

TABLE 1
ALUF PLASTICS INC.
EXHAUST CONCENTRATIONS VS. ODOR THRESHOLDS FOR KNOWN OR POTENTIAL EMISSIONS

Legend: Green Highlight = Concentration < Odor Threshold; Red Highlight = Concentration > Odor Threshold; Yellow Highlight = To Be Determined
 Blue Highlight = Reporting Limit > Odor Threshold

Chemical Classification	Parameter	Odor Threshold (ppbv)	Odor Description	2016 SAMPLING DATA								2016 AND 2007 (BOLD) SAMPLING DATA		2011 STUDY		ANNUAL CAVITY IMPACT C _c		SHORT-TERM CAVITY IMPACT C _{cst}			
				IBC LD1 (ppbv)				IBC LD2 (ppbv)	IBC LD3 (ppbv)	IBC LD RETAIL (ppbv)	IBC REPRO (ppbv)		LAB BENCH STUDY/SIMULATION* - TOTAL FOR 6 EXTRUDERS (WITH 3X SAFETY FACTOR**)		AGC (ug/m ³)	SGC (ug/m ³)	(ug/m ³)	(ppbv)	(ug/m ³)	(ppbv)	
				Inlet 1	Inlet 2	Total Inlet	Outlet	Outlet	Outlet	Outlet	Inlet	Outlet	Avg. of 6 Tests (Inlet)	Max. of 6 Tests (Inlet)							
	Carbon Disulfide	96 (3M); 210 (JAPCA)	Vegetable sulfide	2.6	16.93	19.53	4.11	11.8	22.7	11.2	4.3	1.69									
	Hydrogen Cyanide	603 (3M)	Faint bitter almonds								41.4										
Aliphatic Hydrocarbon	1,3-Butadiene	455 (3M)									4.6	4.81									
	Hexane	21,900 (3M)		15.2		15.2					3.7										
	Methane		Marsh gas	5.3	5.33	10.63	3.95	2.2	3.2	2.7	2.5	2.50									
	Pentane	31,600 (3M)		7.5		7.5															
	Halogenated Hydrocarbon (Aliphatic Hydrocarbon)	1,2-Dichloroethane	11,200 (3M)	Poor warning	2.8		2.8														
	1,2-Dichloropropane	851 (3M)		14.9		14.9															
	Bromomethane										1.02										
	Chloroethane	4,070 (3M)									17.8	15.11									
	Chloromethane	10,200 (3M)		2.4	2.86	5.26	2.62	4.3	1.4	1.5	66.5	66.14									
	Cyclohexane	83,800 (3M)	Irritation	2	1.84	3.84	2.89	2.4	1.1	6.0	2.2	3.89									
Aromatic Hydrocarbon	Benzene	4,680 (JAPCA)	Solvent	5.4	6.32	11.72	51.89	4.1	1.5	3.1	32.5	27.63									
Halogenated Hydrocarbon (Aromatic Hydrocarbon)	1,2-Dichlorobenzene	72 (3M)		4.5		4.5															
	1,4-Dichlorobenzene	48 (3M)			1.73	1.73	1.63	1.1													
	Chlorobenzene	741 (3M)									2.0	2.86									
Alcohol	Ethanol	10,000 (JAPCA)	Sweet	389	26.52	415.52	288.01	20.4	15.1	16.0	624.7	456.96									
Aldehyde	Acetaldehyde	67 (geometric mean by detection, EPA); 186 (3M); 210 (JAPCA)	Green sweet; pungent/fruity								690.8	< 55.1	180.57	289.77	0.45	4500	0.37	0.21	26.2	14.5	
	Acrylaldehyde (Acrolein)	174 (3M); 210 (JAPCA); 1,800 (geometric mean by detection, EPA)	Burnt sweet, pungent, choking																		
	Benzaldehyde	42 (3M)											1.72	5.08							
	Benzaldehyde, 2-methyl												0.81	2.16							
	Benzaldehyde, 3-and/or 4-methyl												0.33	0.34							
	n-Butyraldehyde (Butanal)	9 (3M); 5 low to 9,000 high (NIH)	Acrid smell (unpleasant rancid/sweet, pungent)											50.83	101.52	15	30 (Iso-)	0.09	0.03	6.29	2.13
	Butyraldehyde, 3-methyl (Butanal, 3-methyl; Isovaleraldehyde)		Pungent, unpleasant odor; irritating as fluid											0.51	0.53						
	Crotonaldehyde	135 (3M)												5.87	16.69						
	Formaldehyde	871 (3M); 1,000 (JAPCA)	Hay/straw-like, pungent									298.4	35.2	52.23	107.10						
	Hexanaldehyde		Freshly cut grass; also reported as sharp, strong, unpleasant											14.47	32.98						
	Valeraldehyde	6 (3M); 28 (NIH/ACGIH)	Woody, vanilla, fruity, nutty											32.24	95.17	420		0.1	0.03	7.04 (no SGC)	1.99
	Propionaldehyde	145 (3M); 40 (geometric mean by detection, EPA); 80 (geometric mean by recognition, EPA)	Pungent, unpleasant, suffocating; slightly irritating, fruity											38.75	82.2	8		0.06	0.02	4.10 (no SGC)	1.72
	Ketone	Acetone	4,580 (3M); 100,000 (JAPCA)	Chemical sweet, pungent	126.2	102.35	228.55	94.87	55.5	60.9	32.7	1178.1	784.38, 171.4								
Methyl Ethyl Ketone		270 (3M); 10,000 (JAPCA); 17,000 (geometric mean by detection or recognition, EPA)	Sweet, sharp, acetone									< 41.4									
Organic Acid (Carboxylic Acid)	Acetic Acid	16 (3M), 1,000 (JAPCA)	Sour									< 155.4									
	Acrylic Acid	400 (3M)																			
	Formic Acid	28,200 (3M)										216.3									
Ester	Ethyl Acetate	610 (3M)		10.2		10.2	20.4														
Ether	1,4-Dioxane		Sweet, mild, alcohol, ethereal		9.45	9.45	5.17	2.7	1.4	3.1	16.8	11.94									
		7,780 (3M); 22,000 (geometric mean by detection or recognition, EPA)																			

BOLD = December 2007 Gammie data (after the filter system was installed)
 * = 2011 Lab/Bench Scale study and data analysis by HRP in coordination with a testing lab
 ** = Reported results are triple (3X) study results, per the wishes of the Rockland County Health Department
 INPUT = Before control
 OUTPUT = After control but within exhaust stack before exhaust