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TECHNICAL LIBRARY

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EURO CHLOR – Rue Belliard 40, Box 15 - B-1040 BRUSSELS
E-mail: eurochlor@cefic.be Internet: http://www.eurochlor.org

The Euro Chlor Technical Library is composed of "Living Documents", to be updated and documents that do not need updating.

Living Documents include Guidelines, Codes of Practice and Recommendations on:

- *Technical and safety aspects for chlorine duty; these documents are called "GEST"*
- *Environmental Protection; these documents are called "ENV PROT"*
- *Health; these documents are called "HEALTH"*
- *Analysis; these documents are called "ANALYTICAL".*

Other Documents:

- *Presentations from Technology Conferences, entitled "TSEM" (old name i.e. Technical Seminars)*
- *Position Paper named "PP"*
- *Documents describing incidents named "GEST AP".*

The documents are listed below in several categories as shown in the following table:

The documents are available electronically by sending an email to the following address: cpe@cefic.be

1. General List

GEST 73/17 - Storage of Liquid Chlorine (Ed. 9, November 2025)
GEST 73/25 - Transfer of Dry Chlorine by Piping Systems (Ed. 13, April 2023)
GEST 75/43 - Flexible Steel Pipes and Flexible High Nickel Alloys Hoses for the Transfer of Dry Gaseous or Liquid Chlorine (Ed. 11, September 2022)
GEST 75/47 - Design and Operation of Chlorine Vaporisers (Ed. 13, March 2024)
GEST 76/52 - Equipment for the Treatment of Gaseous Effluents Containing Chlorine (Ed.15, December 2022)
GEST 76/55 - Maximum Levels of Nitrogen Trichloride in Liquid Chlorine (Ed. 14, Nov. 2021)
GEST 78/73 - Design Principles and Operational Procedures for Loading/Off-Loading Liquid Chlorine Road and Rail Tankers and ISO-Containers (Ed. 10, Nov. 2025)
GEST 79/79 - Transfer of Liquid Chlorine by Padding with a Chlorine Compressor (Ed. 5, Jan. 2017)
GEST 79/82 - Materials of Construction for Use in Contact with Chlorine (Ed.14, April 2022)
GEST 80/84 - Commissioning and Decommissioning of Installations for Dry Chlorine Gas and Liquid (Ed. 8, October 2025)
GEST 83/119 - Seal-less Pumps for Use with Liquid Chlorine (Ed. 6, April 2022)
GEST 87/130 - Possible Hazards for Chlorine Plants and their Proposed Mitigations (Ed. 10, July 2020)
GEST 87/133 - Overpressure Relief of Liquid Chlorine Installations (Ed. 7, March 2024)
GEST 88/134 - Stud Bolts, Hexagon Head Bolts and Nuts for Liquid Chlorine (Ed. 5, Sept. 2022)
GEST 88/138 - Small Chlorine Containers Construction and Handling (Ed. 7, April 2023)
GEST 90/162 - Emergency Transfer of Liquid Chlorine (Ed. 6, September 2022)
GEST 91/168 00 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine – Introduction (Ed. 2, Aug. 2017)
GEST 91/168 01 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Basic Properties (Ed. 1, Aug. 2017)
GEST 91/168 02 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Optical Properties (Ed. 1, Aug. 2017)
GEST 91/168 03 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Electric and Magnetic Properties (Ed. 1, Aug. 2017)
GEST 91/168 04 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Density and Specific Volume (Ed. 1, Aug.2017)
GEST 91/168 05 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Mechanical Properties (Ed. 2, Oct. 2016)
GEST 91/168 06 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Thermodynamic Properties (Ed. 2, Aug. 2017)
GEST 91/168 07 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Physico-chemical Properties (Ed. 3, Aug. 2017)
GEST 91/168 08 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - The Chlorine ion and Electrochemical Properties (Ed. 1, Aug. 2017)
GEST 91/168 09 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Safety (Ed. 4, Aug. 2017)
GEST 91/168 10 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Environmental Protection (Ed. 1, Aug.2017)
GEST 92/171 - Personal Protective Equipment in the Chlorine Industry (Ed. 7, Oct. 2025)
GEST 92/175 - A Scheme for Safety Visits to Bulk Chlorine Customers Plants (Ed. 5, May 2023)
GEST 93/179 - Emergency Intervention in Case of Chlorine Leaks (Ed. 11, February 2023)
GEST 94/206 - Safe Use of Chlorine from Drums and Cylinders (Ed. 3, Sept. 2019)
GEST 94/207 - Code of Practice for the Installation of Pressure Sensing Devices on Dry Gaseous and Liquid Chlorine Applications (Ed. 4, July 2023)
GEST 94/211 - Code of Practice for Sampling Liquid Chlorine (Ed. 2, Sept. 2021)
GEST 94/213 - Guidelines for the Selection and the Use of Fixed Chlorine Detection Systems in Chlorine Plants (Ed. 3, June 2020)
GEST 94/215 - Confinement of Units Containing Liquid Chlorine (Ed. 5, March 2024)

