

CA-25

Concreto ≤ C50														
Aço CA-25			γ _s = 1,15		β' _s para (d'/d) =									
β _x	β _y	β _z	β _c	β _s	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,200	0,225	0,250
0,010	0,008	0,996	0,007	1,000										
0,020	0,016	0,992	0,013	1,000										
0,030	0,024	0,988	0,020	1,000	0,050									
0,040	0,032	0,984	0,027	1,000	0,151									
0,050	0,040	0,980	0,033	1,000	0,254									
0,060	0,048	0,976	0,040	1,000	0,360	0,103								
0,070	0,056	0,972	0,046	1,000	0,467	0,208								
0,080	0,064	0,968	0,053	1,000	0,578	0,315	0,052							
0,090	0,072	0,964	0,059	1,000	0,690	0,425	0,159							
0,100	0,080	0,960	0,065	1,000	0,805	0,537	0,268							
0,110	0,088	0,956	0,072	1,000	0,923	0,651	0,380	0,109						
0,120	0,096	0,952	0,078	1,000	1,000	0,768	0,494	0,220						
0,130	0,104	0,948	0,084	1,000	1,000	0,888	0,611	0,333	0,056					
0,140	0,112	0,944	0,090	1,000	1,000	1,000	0,730	0,449	0,168					
0,150	0,120	0,940	0,096	1,000	1,000	1,000	0,852	0,568	0,284					
0,160	0,128	0,936	0,102	1,000	1,000	1,000	0,978	0,690	0,403	0,115				
0,170	0,136	0,932	0,108	1,000	1,000	1,000	1,000	0,815	0,524	0,233				
0,180	0,144	0,928	0,114	1,000	1,000	1,000	1,000	0,942	0,648	0,353	0,059			
0,190	0,152	0,924	0,119	1,000	1,000	1,000	1,000	1,000	0,775	0,477	0,179			
0,200	0,160	0,920	0,125	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302			
0,210	0,168	0,916	0,131	1,000	1,000	1,000	1,000	1,000	1,000	0,734	0,428	0,122		
0,220	0,176	0,912	0,136	1,000	1,000	1,000	1,000	1,000	1,000	0,867	0,557	0,248		
0,230	0,184	0,908	0,142	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,690	0,376	0,063	
0,240	0,192	0,904	0,148	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,826	0,508	0,191	
0,250	0,200	0,900	0,153	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,966	0,644	0,322	
0,260	0,208	0,896	0,158	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,779	0,455	0,130
0,270	0,216	0,892	0,164	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,876	0,563	0,250
0,280	0,224	0,888	0,169	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,965	0,663	0,362
0,290	0,232	0,884	0,174	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,757	0,466
0,300	0,240	0,880	0,180	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,844	0,563
0,310	0,248	0,876	0,185	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,926	0,654
0,320	0,256	0,872	0,190	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,739
0,330	0,264	0,868	0,195	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,819
0,340	0,272	0,864	0,200	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,894
0,350	0,280	0,860	0,205	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,965
0,360	0,288	0,856	0,210	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,370	0,296	0,852	0,214	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,380	0,304	0,848	0,219	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,390	0,312	0,844	0,224	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,400	0,320	0,840	0,228	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,410	0,328	0,836	0,233	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,420	0,336	0,832	0,238	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,430	0,344	0,828	0,242	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,440	0,352	0,824	0,247	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
β _{x,dlt}	0,360	0,820	0,251	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,460	0,368	0,816	0,255	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,470	0,376	0,812	0,260	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,480	0,384	0,808	0,264	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,490	0,392	0,804	0,268	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,500	0,400	0,800	0,272	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Concreto C55														
Aço CA-25			$\gamma_s = 1,15$		β'_s para (d'/d) =									
β_x	β_y	β_z	β_c	β_s	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,200	0,225	0,250
0,010	0,008	0,996	0,007	1,000										
0,020	0,016	0,992	0,013	1,000										
0,030	0,024	0,988	0,019	1,000	0,050									
0,040	0,032	0,984	0,026	1,000	0,151									
0,050	0,039	0,980	0,032	1,000	0,254									
0,060	0,047	0,976	0,038	1,000	0,360	0,103								
0,070	0,055	0,972	0,044	1,000	0,467	0,208								
0,080	0,063	0,969	0,051	1,000	0,578	0,315	0,052							
0,090	0,071	0,965	0,057	1,000	0,690	0,425	0,159							
0,100	0,079	0,961	0,063	1,000	0,805	0,537	0,268							
0,110	0,087	0,957	0,069	1,000	0,923	0,651	0,380	0,109						
0,120	0,095	0,953	0,075	1,000	1,000	0,768	0,494	0,220						
0,130	0,102	0,949	0,081	1,000	1,000	0,888	0,611	0,333	0,056					
