Consequence Summary Report
Workspace: CALB_Sines_Rev-Dez2023_Resposta_APA
Study: 3600s
Summary Basis

These tables will only report global values set in the parameters. Values that are modified in the study tree will not be reported.
The report is context sensitive, and filters up to the study level. You will need to generate multiple summary reports if you have multiple studies in your workspace.
The results in this report are from the non-CFD calculations only.

Discharge Results (after atmospheric expansion)

Path	Scenario	Weather	Peak Flowrate [kg/s]	Temperature [degC]	Liquid mass fraction in material [fraction]	Droplet diameter [um]	Expanded diameter [m]	Velocity [m/s]	End time of release [s]
3600s\01_Rotura tambor Eletrólito	Catastrophic rupture	1.5/F		20	1	10000		0	
		4.9/D		20	1	10000		0	
		5.3/E		20	1	10000		0	
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	17,7467	19,9987	1	9954,9	0,0774597	4,78697	56,3485
		4.9/D	17,7467	19,9987	1	9765,25	0,0774597	4,78697	56,3485
		5.3/E	17,7467	19,9987	1	9624,9	0,0774597	4,78697	56,3485
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	0,177467	19,9987	1	9954,9	0,00774597	4,78697	3600
		4.9/D	0,177467	19,9987	1	9765,25	0,00774597	4,78697	3600
		5.3/E	0,177467	19,9987	1	9624,9	0,00774597	4,78697	3600
3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F		9,99994	1	10000		0,214246	
		4.9/D		9,99994	1	10000		0,214246	
		5.3/E		9,99994	1	10000		0,214246	
3600s\06_Rotura linha 65 mm Eletrólito	Short pipe	1.5/F	0,6	20,0003	1	10000	0,065	0,229837	1672,37
		4.9/D	0,6	20,0003	1	10000	0,065	0,229837	1672,37
		5.3/E	0,6	20,0003	1	10000	0,065	0,229837	1672,37
3600s\07_Fuga linha 65 mm Eletrólito	Leak	1.5/F	0,269945	19,9834	1	768,103	0,00503488	17,2339	2411,61
		4.9/D	0,269945	19,9834	1	753,469	0,00503488	17,2339	2411,61

		5.3/E	0,269945	19,9834	1	742,64	0,00503488	17,2339	2411,61
3600s\08_Rotura linha 40 mm Eletrólito	Short pipe	1.5/F	0,6	20,0035	1	10000	0,04	0,606915	1307,44
		4.9/D	0,6	20,0035	1	10000	0,04	0,606915	1307,44
		5.3/E	0,6	20,0035	1	10000	0,04	0,606915	1307,44
3600s\09_Fuga linha 40 mm Eletrólito	Leak	1.5/F	0,102228	19,9834	1	768,103	0,00309839	17,2339	3600
		4.9/D	0,102228	19,9834	1	753,469	0,00309839	17,2339	3600
		5.3/E	0,102228	19,9834	1	742,64	0,00309839	17,2339	3600

Dispersion Results

Input dispersion parameters

Core averaging time	18,75	s
Flammable averaging time	18,75	s
Toxic averaging time	600	s
Height of interest	0	m

Distance downwind to defined concentrations

The reported concentration of interest is defined at the scenario

Path	Scenario	Weather	Distance to UFL [m]	Distance to LFL [m]	Distance to LFL fraction [m]
3600s\01_Rotura tambor Eletrólito	Catastrophic rupture	1.5/F	1,43537	1,44338	2,83805
		4.9/D	1,4444	1,80044	4,60943
		5.3/E	1,44829	1,45459	3,01895
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	1,40763	2,41643	4,25452
		4.9/D	1,10114	2,46532	3,85864
		5.3/E	1,17397	2,04032	3,59352
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	0,702979	1,38803	1,5615
		4.9/D	0,699711	0,699912	1,04578
		5.3/E	0,685831	1,09049	1,18057
3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F	20,5378	20,5405	27,4223
		4.9/D	23,0723	23,0871	39,2346
		5.3/E	22,8174	22,8243	34,2549

Outdoor Toxic Results

Distance downwind to defined concentrations

The reported concentrations are defined in the respective material properties

Path	Scenario	Weather	Distance downwind to ERPG1 (3600 s) [m]	Distance downwind to ERPG2 (3600 s) [m]	Distance downwind to ERPG3 (3600 s) [m]	Distance downwind to STEL (900 s) [m]	Distance downwind to IDLH (1800 s) [m]
3600s\05_Libertação nuvem CO por incendio c/ Eletrólito	User defined source	1.5/F	n/a	n/a	n/a	n/a	n/a
		4.9/D	n/a	n/a	n/a	n/a	n/a
		5.3/E	n/a	n/a	n/a	n/a	n/a

