

DVS Technical Codes and Bulletins

DVS 1904-1	(2010-02)	Adhesive bonding of plastics in domestic installation – Requirements on plants and personnel	1
DVS 1904-2	(2010-02)	Adhesive bonding of plastics in domestic installation – Pipes and fittings – Adhesive bonding operation – Findings on adhesive-bonded joints	2
DVS 2201-1	(1989-02)	Testing of semi-finished products of thermoplastics – Bases – indications	5
DVS 2201-1 Supplement 1	(2004-10)	Testing of semi-finished products made of thermoplastics; Basics – indications – Material and abbreviation	9
DVS 2201-1 Supplement 2	(2004-10)	Testing of semi-finished products made of thermoplastics; Basics – indications – Directives for creep rupture curves of pipes	10
DVS 2201-1 Supplement 3	(2004-10)	Testing of semi-finished products made of thermoplastics; Basics – indications – Linear thermal expansion coefficients	11
DVS 2201-1 Supplement 4	(2004-10)	Testing of semi-finished products made of thermoplastics; Basics – indications – Dimension stability of semi-finished material after heating	12
DVS 2201-1 Supplement 5	(2006-10) Draft	Service life temperature time limits due to thermal ageing	13
DVS 2201-2	(1985-07)	Testing of semi-finished products of thermoplastics: Weldability – Test methods – Requirements	14
DVS 2202 Supplement 2	(2012-11)	Assessment of defects in joints between thermoplastics on piping parts and panels – Sleeve welding with an incorporated heating element (HM)	17
DVS 2202 Supplement 3	(2012-11)	Assessment of defects in joints between thermoplastics on piping parts and panels – Heated tool sleeve welding (HD)	22
DVS 2202-1	(2006-07)*	Imperfections in thermoplastic welding joints – Features, descriptions, evaluation	26
DVS 2203-1	(2003-01)	Testing of welded joints of thermoplastic sheets and pipes – Test methods – Requirements	53
DVS 2203-1 Supplement 1	(2010-08)	Testing of welded joints between panels and pipes made of thermoplastics – Requirements in the tensile test – Short-time tensile welding factor f_z	55
DVS 2203-1 Supplement 2	(2006-04)*	Testing of welded joints between panels and pipes made of thermoplastics, Requirements in the tensile creep test, (Tensile creep welding factor f_s)	56

DVS 2203-1 Supplement 3	(2012-06)	Testing of welded joints between panels and pipes made of thermoplastics – Requirements in the technological bending test – Bending angle / bending path	57
DVS 2203-1 Supplement 4	(2008-11)*	Testing of welded joints between panels and pipes made of thermoplastics – Requirements on shear and peeling tests for sleeve welding with an incorporated electric heating element (HM) and heated tool sleeve welding (HD) on pipes and fittings	68
DVS 2203-2	(2010-08)	Testing of welded joints between panels and pipes made of thermoplastics – Tensile test	71
DVS 2203-2 Supplement 1	(2010-08)	Testing of welded joints between panels and pipes made of thermoplastics – Low-temperature tensile test	74
DVS 2203-3	(2011-04)	Testing of welded joints between panels and pipes made of thermoplastics – Tensile impact test	76
DVS 2203-4	(1997-07)	Testing of welded joints of thermoplastics plates and tubes – Tensile creep test	78
DVS 2203-4 Supplement 1	(2001-12)	Testing of welded joints of thermoplastic sheets and pipes – Tensile creep test – Testing of socket joints	82
DVS 2203-4 Supplement 2	(2001-12)	Testing of welded joints of thermoplastic sheets and pipes – Tensile creep test – Testing of the resistance to slow crack growth using the Full Notch Creep Test (FNCT)	84
DVS 2203-4 Supplement 3	(2008-01) Draft	Testing of welded joints between panels and pipes made of thermoplastics – Tensile creep-rupture test – Checking of the demanded tensile creep-rupture welding factor and of the minimum service life of welded joints between polyethylenes (PE 80 and PE 100)	86
DVS 2203-5	(1999-08)	Testing of welded joints of thermoplastics plates and tubes – Technological bend test	95
DVS 2203-6	(2008-01)*	Testing of joints between polymeric materials – Shear and peeling tests	98
DVS 2203-6 Supplement 1	(2008-01)*	Testing of joints between polymeric materials – Torsion shear and radial peeling tests for joints executed by means of sleeve welding with an incorporated electric heating element and heated tool sleeve welding	100
DVS 2203-6 Supplement 2	(2008-01)	Testing of joints between polymeric materials – Testing of adhesive-bonded joints in the shear and peeling tests	104
DVS 2204-1	(2011-01)	Adhesive bonding of thermoplastics	107
DVS 2204-4	(2011-12)	Adhesive bonding of pipes and piping parts made of thermoplastics – Polyvinyl chloride (PVC-U)	118