0,140	0,110	0,945	0,086	1,000	1,000	1,000	0,730	0,449	0,168					
0,150	0,118	0,941	0,092	1,000	1,000	1,000	0,852	0,568	0,284					
0,160	0,126	0,937	0,098	1,000	1,000	1,000	0,978	0,690	0,403	0,115				
0,170	0,134	0,933	0,104	1,000	1,000	1,000	1,000	0,815	0,524	0,233				
0,180	0,142	0,929	0,109	1,000	1,000	1,000	1,000	0,942	0,648	0,353	0,059			
0,190	0,150	0,925	0,115	1,000	1,000	1,000	1,000	1,000	0,775	0,477	0,179			
0,200	0,158	0,921	0,120	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302			
0,210	0,165	0,917	0,126	1,000	1,000	1,000	1,000	1,000	1,000	0,734	0,428	0,122		
0,220	0,173	0,913	0,131	1,000	1,000	1,000	1,000	1,000	1,000	0,867	0,557	0,248		
0,230	0,181	0,909	0,137	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,690	0,376	0,063	
0,240	0,189	0,906	0,142	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,818	0,503	0,189	
0,250	0,197	0,902	0,147	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302	
0,260	0,205	0,898	0,152	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,987	0,697	0,406	0,116
0,270	0,213	0,894	0,157	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,783	0,503	0,224
0,280	0,221	0,890	0,163	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,863	0,593	0,323
0,290	0,228	0,886	0,168	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,937	0,677	0,416
0,300	0,236	0,882	0,173	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,755	0,503
0,310	0,244	0,878	0,178	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,828	0,584
0,320	0,252	0,874	0,183	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,896	0,660
0,330	0,260	0,870	0,187	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,961	0,732
0,340	0,268	0,866	0,192	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,799
$\beta_{x,dlt}$	0,276	0,862	0,197	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,863
0,360	0,284	0,858	0,202	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,922
0,370	0,291	0,854	0,206	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,979
0,380	0,299	0,850	0,211	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,390	0,307	0,846	0,215	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,400	0,315	0,843	0,220	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,410	0,323	0,839	0,224	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,420	0,331	0,835	0,229	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,430	0,339	0,831	0,233	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,440	0,347	0,827	0,237	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,450	0,354	0,823	0,242	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,460	0,362	0,819	0,246	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,470	0,370	0,815	0,250	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,480	0,378	0,811	0,254	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,490	0,386	0,807	0,258	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,500	0,394	0,803	0,262	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Concreto C60														
Aço CA-25			$\gamma_s = 1,15$		β'_s para (d'/d) =									
β_x	β_y	β_z	β_c	β_s	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,200	0,225	0,250
0,010	0,008	0,996	0,006	1,000										
0,020	0,016	0,992	0,012	1,000										
0,030	0,023	0,988	0,019	1,000	0,050									
0,040	0,031	0,985	0,025	1,000	0,151									
0,050	0,039	0,981	0,031	1,000	0,254									
0,060	0,047	0,977	0,037	1,000	0,360	0,103								
0,070	0,054	0,973	0,043	1,000	0,467	0,208								
0,080	0,062	0,969	0,049	1,000	0,578	0,315	0,052							
0,090	0,070	0,965	0,054	1,000	0,690	0,425	0,159							
0,100	0,078	0,961	0,060	1,000	0,805	0,537	0,268							
0,110	0,085	0,957	0,066	1,000	0,923	0,651	0,380	0,109						
0,120	0,093	0,954	0,072	1,000	1,000	0,768	0,494	0,220						
0,130	0,101	0,950	0,077	1,000	1,000	0,888	0,611	0,333	0,056					
0,140	0,109	0,946	0,083	1,000	1,000	1,000	0,730	0,449	0,168					
0,150	0,116	0,942	0,088	1,000	1,000	1,000	0,852	0,568	0,284					
0,160	0,124	0,938	0,094	1,000	1,000	1,000	0,978	0,690	0,403	0,115				
0,170	0,132	0,934	0,099	1,000	1,000	1,000	1,000	0,815	0,524	0,233				
0,180	0,140	0,930	0,105	1,000	1,000	1,000	1,000	0,942	0,648	0,353	0,059			
0,190	0,147	0,926	0,110	1,000	1,000	1,000	1,000	1,000	0,775	0,477	0,179			
0,200	0,155	0,923	0,115	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302			
0,210	0,163	0,919	0,121	1,000	1,000	1,000	1,000	1,000	1,000	0,734	0,428	0,122		
0,220	0,171	0,915	0,126	1,000	1,000	1,000	1,000	1,000	1,000	0,867	0,557	0,248		
0,230	0,178	0,911	0,131	1,000	1,000	1,000	1,000	1,000	1,000	0,969	0,666	0,363	0,061	
0,240	0,186	0,907	0,136	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,754	0,464	0,174	