Distance downwind to defined dangerous doses

The reported dangerous doses are defined in the respective material properties

Path	Scenario	Weather	Distance downwind to dangerous toxic load [m]	Distance downwind to dangerous dose 2 [m]	Distance downwind to dangerous dose 3 [m]
3600s\05_Libertação nuvem CO por incendio c/ Eletrólito	User defined source	1.5/F	0	677,106	133,001
		4.9/D	0	96,8546	n/a
		5.3/E	0	106,08	n/a

Exposure duration at defined dangerous doses

The reported dangerous doses are defined in the respective material properties

Path	Scenario	Weather	Exposure duration for dangerous toxic load [s]	Exposure duration for dangerous dose 2 [s]	Exposure duration for dangerous dose 3 [s]	Exposure duration for dangerous dose 4 [s]	Exposure duration for dangerous dose 5 [s]	Exposure duration for dangerous dose 6 [s]
3600s\05_Libertação nuvem CO por incendio c/ Eletrólito	User defined source	1.5/F	3240	3240	3240	n/a	n/a	n/a
		4.9/D	3240	3240	n/a	n/a	n/a	n/a
		5.3/E	3240	3240	n/a	n/a	n/a	n/a

Jet Fire Results

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Flame length [m]	Distance downwind to intensity level 1 (37,5 kW/m2) [m]	Distance downwind to intensity level 2 (12,5 kW/m2) [m]	Distance downwind to intensity level 3 (7 kW/m2) [m]	Distance downwind to intensity level 4 (5 kW/m2) [m]	Distance downwind to intensity level 5 (3 kW/m2) [m]
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	5,66874	n/a	6,34117	6,34117	6,66158	7,48461
		4.9/D	5,19081	5,76889	6,04688	6,7867	7,26953	8,11855
		5.3/E	4,78732	5,31753	5,59898	6,29212	6,73782	7,52121
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	1,36399	n/a	n/a	1,51316	1,51316	1,62437
		4.9/D	0,994104	n/a	1,0905	1,16117	1,24956	1,38866
		5.3/E	0,97581	n/a	1,06967	1,15351	1,23728	1,37569
3600s\05_Libertação nuvem CO por incendio c/ Eletrólito	User defined source	1.5/F	13,4104	n/a	n/a	n/a	n/a	n/a
		4.9/D	13,3056	n/a	n/a	n/a	n/a	n/a
		5.3/E	13,2273	n/a	n/a	n/a	n/a	n/a

Early Pool Fire Results

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Pool diameter [m]	Distance downwind to intensity level 1 (37,5 kW/m2) [m]	Distance downwind to intensity level 2 (12,5 kW/m2) [m]	Distance downwind to intensity level 3 (7 kW/m2) [m]	Distance downwind to intensity level 4 (5 kW/m2) [m]	Distance downwind to intensity level 5 (3 kW/m2) [m]
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	17,9918	13,2302	28,1265	36,1587	41,4384	50,7962
		4.9/D	17,9544	16,0599	31,2244	38,3045	43,1759	51,8697
		5.3/E	17,9167	16,3527	31,1001	38,1986	42,9762	51,5445
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	2,64989	2,38077	5,12226	6,85481	7,82797	9,43694
		4.9/D	2,67467	2,38792	6,36043	7,57823	8,47585	9,94585
		5.3/E	2,69412	2,38202	6,40553	7,62148	8,48828	9,9333

Late Pool Fire Results

Distance downwind to defined radiation levels

The reported radiations are defined in the parameters

Path	Scenario	Weather	Pool diameter [m]	Distance downwind to intensity level 1 (37,5 kW/m2) [m]	Distance downwind to intensity level 2 (12,5 kW/m2) [m]	Distance downwind to intensity level 3 (7 kW/m2) [m]	Distance downwind to intensity level 4 (5 kW/m2) [m]	Distance downwind to intensity level 5 (3 kW/m2) [m]
3600s\01_Rotura tambor Eletrólito	Catastrophic rupture	1.5/F	18,0526	12,3848	27,3209	35,3763	40,672	50,0587
		4.9/D	18,0119	15,2636	30,4635	37,5645	42,45	51,1698
		5.3/E	17,9632	15,554	30,3321	37,4477	42,2367	50,8257
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	17,9918	13,2302	28,1265	36,1587	41,4384	50,7962
		4.9/D	17,9544	16,0599	31,2244	38,3045	43,1759	51,8697
		5.3/E	17,9167	16,3527	31,1001	38,1986	42,9762	51,5445
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	12,5582	8,89102	20,1774	26,0949	29,9213	36,6595
		4.9/D	11,7348	9,79665	21,5242	26,3006	29,6076	35,4552
		5.3/E	11,9639	10,2316	21,8351	26,7109	30,0093	35,874
3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F	61,0495	45,9037	83,6369	106,607	122,245	150,438
		4.9/D	61,0271	58,7748	90,182	111,614	126,404	153,224
		5.3/E	61,0309	59,8352	90,2036	111,65	126,289	152,919