DVS 2204-5	(2003-11)	Adhesive bonding of pipes and fittings made of thermoplastics – Chlorinated polyvinyl chloride (PVC-C)	123
DVS 2204-5 Supplement 1	(2003-12)	Adhesive bonding of pipes and fittings made of thermoplastics – Chlorinated polyvinyl chloride (PVC-C) – Quality assurance of the adhesives	126
DVS 2204-5 Supplement 2	(2003-12)	Adhesive bonding of pipes and fittings made of thermoplastics – Chlorinated polyvinyl chloride (PVC-C) – Requirements on adhesive-bonded joints between PVC-C	128
DVS 2205-1	(2011-04) Draft	Calculation of tanks and apparatus made of thermoplastics – Characteristic values	129
DVS 2205-1 Supplement 1	(2011-11)	Calculation of tanks and apparatus made of thermoplastics – Characteristic values of the polyethylene material group	135
DVS 2205-1 Supplement 2	(2011-04) Draft	Calculation of tanks and apparatus made of thermoplastics – Characteristic values of the polypropylene material group	147
DVS 2205-1 Supplement 3	(2011-04) Draft	Calculation of tanks and apparatus made of thermoplastics – Characteristic values of the polyvinyl chloride material group	160
DVS 2205-1 Supplement 4	(2012-01) Draft	Calculation of tanks and apparatus made of thermoplastics – Characteristic values of the fluoropolymer material group	168
DVS 2205-1 Supplement 5	(2011-04) Draft	Calculation of tanks and apparatus made of thermoplastics – Reduction coefficients in the case of a media influence	187
DVS 2205-1 Supplement 6	(2013-02)	Calculation of tanks and apparatus made of thermoplastics – Welding factors	197
DVS 2205-1 Supplement 7	(2013-02)	Calculation of tanks and apparatus made of thermoplastics – Application examples	198
DVS 2205-1 Supplement 9	(2005-09)	Calculation of tanks and apparatus made of thermoplastics – Reduction coefficients A_1 for moulding materials made of PVC-C	201
DVS 2205-1 Supplement 10	(2005-07)	Calculation of tanks and apparatus made of thermoplastics – Reduction coefficients A_1 for moulding materials made of PP	202
DVS 2205-1 Supplement 11	(2002-03)	Design calculations for containers and apparatus made from thermoplastics; Creep rupture curves for pipes made from PVC-C	203
DVS 2205-1 Supplement 12	(2002-03)	Design calculations for containers and apparatus made from thermoplastics – Creep rupture curves for pipes made from PVC-C	204

DVS 2205-1 Supplement 14	(2005-09)	Calculation of tanks and apparatus made of thermo- plastics – Reduction coefficients A_1 for moulding materials made of PVC-U	205
DVS 2205-1 Supplement 15	(2005-09)	Calculation of tanks and apparatus made of thermo- plastics – Reduction coefficients A_{21} in the case of proof of the stability with a media influence for PE and PP	206
DVS 2205-1 Supplement 18	(2006-02)	Calculation of tanks and apparatus made of thermo- plastics – Creep curves for pipes made of ECTFE	207
DVS 2205-1 Supplement 20	(2007-08)	Calculation of tanks and apparatus made of thermo- plastics – PVDF media list	208
DVS 2205-1 Supplement 21	(2008-01)	Calculation of tanks and apparatus made of thermo- plastics – Creep strength for pipes made of PTFE	214
DVS 2205-1 Supplement 25	(2007-08)	Calculation of tanks and apparatus made of thermo- plastics – Creep strength for pipes made of PVDF copolymer	215
DVS 2205-2	(2011-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round, non-pressurised tanks	216
DVS 2205-2 Supplement 1	(2003-11)*	Calculation of tanks and apparatus made of thermo- plastics – Welded stationary tanks in the case of installation in buildings	229
DVS 2205-2 Supplement 2	(2011-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round non-pressurised tanks – Collecting devices	237
DVS 2205-2 Supplement 3	(2010-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round, non-pressurised tanks – Flat roofs	245
DVS 2205-2 Supplement 4	(2013-02)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round non-pressurised tanks – Flat-bottomed tanks in earthquake regions	249
DVS 2205-2 Supplement 5	(2013-02)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round non-pressurised tanks – Vertical-skirt tanks in earthquake regions	257
DVS 2205-2 Supplement 6	(2011-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round, non-pressurised tanks – Shell construction method	263
DVS 2205-2 Supplement 7	(2012-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round, non-pressurised tanks – Ring-supported conical bottom	266
DVS 2205-2 Supplement 8	(2012-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round non-pressurised tanks – Example of a ring-supported conical bottom	273

