrument photo and time-stamped reading.
12	Check for hydrocarbons: visual sheen test on clean surface tray; if available, use oil/grease field kit (mg/L); acceptance: no sheen or within limit; evidence: tray photo and kit result.
13	Screen incoming groundwater interaction: test chlorides/sulfates with strips (mg/L); acceptance: within specified limits; evidence: strip photo beside color chart and logged value.
14	Identify cement/concrete ingress: look for rapid pH rise, density increase, or flocculation near tremie; acceptance: within control limits; action: isolate tank if exceeded; evidence: readings and incident note.

Recyclability Assessment	
15	Run 30-minute settling test in transparent beaker; photograph start and finish; acceptance: clarity and viscosity retain within targets; evidence: before/after photos and notes.
16	Perform shear-recovery check using low–high–low mixing or viscometer; acceptance: recovery response per project criteria; evidence: recorded curve/observations and operator signature.
17	Trial reactivation: dose measured polymer concentrate; mix for specified time; retest viscosity/density; acceptance: meets targets without exceeding max concentration; evidence: dose log and post-dose results.

Operations Control	
18	Maintain circulation to avoid air entrainment; verify pump flow rate (L/min) matches plan; acceptance: within operational band; evidence: flowmeter reading and hourly log.
19	Screen slurry through 500–1000 µm shaker screens compatible with polymer fluids; record retained mass; acceptance: removal of coarse fines without degrading polymer; evidence: screen photos and retained mass.
20	Segregate tanks for fresh, in-use, and recovery slurry; label clearly; document transfers (L) and locations; acceptance: no cross-contamination; evidence: tank labels and volume log.

Documentation and Handling	
21	Record all readings in the interactive checklist; attach photos, calibration certificates, and batch labels; acceptance: complete data set per test point; evidence: digital record with reviewer initials.
22	Reconcile daily slurry mass balance: produced, reused, topped-up, and disposed (L); acceptance: within acceptable variance per approved project specifications; evidence: summary table and supervisor confirmation.
23	Dispose of non-recyclable slurry via licensed waste contractor per environmental plan; acceptance: manifests and volumes documented; evidence: disposal tickets and haulage receipts uploaded.
24	Issue hold point if any parameter is out of tolerance; notify stakeholders; acceptance: corrective action approved before reuse; evidence: hold log, approval note, and retest results.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Control polymer slurry is critical to maintaining excavation stability and concrete quality in bored piles, CFA shafts, and diaphragm walls. This checklist focuses on polymer support fluid, also called polymer drilling slurry or polymer-based drilling fluid, and establishes practical field controls for viscosity, density, contamination, and recyclability. It excludes bentonite controls, sand content checks, and gel-strength procedures. Using calibrated instruments and repeatable methods, crews can quickly detect fines loading, cement ingress, hydrocarbons, or saline groundwater effects before they jeopardize stability or cover fresh concrete. The result is fewer stoppages, consistent cut-off levels, and lower waste-handling costs through verified reuse. Each step specifies tools, acceptance cues per approved project specifications and authority requirements, and the evidence to capture for traceability. Use this interactive checklist to tick tasks, add comments, attach photos, and export PDF/Excel with a QR-secured audit trail.	1. Preparation: assemble calibrated Marsh funnel, mud balance, pH meter, thermometer, turbidimeter, filtration kit, clean sample bottles, PPE, and labeled sample containers. Verify power/water availability, safe access, spill control, and lighting. 2. Set up: designate fresh, in-use, and recovery tanks; install compatible screens; mark sampling points; brief the crew on acceptance criteria per approved project specifications and authority requirements. 3. Using the Interactive Checklist: start interactive mode, select test point, tick each step, attach photos of readings, add comments for anomalies, and tag responsible personnel. 4. Export and Share: generate a commentable report and export as PDF/Excel; share via QR-secured link for supervisors, inspectors, and the materials engineer. 5. Sign-Off and Archive: collect digital signatures from the tester and reviewer; confirm corrective actions closed; archive with batch numbers, calibration records, and manifests.