

TABLE OF CONTENTS

FOREWORD	iii	2.5.1 USAGE	2.7
PVC TASK FORCE	iv	2.6 HDPE -- HIGH DENSITY POLYETHYLENE (LINEAR)	2.7
NOTICE TO USERS	v	2.7 UHMW -- POLYETHYLENE (ULTRA HIGH MOLECULAR WEIGHT)	2.8
TABLE OF CONTENTS	vii	2.8 ABS -- ACRYLONITRILE BUTADIENE STYRENE	2.8
CHAPTER 1 -- INTRODUCTION		2.9 ACRYLICS	2.8
1.1 PLASTIC MATERIALS	1.1	2.10 PVDF -- POLYVINYLDIENE FLUORIDE	2.10
1.2 THERMOPLASTICS	1.1	2.11 TEFLON®	2.9
1.3 THERMOSETS	1.1	2.12 ELASTOMERS	2.9
1.4 PLASTIC DUCT USE	1.2	2.12.1 EPDM -- ETHYLENE PROPYLENE DIENE MONOMER	2.9
1.5 PURPOSE	1.2	2.12.2 VITON	2.9
1.6 CONTENTS	1.2	2.12.3 BUNA N	2.9
CHAPTER 2 -- MATERIAL SELECTION AND APPLICATIONS GUIDE		2.13 APPLICABLE STANDARDS FOR THERMOPLASTIC MATERIAL & PRODUCTS	2.13
2.1 GENERAL APPLICATION AND DESCRIPTION OF THERMOPLASTIC MATERIALS	2.1	2.14 PHYSICAL PROPERTIES	2.10
2.1.1 INTRODUCTION	2.1	2.15 CORROSION RESISTANCE	2.14
2.1.2 APPLICATIONS	2.1	2.15.1 RATINGS	2.14
2.1.3 PROPERTIES	2.1	2.15.2 COMPATIBILITY	2.14
2.1.4 INDUSTRIAL PROCESSES ...	2.1	2.15.3 CORROSION -- METAL ..	2.14
2.1.5 CHOOSING MATERIALS	2.1	2.15.4 CORROSION -- PLASTICS	2.14
2.2 PVC -- POLYVINYL CHLORIDE ..	2.2	2.15.5 CORROSION MEASUREMENT	2.15
2.2.1 CELL CLASSIFICATION	2.2	2.15.6 ORGANIC ATTACK	2.15
2.2.2 CELL NUMBERS	2.2	2.15.7 STRESS CRACKING	2.15
2.2.3 METHODS OF MANUFACTURING	2.5	2.15.8 TEMPERATURE	2.16
2.2.4 EXTRUDED SHEET	2.5	2.16 FLAMMABILITY	2.16
2.2.5 PRESS LAMINATED SHEET ..	2.5		
2.2.6 EXTRUDED ROUND DUCT ...	2.5		
2.2.7 STRUCTURAL SHAPES	2.6		
2.2.8 PVC WELDING ROD	2.6		
2.2.9 PVC SOLVENT CEMENTS	2.6		
2.3 CPVC -- CHLORINATED POLYVINYL CHLORIDE	2.6		
2.4 PP -- POLYPROPYLENE	2.7		
2.5 LDPE -- LOW DENSITY POLYETHYLENE (CONVENTIONAL)	2.7		
		CHAPTER 3 -- STANDARDS OF CONSTRUCTION FOR PVC DUCT SYSTEMS	