DVS 2205-2 Supplement 9	(2012-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round non-pressurised tanks – Parallel-supported sloping base	276
DVS 2205-2 Supplement 10	(2012-01)	Calculation of tanks and apparatus made of thermo- plastics – Vertical round, non-pressurised tanks – Example of a parallel-supported sloping basen	283
DVS 2205-3	(1975-04)	Design of thermoplastic tanks and apparatuses – Welded joints	286
DVS 2205-4	(1988-11)	Calculation of thermoplastic tanks and apparatus – Flanged joints	296
DVS 2205-4 Supplement	(1996-11)	Calculation of thermoplastic tanks and apparatus – Welded flanges, welded collars – Constructive details ...	300
DVS 2205-5	(1987-07)	Calculation of thermoplastic tanks and apparatus – Rectangular Tanks	303
DVS 2205-5 Supplement	(1984-10)	Calculation of thermoplastic tanks and apparatus – Rectangular tanks, structural details	310
DVS 2206-1	(2011-09)	Non-destructive tests on tanks, apparatus and piping made of thermoplastics – Dimensional checking and visual inspection	315
DVS 2206-4	(2011-09)	Non-destructive tests on tanks, apparatus and piping made of thermoplastics – Testing with electrical high voltage	318
DVS 2206-5	(2011-09)	Non-destructive tests on piping made of thermo- plastics – Angle measurement on welded joints executed by means of sleeve welding with an incorporated heating element (HM) and heated tool sleeve welding (HD)	320
DVS 2207-1	(2005-09)*	Welding of thermoplastics – Heated tool welding of pipes, pipeline components and sheets made of PE-HD	322
DVS 2207-1 Supplement 1	(2005-12)*	Welding of thermoplastics – Heated tool welding of pipes made of PE-Xa with pipeline components made of PE-HD	336
DVS 2207-1 Supplement 2	(2013-01) Draft	Heated tool butt welding of large-diameter pipes made of PE 100	341
DVS 2207-3	(2005-04)*	Welding of thermoplastics – Hot-gas string-bead welding and hot-gas welding with torch separate from filler rod of pipes, pipe components and sheets – Methods, requirements	343
DVS 2207-3 Supplement 1	(2009-05) Draft	Welding of thermoplastics – High-speed hot gas welding and hot gas welding with the torch separate from the filler rod of pipes, piping parts and panels – Welding parameters	352

DVS 2207-3 Supplement 2	(2005-04)*	Welding of thermoplastics – Hot-gas string-bead welding and hot-gas welding with torch separate from filler rod of pipes, pipe components and sheets – Requirements for welding equipment and accessories ...	353
DVS 2207-4	(2005-04)*	Welding of thermoplastics – Extrusion welding of pipes, piping parts and panels – Processes and requirements	355
DVS 2207-4 Supplement 1	(2009-05) Draft	Welding of thermoplastics – Extrusion welding of pipes, piping parts and panels – Welding parameters	365
DVS 2207-4 Supplement 2	(2005-04)*	Welding of thermoplastics – Extrusion welding of pipes, piping parts and panels – Requirements on the welding machines and welding devices	366
DVS 2207-5	(1993-02)	Welding of thermoplastics – Welding of PE casing pipes – Tubes and tubular components	369
DVS 2207-5 Supplement 1	(1997-07)	Welding of thermoplastics – Welding of PE casing pipes – Fittings and isolating valves	391
DVS 2207-6	(2003-09)	Welding of thermoplastics – Non-contact heated tool butt welding of pipes, pipeline components and sheets – Methods, equipment, parameters	397
DVS 2207-11	(2008-08)*	Welding of thermoplastics – Heated tool welding of pipes, piping parts and panels made of PP	405
DVS 2207-12	(2006-12)*	Welding of thermoplastics – Heated tool welding of pipes, piping parts and panels made of PVC-U	417
DVS 2207-13	(2012-11)	Welding of thermoplastics – Heated tool welding of pipes, piping parts and panels made of PVC-C	424
DVS 2207-14	(2009-04)	Welding of thermoplastics – Welding by bending using a heated tool for panels made of PP and PE	431
DVS 2207-15	(2005-12)*	Welding of thermoplastics – Heated tool welding of pipes, piping parts and panels made of PVDF	436
DVS 2207-16	(2010-07)	Welding of thermoplastics – Heated tool welding of pipes and piping parts made of Polyamide 12	446
DVS 2207-25	(1989-10)	Welding of thermoplastic – Heated tool butt welding – Welding of casement sections made from PVC-U	454
DVS 2208-1	(2007-03)*	Welding of thermoplastics – Machines and devices for the heated tool welding of pipes, piping parts and panels	461
DVS 2208-1 Supplement 1	(2012-02)	Welding of thermoplastics – Tools and devices for the heated tool welding of pipes and piping parts	475
DVS 2210-1	(1997-04)	Industrial Pipelines Made of Thermoplastics – Planning and Execution, Above-Ground Pipe Systems	477

