

Replaces DVS 2205-1, Supplement 15 (September 2005)

This supplement includes reduction coefficients in the case of a media influence.

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Footnotes for Sections 1.1 and 1.2:

- 1) I: inorganic substance
O: organic substance
M: mixture of inorganic and organic substances
- 2) SS: saturated (at 20°C), aqueous solution
TP: technically pure medium
CA: commercially available composition or as occurring in nature
- 3) Not transferable to other waste waters.
- 4) 88.25 parts of water, 10 parts of sodium perchlorate, 1 part of sodium hydroxide, 0.25 parts of aniline, 0.25 parts of monochlorobenzene and 0.25 parts of toluene diamine.
- 5) On the basis of many years of experience in practice, $A_2 = 1$ (also see the DVS 2205-1 technical code, Section 4.2)
- 6) Extrapolated values according to ISO/TC 138 SC 3 N 382.
- 7) For further information, see:
Kempe, B.: Testing methods for the determination of the behaviour of polyolefins subjected to the effect of chemicals.
Materialwissenschaft und Werkstofftechnik 15 (1984), pp. 157/172.
- 8) For further information, see:
Barth, E.: The behaviour of hard PVC subjected to the effect of chemicals.
Materialwissenschaft und Werkstofftechnik 17 (1986), pp. 74-76 and 98-108.

1 Reduction coefficients A_2 in the case of a media influence for PE, PP and PVC

1.1 Media with stress-independent A_2 values

| Medium | Chemical formula | 1) | Concentration ²⁾ % | PE-HD | | | | PP | | | | | PVC-NI | | | |
|---|------------------------------------|----|----------------------------------|-------|------|------|------|------|------|------|------|------|--------|------|------|---|
| | | | | 20°C | 40°C | 60°C | 80°C | 20°C | 40°C | 60°C | 80°C | 95°C | 20°C | 40°C | 60°C | |
| Air | O ₂ N ₂ | I | 100 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Alkaline solutions ⁴⁾ | | M | 100 | | | | | | | | | | | | | |
| Aluminium chloride ⁵⁾ | AlCl ₃ | I | ≤ SS | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 |
| Aluminium sulphate ³⁾ | Al ₂ (SO ₄) | I | ≤ SS | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 |
| Alums (Me(I)/Me(III) sulphates) ⁵⁾ | | I | ≤ SS | 1 | 1 | | | 1 | 1 | 1 | | | | 1 | 1 | 1 |

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DVS, Technical Committee, Working Group "Joining of Plastics"

| Medium | Chemical formula | 1) | Concentration ²⁾ % | PE-HD | | | | PP | | | | | PVC-NI | | | |
|---|--|-----|----------------------------------|-------|------|------|------|------|------|------|------|------|--------|------|------|------|
| | | | | 20°C | 40°C | 60°C | 80°C | 20°C | 40°C | 60°C | 80°C | 95°C | 20°C | 40°C | 60°C | |
| Ammonia liquor ⁵⁾ | NH ₄ OH | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonia gaseous ⁵⁾ | NH ₃ | I | TP | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonia, liquid ⁵⁾ | NH ₃ | I | TP | 1 | 1 | 1 | | 1 | | | | | | | | |
| Ammonia solution ⁵⁾ | NH ₄ OH | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| | | | 15 | | | | | | | | 1.67 | | | | | |
| | | | ≤ 30 | | | | | | | | | | | 1 | 1 | 1 |
| Ammonium acetate ⁵⁾ | CH ₃ COONH ₄ | M | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | | | |
| Ammonium bromide ⁵⁾ | NH ₄ Br | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonium carbonate ⁵⁾ | (NH ₄) ₂ CO ₃ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonium chloride ⁵⁾ | NH ₄ Cl | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonium fluoride ⁵⁾ | NH ₄ F | I | > 10 | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonium hydrogencarbonate ⁵⁾ | (NH ₄)HCO ₃ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | |
| Ammonium nitrate ⁵⁾ | NH ₄ NO ₃ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Ammonium sulphate ⁵⁾ | (NH ₄) ₂ SO ₄ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Ammonium sulphide ⁵⁾ | (NH ₄) ₂ S | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Ammonium-dihydrogenphosphat ⁵⁾ | NH ₄ H ₂ PO ₄ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Amyl alcohol ⁸⁾ | C ₅ H ₁₁ -OH | O | TP | | | | | | | | | | | | | 2.36 |
| Apple juice ⁵⁾ | | O | CA | 1 | 1 | 1 | | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 |
| Arkopal N 100 ⁸⁾ | | O | 2 | | | | | | | | | | | | | 1.28 |
| | | | 5 | | | | | | | | | | | | | 2.17 |
| | | | | | | | | | | | | | | | | |
| Barium carbonate ⁵⁾ | BaCO ₃ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Barium chloride ⁵⁾ | BaCl ₂ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Barium hydroxide ⁵⁾ | Ba(OH) ₂ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Barium nitrate ⁵⁾ | Ba(NO ₃) ₂ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Barium salts ⁵⁾ | | I/M | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Barium sulphate ⁵⁾ | BaSO ₄ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Barium sulphide ⁵⁾ | BaS | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Battery acid (see sulphuric acid) | H ₂ SO ₄ | I | ≤ 51 | | | | | 1 | 1 | 1 | | | | 1 | 1 | 1 |
| Beer ⁵⁾ | | O | CA | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Benzene sulphonic acid ⁵⁾ | | O | 40 | | | | | | | | | | | 1 | 1 | 1 |
| Benzyl alcohol ⁸⁾ | C ₆ H ₅ CH ₂ OH | O | TP | | | | | | | | | | | | | 4.54 |
| Boric acid ⁵⁾ | | I | | | | | | | | | | | | 1 | 1 | 1 |
| Butanol – butyl alcohol ⁸⁾ | C ₄ H ₉ OH | O | TP | | | | | | | | | | | | | 2.5 |
| Buttermilk ⁵⁾ | | O | CA | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cadmium chloride ⁵⁾ | CdCl ₂ | I | ≤ SS | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 |