GEST 94/216 -	Gaskets Selection for the Use in Liquid Chlorine and Dry or Wet Chlorine Gas Service (Ed. 5, Sept. 2019)
GEST 96/218 -	Safe Use of Sodium Hypochlorite at Swimming Pools (Ed. 4, Oct. 2025)
GEST 98/251-	Safe Use of Solid Chlorinated Products at non-domestic Swimming Pools (Ed. 2, June 2018)
GEST 05/316 -	Guideline for Site Security of Chlorine Production Facilities (Ed. 3, June 2022)
GEST 06/317 -	The Chlorine Reference Manual (Ed. 3, September 2021)
GEST 08/360 -	Design and Operation of Chlorine Liquefaction Units (Ed. 2, Sept. 2019)
GEST 10/361 -	Dry Chlorine Gas Compressors (Ed. 3, March 2024)
GEST 10/362 -	Corrosion Behaviour of Carbon Steel in Wet and Dry Chlorine (Ed. 4, Nov 2022)
GEST 12/406 -	Best Practices in the Production and Handling of Caustic Soda/Potash (Ed.3, Jan. 2022)
GEST 12/408 -	Liquid Chlorine Level Measurement and Detection Devices (Ed. 2, Sept. 2021)
GEST 17/490 -	Hydrogen in Chlorine Safety (Ed.1, June 2019)
GEST 17/492 -	Specifications and Approval Procedure for Valves to be Used in Liquid Chlorine or Dry Chlorine Gas (Ed. 3, July 2023)
GEST 17/493 -	Design & Construction of Containers for bulk Transport of Liquid Chlorine (Ed. 2, December 2023)
GEST 18/494 -	Safe Loading and Unloading of Chlor-Alkali related Chemicals (Ed. 3, Oct 2022) – *Translation of this document available in Dutch, French, German, Italian, Polish, Portuguese and Spanish*
GEST 21/506 -	Attention Points for Valves Used in Wet Chlorine Gas Applications (Ed. 1, July 2023)
GEST 22/507 -	Electrical Safety in Chlor-Alkali Electrolysis Plants (Ed. 1, May 2023)
Analytical 3 -	Determination of Mercury in Solids (Ed. 3, Sept. 2009)
Analytical 6 -	Determination of Mercury in Gasses (Ed. 4, Jan. 2014)
Analytical 7 -	Determination of Mercury in Liquids (Ed. 3, May 2009)
Analytical 8 -	Determination of Chlorine in Workplace Air (Ed. 2, Aug. 2010)
Analytical 10 -	Determination of the Total Weight of Mercury in the Electrolysis Cells by Radioisotopes (Ed. 2, Jan. 2003)
Analytical 11 -	Determination of Mercury and Creatinine in Urine (Ed. 1, Feb. 2007)
Analytical 13 -	Determination of Moisture in Dry Gaseous Chlorine (Ed. 3, December 2025)
BREF 2014 -	Best Available Techniques (BAT) Reference document for the Production for Chlor-alkali (Ed. 1, Nov. 2014)
COC 94/01 -	The Chlorine Chemistry (Ed. 1, March 1994)
COC 94/02 -	Halogenated Organic Compounds in the Environment (Ed. 1, March 1994)
COC 94/03 -	Chlorine Chemistry of Marine Organism (Ed. 1, March 1994)
COC 94/04 -	Position Paper on the Use of the AOX Measurement as a Control Parameter (Ed. 1, March 1994)
Env Prot 3 -	Decommissioning of Mercury Chlor Alkali Plants (Ed. 7, Aug. 2015)
Env Prot 5 -	Guidelines for the Measurement of Air Flow and Mercury in Cell Room Ventilation (Ed. 3, Jan. 2009)
Env Prot 11 -	Code of Practice - Mercury Housekeeping (Ed. 6, July 2012)
Env Prot 12 -	Guidelines for Making a Mercury Balance in a Chlorine Plant (Ed. 5, March 2010)
Env Prot 13 -	Guideline for the Minimisation of Mercury Emissions and Waste from Mercury Chlor-Alkali Plants (Ed. 3, Jan. 2014)
Env Prot 15 -	Management of Mercury Contaminated Sites (Ed. 4, November 2018)
Env Prot 17 -	Guideline for Preparing an Audit of the Mercury Balance in a Chlorine Plant (Ed. 1, Jan. 2003)
GEST AP 1 -	Learning from Accidents (Ed. 1, Nov. 1996)
GEST AP 2 -	Learning from Experience (Ed. 1, Oct. 1999)