DVS 2210-1 Supplement 1	(2003-04)	Industrial piping made of thermoplastics – Design and execution, Above-ground pipe systems – Calculation example	511
DVS 2210-1 Supplement 2	(2004-07)	Industrial piping made of thermoplastics – Design and execution, Above-ground pipe systems – Recommendations for the internal pressure and leak tests	520
DVS 2210-1 Supplement 3	(2006-05)	Industrial piping made of thermoplastics – Design and execution, Above-ground pipe systems – Flanged joints: Description, requirements and assembly	531
DVS 2210-2	(2007-10)	Industrial piping made of thermoplastics – Design, structure and installation of two-pipe systems	538
DVS 2211	(2005-04)*	Welding of thermoplastics – Welding fillers – Marking, requirements and tests	564
DVS 2212-1	(2006-05)*	Qualification testing of plastics welders – Qualification Test Groups I and II – Hot gas welding with the torch separate from the filler rod (WF), highspeed hot gas welding (WZ), heated tool butt welding (HS), sleeve welding with an incorporated electric heating element (HM), heated tool sleeve welding (HD) and hot gas extrusion welding (WE)	568
DVS 2212-1 Supplement 1	(2006-05)*	Qualification testing of plastics welders – Qualification Test Groups I and II – Planned monitoring of the certified plastics welders according to DVS 2212-1	582
DVS 2212-3	(1994-10)	Testing of plastics welders – Examination Group III – Lining membranes in geotechnical and hydraulic engineering	584
DVS 2212-4	(2004-09)	Qualification testing of plastics welders; welding of PE shell pipes – Pipes and piping parts	600
DVS 2213	(2010-12)	Specialist for plastics welding	609
DVS 2213 Supplement 1	(2010-12)	Qualification testing regulations for the qualification test to become a specialist for plastics welding	611
DVS 2215-1	(2010-09)	Heated tool welding of mouldings made of thermoplastics in series fabrication	613
DVS 2215-2	(1996-11)	Hot plate welding of mouldings made of polyolefins (PE, PP) in volume production	624
DVS 2215-3	(1999-04)	Hot plate welding of mouldings made from amorphous thermoplastics in volume production	636
DVS 2215-3 Supplement 1	(1999-04)	Hot plate welding of mouldings made from amorphous thermoplastics in volume production – Welding parameters for amorphous thermoplastics and blends ...	643

DVS 2216-1	(2007-04)*	Ultrasonic welding of plastic series parts – Process description, machines and devices, influencing variables, design and quality assurance	650
DVS 2216-1 Supplement 1	(2005-09)*	DVS test specimens with an energy director for the ultrasonic welding of thermoplastics and testing conditions	674
DVS 2216-2	(2012-07)	Guide to the project sequence for the joining of thermoplastics in series fabrication	677
DVS 2216-3	(1992-08)	Ultrasonic joining of moulded parts and semi-finished parts of thermoplastic polymers in mass production – Forming with ultrasonic; staking, swaging and tamping	683
DVS 2216-4	(1992-08)	Ultrasonic joining of moulded parts and semi-finished parts of thermoplastic polymers in mass production – Insertion of metal parts and other materials with ultrasonic	686
DVS 2216-5	(1996-08)	Ultrasonic joining of moulded parts produced of thermoplastic polymers in mass production, manufacture of horns	688
DVS 2216-6	(2002-06)*	Ultrasonic joining of mouldings and semi-finished products made of amorphous thermoplastics in series fabrication	695
DVS 2217-1	(1999-03)	Vibration welding of mouldings and semi-finished products made of thermoplastic polymers in series production	707
DVS 2217-2	(2002-12)	Vibration welding of mouldings and semi-finished products made of thermoplastic polymers in series production: Mouldings made of polyamides	716
DVS 2218-1	(2010-06)	Welding of thermoplastics in series fabrication – Rotational friction welding – Installations, procedures and characteristics	720
DVS 2218-2	(2003-04)*	Welding of thermoplastics in series fabrication – Rotational friction welding of mouldings made of polyolefins (PE and PP)	725
DVS 2218-3	(2006-04)*	Welding of thermoplastics in series fabrication – Rotational friction welding of mouldings and semi-finished products made of polyamides (PAs)	732
DVS 2219-1	(2005-04)*	High-frequency joining of thermoplastics in series fabrication	737
DVS 2219-2	(2005-04)*	Thermocontact welding of thermoplastic films (polyolefins)	743