3.1 PURPOSE	3.1	WELDING	3.26
3.2 SCOPE	3.1	3.9.3 SOLVENT WELDING	3.26
3.3 DESIGN CONSIDERATIONS	3.1	3.10 JOINTS AND SEAMS	3.27
3.4 MATERIALS	3.2	3.10.1 LONGITUDINAL SEAMS ..	3.27
3.4.1 PLASTIC COMPOUNDS	3.2	3.10.2 TRANSVERSE JOINTS ...	3.27
3.4.2 RIGID SHEETS	3.2	3.10.2.1 BELL AND SPIGOT	3.27
3.4.3 EXTRUDED DUCT	3.2	3.10.2.2 SLEEVE JOINTS	3.27
3.5 METHODS OF CONSTRUCTION		3.11 FITTING TRANSITIONS AND	
GENERAL	3.2	BRANCHES	3.27
3.6 DUCT SIZES AND		3.11.1 ELBOWS, ROUND DUCT .	3.27
TOLERANCES	3.2	3.11.2 ELBOWS, RECTANGULAR	
3.6.1 WALL THICKNESS	3.2	DUCT	3.28
3.6.2 ROUND DUCT	3.2	3.11.3 TURNING VANES	3.28
3.6.3 RECTANGULAR DUCT	3.3	3.11.4 OFFSETS	3.28
3.6.4 FITTINGS	3.3	3.11.5 TRANSITIONS AND	
3.6.5 SQUARENESS OF ENDS	3.3	REDUCERS	3.28
3.7 REINFORCEMENT --		3.11.6 BRANCHES ENTERING	
EXTERNAL	3.3	MAIN	3.28
3.7.1 LOCATION	3.3	3.12 FLANGES	3.28
3.7.2 REINFORCEMENT OF		3.12.1 FLANGE	
FITTINGS	3.3	ATTACHMENTS	3.28
3.7.3 RIGIDITY	3.3	3.12.2 FACE OF FLANGES	3.29
3.7.4 TYPE	3.3	3.12.3 FLANGE BOLTING	3.29
3.7.5 REINFORCING		3.13 GASKETS	3.29
MATERIALS	3.3	3.14 FLEXIBLE CONNECTIONS	3.29
3.7.6 ATTACHMENT	3.4	3.14.1 LOCATIONS	3.29
3.8 REINFORCEMENT --		3.14.2 MATERIAL	3.29
INTERNAL	3.4	3.14.3 CONSTRUCTION	3.31
3.8.1 LOCATION	3.4	3.14.4 SUPPORT	3.31
3.8.2 REINFORCEMENT		3.15 EXPANSION JOINTS	3.31
MATERIALS	3.4	3.16 DUCT HANGERS AND	
3.8.3 FLANGE SELECTION	3.4	SUPPORT	3.32
ROUND DUCT --		3.17 FUME HOODS	3.32
GENERAL NOTES	3.6	3.18 DAMPERS	3.32
RECTANGULAR DUCT --		3.18.1 VOLUME DAMPERS	3.32
GENERAL NOTES	3.16	3.18.2 BACK-DRAFT	
3.9 WELDING	3.26	DAMPERS	3.33
3.9.1 HOT GAS FILLER ROD		3.18.3 FIRE DAMPERS	3.33
WELDING	3.26	3.19 ACCESS OPENING AND	
3.9.2 THERMAL BUTT		END CAPS	3.33

3.20 DRAINS 3.33

3.21 VENTILATOR HEADS AND
LOUVERS 3.33

3.22 AUXILIARY EQUIPMENT 3.33

**CHAPTER 4 - GUIDE SPECIFICATION FOR
PVC AIR HANDLING SYSTEMS**

GENERAL 4.1
DRAWINGS 4.1
SEISMIC RESTRAINT PROVISIONS ... 4.1

1.00 GENERAL PROVISIONS 4.2

- 1.01 WORK INCLUDED 4.2
- 1.02 WORK EXCLUDED 4.3
- 1.03 COORDINATION OF WORK ... 4.3
- 1.04 SUBMITTALS 4.4
- 1.05 EQUIPMENT
IDENTIFICATION 4.5
- 1.06 REFERENCED DOCUMENTS . 4.5

2.00 AIR DISTRIBUTION PVC DUCT ... 4.6

- 2.01 MATERIAL 4.6
- 2.02 SIZE 4.7
- 2.03 LOCATION OF ACCESS
DOORS 4.7
- 2.04 LOCATION OF
REGULATING DAMPERS 4.7
- 2.05 FIRE DAMPERS 4.7
- 2.06 LOCATION OF FLEXIBLE
CONNECTIONS 4.7
- 2.07 LOCATION OF EXPANSION
JOINTS 4.7
- 2.08 LOCATION OF DRAINS 4.8

3.00 EQUIPMENT AND
ACCESSORIES 4.8

3.01 FANS (SUPPLY, RETURN AND
EXHAUST) 4.8

3.02 AIR OR FUME SCRUBBER ... 4.8

3.03 DUST COLLECTORS 4.9

3.04 FILTERS 4.9

3.05 HOODS, FUME 4.9

3.06 LOUVERS AND VENTILATOR
HEADS 4.9

3.07 MOTORS AND BASES 4.9

3.08 SOUND ATTENUATORS 4.9

3.09 BALANCING AND
ADJUSTING 4.10

3.10 GUARANTEE 4.10

**CHAPTER 5 -- CHEMICAL RESISTANCE
GUIDE**

CHAPTER 6 -- GLOSSARY OF TERMS

APPENDICES

APPENDIX A -- CRITERIA FOR THE
ESTABLISHMENT OF PVC DUCT
REINFORCEMENT TABLES A.1

A-1.0 TEST METHODS FOR
REINFORCEMENT TABLES A.1

A-1.1 ROUND DUCT UNDER
NEGATIVE PRESSURE A.1

A-1.2 ROUND DUCT UNDER
POSITIVE
PRESSURE A.2

A-1.3 RECTANGULAR DUCT
UNDER NEGATIVE
PRESSURE A.3

A-1.4 RECTANGULAR DUCT
UNDER POSITIVE
PRESSURE A.4

A-1.5 OTHER CRITERIA A.4

APPENDIX B -- LISTED
REFERENCES B.1

INDEX I.1