0,250	0,194	0,903	0,141	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,836	0,557	0,279	
0,260	0,202	0,899	0,146	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,911	0,643	0,375	0,107
0,270	0,209	0,895	0,151	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,980	0,722	0,464	0,206
0,280	0,217	0,892	0,156	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,796	0,547	0,298
0,290	0,225	0,888	0,161	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,864	0,624	0,384
0,300	0,233	0,884	0,166	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,928	0,696	0,464
0,310	0,240	0,880	0,171	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,988	0,764	0,539
0,320	0,248	0,876	0,175	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,827	0,609
0,330	0,256	0,872	0,180	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,886	0,675
0,340	0,264	0,868	0,185	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,942	0,737
$\beta_{x,dtl}$	0,271	0,864	0,189	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,995	0,796
0,360	0,279	0,861	0,194	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,851
0,370	0,287	0,857	0,198	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,903
0,380	0,295	0,853	0,203	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,953
0,390	0,302	0,849	0,207	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,400	0,310	0,845	0,212	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,410	0,318	0,841	0,216	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,420	0,326	0,837	0,220	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,430	0,333	0,833	0,224	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,440	0,341	0,830	0,228	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,450	0,349	0,826	0,233	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,460	0,357	0,822	0,237	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,470	0,364	0,818	0,241	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,480	0,372	0,814	0,245	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,490	0,380	0,810	0,248	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,500	0,388	0,806	0,252	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Concreto C70														
Aço CA-25			$\gamma_s = 1,15$		β'_s para (d'/d) =									
β_x	β_y	β_z	β_c	β_s	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,200	0,225	0,250
0,010	0,008	0,996	0,006	1,000										
0,020	0,015	0,993	0,011	1,000										
0,030	0,023	0,989	0,017	1,000	0,050									
0,040	0,030	0,985	0,023	1,000	0,151									
0,050	0,038	0,981	0,028	1,000	0,254									
0,060	0,045	0,978	0,034	1,000	0,360	0,103								
0,070	0,053	0,974	0,039	1,000	0,467	0,208								
0,080	0,060	0,970	0,045	1,000	0,578	0,315	0,052							
0,090	0,068	0,966	0,050	1,000	0,690	0,425	0,159							
0,100	0,075	0,963	0,055	1,000	0,805	0,537	0,268							
0,110	0,083	0,959	0,061	1,000	0,923	0,651	0,380	0,109						
0,120	0,090	0,955	0,066	1,000	1,000	0,768	0,494	0,220						
0,130	0,098	0,951	0,071	1,000	1,000	0,888	0,611	0,333	0,056					
0,140	0,105	0,948	0,076	1,000	1,000	1,000	0,730	0,449	0,168					
0,150	0,113	0,944	0,081	1,000	1,000	1,000	0,852	0,568	0,284					
0,160	0,120	0,940	0,086	1,000	1,000	1,000	0,978	0,690	0,403	0,115				
0,170	0,128	0,936	0,091	1,000	1,000	1,000	1,000	0,815	0,524	0,233				
0,180	0,135	0,933	0,096	1,000	1,000	1,000	1,000	0,942	0,648	0,353	0,059			
0,190	0,143	0,929	0,101	1,000	1,000	1,000	1,000	1,000	0,775	0,477	0,179			
0,200	0,150	0,925	0,106	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302			
0,210	0,158	0,921	0,111	1,000	1,000	1,000	1,000	1,000	1,000	0,733	0,428	0,122		
0,220	0,165	0,918	0,116	1,000	1,000	1,000	1,000	1,000	1,000	0,816	0,525	0,233		
0,230	0,173	0,914	0,121	1,000	1,000	1,000	1,000	1,000	1,000	0,892	0,614	0,335	0,056	
0,240	0,180	0,910	0,125	1,000	1,000	1,000	1,000	1,000	1,000	0,962	0,695	0,428	0,160	
0,250	0,188	0,906	0,130	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,770	0,513	0,257	
0,260	0,195	0,903	0,135	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,839	0,592	0,345	0,099
0,270	0,203	0,899	0,139	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,903	0,665	0,428	0,190
0,280	0,210	0,895	0,144	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,962	0,733	0,504	0,275
0,290	0,218	0,891	0,148	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,796	0,575	0,354
0,300	0,225	0,888	0,153	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,855	0,641	0,428
0,310	0,233	0,884	0,157	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,910	0,703	0,497
0,320	0,240	0,880	0,162	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,962	0,762	0,561