DVS 2220	2011-05	Qualification testing of plastics laminators and adhesive bonders – Laminates as well as laminate and adhesive-bonded joints between GFRPs (UP-GF and EP-GF)	749
DVS 2220 Supplement 1	2011-05	Qualification testing of plastics laminators and adhesive bonders – Fabrication of Test Piece I.1/II.1 – Joint for a pipe nozzle in a panel	756
DVS 2220 Supplement 2	2011-05	Qualification testing of plastics laminators and adhesive bonders – Fabrication of Test Piece II.2 – Building up a new laminate	758
DVS 2221	(2010-12)	Qualification testing of plastics adhesive bonders – Pipe joints between PVC-U, PVC-C and ABS with solvent-based adhesives	760
DVS 2225-1	(1991-02)	Joining of Lining Membranes made from Polymeric Materials (Geomembranes) in Geotechnical and Hydraulic Application – Welding, Bonding by Adhesives, Vulcanising	767
DVS 2225-2	(1992-08)	Joining of lining membranes – Made of polymer materials in geotechnical and hydraulic engineering – Site testing	774
DVS 2225-3	(1997-07)	Joining of sealing sheets made of polymeric materials in earthwork and water engineering – Requirements on welding machines and welding devices	784
DVS 2225-4	(2006-12)*	Welding of sealing sheets made of polyethylene (PE) for the sealing of dumps and contaminated sites	788
DVS 2225-5	(2011-03)	Welding of sealing sheets made of thermoplastics in tunnel construction	807
DVS 2226-1	(2000-09)	Testing of fused joints on liners of polymer materials – Testing procedure, requirements	820
DVS 2226-2	(1997-07)	Testing of fused joints on liners of polymer materials – Lap shear test	822
DVS 2226-3	(1997-07)	Test of fusions on PE liners – Peeling test	824
DVS 2226-4	(2000-11)	Testing of fused joints on liners of polymer materials – Tensile creep test on PE	826
DVS 2227-1	(2004-08)*	Welding of semi-finished products made of high-density polyethylene (PE-HD) for the sealing of concrete structures in the field of ground water protection and for corrosion protection	830
DVS 2230-1	(2003-07)	Welding of plastic series parts – Quality assurance and testing	850
DVS 2231	(2008-12)*	Above-ground tanks, apparatus and piping made of thermoplastics – Guide to quality assurance	870

DVS 2240-1	(2005-05)*	Thread inserts for the joining of mouldings made of plastics	873
DVS 2241-1	(2003-07)*	Direct screwing into mouldings made of plastics	880
DVS 2241-1 Supplement 1	(2007-10)*	Examples – Direct screwing of mouldings made of plastics and additional elements for thin-walled components	888
DVS 2242-1	(2011-04)	Mechanical joining of plastic components – Snap joints	895
DVS 2242-1 Supplement 1	(2011-04)	Mechanical joining of plastic components – Snap joints – Examples	903
DVS 2280	(2010-12)	DVS® foundation course about the processing of semi-finished products made of thermoplastics	909
DVS 2281	(2004-09)	DVS® course for plastics welders in Qualification Test Group I	911
DVS 2282	(2004-09)	DVS® course for plastics welders in Qualification Test Group II	913
DVS 2283	(2009-11)	DVS® course for plastics welders in Qualification Test Group III	915
DVS 2284	(2004-09)	DVS® course for plastics welders – PE shell pipes; Preparation for the welder qualification test according to the DVS® 2212-4 guideline	917
DVS 2290	(2012-04)	DVS® course for plastics laminators and adhesive bonders	919
DVS 2291	(2010-12)	DVS® course for plastics adhesive bonders for pipe joints between PVC-U, PVC-C and ABS with solvent-based adhesives	921

The dates indicate are the publication dates of the German editions.

* Publication date of the English edition differs from the German edition.