Flash Fire Results

Distance downwind to defined concentrations

The reported LFL and LFL fraction are defined in the respective material property

Path	Scenario	Weather	Distance downwind to LFL [m]	Distance downwind to LFL Fraction [m]
3600s\01_Rotura tambor Eletrólito	Catastrophic rupture	1.5/F	1,44338	2,83805
		4.9/D	1,80044	4,60943
		5.3/E	1,45459	3,01895
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	2,41643	4,25452
		4.9/D	2,46532	3,85864
		5.3/E	2,04032	3,59352
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	1,38803	1,5615
		4.9/D	0,699912	1,04578
		5.3/E	1,09049	1,18057
3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F	20,5405	27,4223
		4.9/D	23,0871	39,2346
		5.3/E	22,8243	34,2549
3600s\05_Libertação nuvem CO por incendio c/ Eletrólito	User defined source	1.5/F		
		4.9/D		
		5.3/E		

Maximum distance to LFL fraction at any height

Path	Scenario	Weather	Max flash fire distance [m]	Height of the max flash fire distance [m]	Time [s]
3600s\01_Rotura tambor Eletrólito	Catastrophic rupture	1.5/F	2,79997	0	4,36476
		4.9/D	4,49527	0	2,14669
		5.3/E	2,92323	0	1,60839
3600s\02_Fuga 100mm tambor Eletrólito	Leak	1.5/F	4,22361	0	15,6277
		4.9/D	4,10464	0,0267931	2,07846
		5.3/E	3,76341	0,0264534	4,40132
3600s\03_Fuga 10mm tambor Eletrólito		1.5/F	1,51554	0,0455759	3548,72
		4.9/D	1,21248	0,0235283	3548,72
		5.3/E	1,31736	0,0234236	3548,72

3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F	27,3228	0	8,80988
		4.9/D	39,0402	0	6,8631
		5.3/E	34,1258	0	6,45211
3600s\05_Libertação nuvem CO por incendio c/ Eletrólito	User defined source	1.5/F			
		4.9/D			
		5.3/E			

Explosion Results

Explosion scenarios for worst-case maximum downwind distance to defined overpressures.
These results are produced during the consequence run and depend on the precise setting of the scenario.
These results may be quite different to the explosion results calculated during the risk or effects modelling as these will depend on the obstructed regions defined on the map.

The reported overpressures are defined in the explosion parameters

Path	Scenario	Weather	Overpressure level [bar]	Maximum distance [m]	Diameter [m]
3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F	0,3 0,14 0,05 0,03	No hazard No hazard No hazard No hazard	0 0 0 0
		4.9/D	0,3 0,14 0,05 0,03	No hazard No hazard No hazard No hazard	0 0 0 0
		5.3/E	0,3 0,14 0,05 0,03	No hazard No hazard No hazard No hazard	0 0 0 0

Supplementary data for worst-case explosion scenarios

Path	Scenario	Weather	Overpressure level [bar]	Explosion flammable mass [kg]	Ignition time [s]	Ignition source [m]	Cloud centre [m]	Explosion centre [m]
3600s\04_Incendio no armazém H1 c/ Eletrólito	Catastrophic rupture	1.5/F	0,3 0,14 0,05 0,03	0	0 0 0 0	No hazard No hazard No hazard No hazard	No hazard No hazard No hazard No hazard	0 0 0 0
		4.9/D	0,3 0,14 0,05 0,03	0	0 0 0 0	No hazard No hazard No hazard No hazard	No hazard No hazard No hazard No hazard	0 0 0 0
		5.3/E	0,3 0,14 0,05 0,03	0	0 0 0 0	No hazard No hazard No hazard No	No hazard No hazard No hazard No	0 0 0 0

hazard	hazard
No	No
hazard	hazard