0,330	0,248	0,876	0,166	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,816	0,622
0,340	0,255	0,873	0,170	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,868	0,679
$\beta_{x,dlt}$	0,263	0,869	0,174	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,916	0,733
0,360	0,270	0,865	0,179	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,962	0,784
0,370	0,278	0,861	0,183	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,832
0,380	0,285	0,858	0,187	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,878
0,390	0,293	0,854	0,191	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,921
0,400	0,300	0,850	0,195	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,962
0,410	0,308	0,846	0,199	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,420	0,315	0,843	0,203	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,430	0,323	0,839	0,207	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,440	0,330	0,835	0,211	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,450	0,338	0,831	0,215	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,460	0,345	0,828	0,218	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,470	0,353	0,824	0,222	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,480	0,360	0,820	0,226	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,490	0,368	0,816	0,229	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,500	0,375	0,813	0,233	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Concreto C80														
Aço CA-25			$\gamma_s = 1,15$		β'_s para (d'/d) =									
β_x	β_y	β_z	β_c	β_s	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,200	0,225	0,250
0,010	0,007	0,996	0,005	1,000										
0,020	0,015	0,993	0,010	1,000										
0,030	0,022	0,989	0,016	1,000	0,050									
0,040	0,029	0,986	0,021	1,000	0,151									
0,050	0,036	0,982	0,026	1,000	0,254									
0,060	0,044	0,978	0,031	1,000	0,360	0,103								
0,070	0,051	0,975	0,036	1,000	0,467	0,208								
0,080	0,058	0,971	0,041	1,000	0,578	0,315	0,052							
0,090	0,065	0,967	0,046	1,000	0,690	0,425	0,159							
0,100	0,073	0,964	0,050	1,000	0,805	0,537	0,268							
0,110	0,080	0,960	0,055	1,000	0,923	0,651	0,380	0,109						
0,120	0,087	0,957	0,060	1,000	1,000	0,768	0,494	0,220						
0,130	0,094	0,953	0,065	1,000	1,000	0,888	0,611	0,333	0,056					
0,140	0,102	0,949	0,070	1,000	1,000	1,000	0,730	0,449	0,168					
0,150	0,109	0,946	0,074	1,000	1,000	1,000	0,852	0,568	0,284					
0,160	0,116	0,942	0,079	1,000	1,000	1,000	0,978	0,690	0,403	0,115				
0,170	0,123	0,938	0,084	1,000	1,000	1,000	1,000	0,815	0,524	0,233				
0,180	0,131	0,935	0,088	1,000	1,000	1,000	1,000	0,942	0,648	0,353	0,059			
0,190	0,138	0,931	0,093	1,000	1,000	1,000	1,000	1,000	0,775	0,477	0,179			
0,200	0,145	0,928	0,097	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302			
0,210	0,152	0,924	0,102	1,000	1,000	1,000	1,000	1,000	1,000	0,719	0,419	0,120		
0,220	0,160	0,920	0,106	1,000	1,000	1,000	1,000	1,000	1,000	0,800	0,514	0,229		
0,230	0,167	0,917	0,110	1,000	1,000	1,000	1,000	1,000	1,000	0,875	0,601	0,328	0,055	
0,240	0,174	0,913	0,115	1,000	1,000	1,000	1,000	1,000	1,000	0,943	0,681	0,419	0,157	
0,250	0,181	0,909	0,119	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,754	0,503	0,251	
0,260	0,189	0,906	0,123	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,822	0,580	0,339	0,097
0,270	0,196	0,902	0,128	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,885	0,652	0,419	0,186
0,280	0,203	0,899	0,132	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,943	0,719	0,494	0,269
0,290	0,210	0,895	0,136	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,997	0,781	0,564	0,347
0,300	0,218	0,891	0,140	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,838	0,629	0,419
0,310	0,225	0,888	0,144	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,892	0,690	0,487
0,320	0,232	0,884	0,148	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,943	0,747	0,550
0,330	0,239	0,880	0,152	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,991	0,800	0,610
0,340	0,247	0,877	0,156	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,851	0,666
$\beta_{x,dlt}$	0,254	0,873	0,160	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,898	0,719
0,360	0,261	0,870	0,164	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,943	0,768
0,370	0,268	0,866	0,168	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,986	0,816
0,380	0,276	0,862	0,172	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,860
0,390	0,283	0,859	0,175	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,903
0,400	0,290	0,855	0,179	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,943
0,410	0,297	0,851	0,183	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,981
0,420	0,305	0,848	0,187	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,430	0,312	0,844	0,190	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,440	0,319	0,841	0,194	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,450	0,326	0,837	0,197	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,460	0,334	0,833	0,201	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,470	0,341	0,830	0,204	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,480	0,348	0,826	0,208	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,490	0,355	0,822	0,211	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,500	0,363	0,819	0,214	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Concreto C90														
Aço CA-25			$\gamma_s = 1,15$		β'_s para (d'/d) =									
β_x	β_y	β_z	β_c	β_s	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,200	0,225	0,250
0,010	0,007	0,997	0,005	1,000										
0,020	0,014	0,993	0,009	1,000										
0,030	0,021	0,990	0,014	1,000	0,050									
0,040	0,028	0,986	0,019	1,000	0,151									
0,050	0,035	0,983	0,023	1,000	0,254									
0,060	0,042	0,979	0,028	1,000	0,360	0,103								
0,070	0,049	0,976	0,033	1,000	0,467	0,208								
0,080	0,056	0,972	0,037	1,000	0,578	0,315	0,052							
0,090	0,063	0,969	0,041	1,000	0,690	0,425	0,159							
0,100	0,070	0,965	0,046	1,000	0,805	0,537	0,268							
0,110	0,077	0,962	0,050	1,000	0,923	0,651	0,380	0,109						
0,120	0,084	0,958	0,055	1,000	1,000	0,768	0,494	0,220						
0,130	0,091	0,955	0,059	1,000	1,000	0,888	0,611	0,333	0,056					
0,140	0,098	0,951	0,063	1,000	1,000	1,000	0,730	0,449	0,168					
0,150	0,105	0,948	0,068	1,000	1,000	1,000	0,852	0,568	0,284					
0,160	0,112	0,944	0,072	1,000	1,000	1,000	0,978	0,690	0,403	0,115				
0,170	0,119	0,941	0,076	1,000	1,000	1,000	1,000	0,815	0,524	0,233				
0,180	0,126	0,937	0,080	1,000	1,000	1,000	1,000	0,942	0,648	0,353	0,059			
0,190	0,133	0,934	0,084	1,000	1,000	1,000	1,000	1,000	0,775	0,477	0,179			
0,200	0,140	0,930	0,089	1,000	1,000	1,000	1,000	1,000	0,906	0,604	0,302			
0,210	0,147	0,927	0,093	1,000	1,000	1,000	1,000	1,000	1,000	0,718	0,419	0,120		
0,220	0,154	0,923	0,097	1,000	1,000	1,000	1,000	1,000	1,000	0,799	0,514	0,228		
0,230	0,161	0,920	0,101	1,000	1,000	1,000	1,000	1,000	1,000	0,874	0,601	0,328	0,055	
0,240	0,168	0,916	0,105	1,000	1,000	1,000	1,000	1,000	1,000	0,942	0,680	0,419	0,157	
0,250	0,175	0,913	0,109	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,753	0,502	0,251	
0,260	0,182	0,909	0,112	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,821	0,580	0,338	0,097
0,270	0,189	0,906	0,116	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,884	0,651	0,419	0,186
0,280	0,196	0,902	0,120	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,942	0,718	0,493	0,269
0,290	0,203	0,899	0,124	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,996	0,779	0,563	0,346
0,300	0,210	0,895	0,128	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,837	0,628	0,419
0,310	0,217	0,892	0,132	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,891	0,689	0,486
0,320	0,224	0,888	0,135	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,942	0,746	0,549
0,330	0,231	0,885	0,139	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,989	0,799	0,609
0,340	0,238	0,881	0,143	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,850	0,665
$\beta_{x,dlt}$	0,245	0,878	0,146	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,897	0,718
0,360	0,252	0,874	0,150	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,942	0,767
0,370	0,259	0,871	0,153	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,984	0,815
0,380	0,266	0,867	0,157	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,859
0,390	0,273	0,864	0,160	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,902
0,400	0,280	0,860	0,164	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,942
0,410	0,287	0,857	0,167	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0,980
0,420	0,294	0,853	0,171	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,430	0,301	0,850	0,174	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,440	0,308	0,846	0,177	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,450	0,315	0,843	0,180	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,460	0,322	0,839	0,184	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,470	0,329	0,836	0,187	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,480	0,336	0,832	0,190	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,490	0,343	0,829	0,193	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
0,500	0,350	0,825	0,196	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000