HEALTH 8 -	Housekeeping DO'S and DON'TS when working in mercury cell rooms (Ed. 1, Jan. 2012)
HEALTH 10 -	Electromagnetic Fields in Chlorine Electrolysis Units - What an occupational physician should know (Ed.3, Nov. 2023)
HEALTH 11 -	Chemical Health Hazards of chlor-alkali production (Ed. 3, December 2022)
HEALTH 12 -	Stress and Burnout Awareness (Ed. 1, April 2021)
HEALTH 13 -	Chlorine Acute Exposure Advice (Ed. 1, December 2022)
"old" PP I -	Contribution to the Reduction of Mercury Emission - Proposal of Euro Chlor (Ed. 1, 1989)
"old" PP II -	Memorandum on the Use of Asbestos in the European Chlor-Alkali Industry (Ed. 2, March 1998)
"old" PP III -	Euro Chlor views on the discussion of prohibiting the use of certain asbestos products as gaskets material in the chlorine industry (Ed. 1, March 1992)
"old" PP IV -	Transport of chlorine within West European chlor-alkali industry (Ed. 1, June 1992)
"old" PP V -	OECD council decision on the control of transfrontier movement of wastes destinated for recovery operation - Limit concentration of dioxins and furanes for placement of wastes in the red list of OECD decision (Ed. 1, Feb. 1993)
"old" PP VI -	Chlor-alkali mercury cells, economics and the environment (Ed. 1, Oct. 1994)
"old" PP VII -	Use of Carbon Tetrachloride in Chlorine Production (Ed. 1, Feb. 1995)
PP VIII -	Summary of Euro Chlor Procedures for Determining Mercury in Cell Room Atmosphere (Ed. 1, March 2005)
PP X -	ATEX: Explosion Protection Considerations Regarding the Cell room of a Chlor-Alkali Electrolysis Unit (Ed. 1, Oct. 2007)
PP XII -	Memorandum on Confinement of Liquid Chlorine Plants (Ed. 1, Aug. 2011)
TID 001 -	Technical Information Document: Ecoprofile of Chlorine Production (Ed. 1, Oct. 2000)

Technical Publications: TSEM DOCUMENTS

TSEM 90/153 - Learning from Past Accidents (R. Papp)
TSEM 90/154 - Chlorine Hazard Properties (T. Dokter)
TSEM 90/155 - Toxicity of Chlorine under Emergency Conditions (V. Van Heemst)
TSEM 90/159 - Aspects of Transport Safety (D.A. Beattie)
TSEM 90/159B - Transport Accident Statistics (G. Poli)
TSEM 90/160 - Dispersion Models (Py -E. Vergison)
TSEM 90/161 - Quantitative Risk Assessment (V. van Heemst)

TSEM 93/186 - General technology overview (W.D. Müller)
TSEM 93/191 - Safe Design (K. Hannesen)
TSEM 93/192 - How to Use Steel and Titanium Safely (P.C. Western)
TSEM 93/193 - Safe Construction (J. Van Diest)
TSEM 93/194 - Safe Operation (D. Mohrmann)

TSEM 97/228 - Euro Chlor Activities (L. Schmidt)
TSEM 97/229 - The Importance of the Chlorine Industry (J. Walter)
TSEM 97/230 - Current & Future Trends of Chlorine, Caustic Soda and Chlorine Derivatives Production (D.J. Hutchinson)
TSEM 97/231 - Responsible Care Worldwide Activities (R.G. Smerko)
TSEM 97/232 - The European Chlorine Balance (R.F. Nolte)
TSEM 97/233 - BAT for the Mercury Process for Chlor-Alkali Production (A. Llinares)
TSEM 97/234 - Organo-chlorine Emissions (P. Decuyper)
TSEM 97/235 - Dioxins in Chlorine Production (S. Grunden)
TSEM 97/236 - Planned Threshold Limits for Concentration of Chlorine and Mercury in the Workplace, and Present Situation in Production Plants (K. Blum)
TSEM 97/237 - Emergency Limit Values for Accidental Exposure to Chlorine (J. de Gerlache)
TSEM 97/238 - Chlorine Safety in Swimming Pools (M. Monzain)
TSEM 97/239 - Learning from Experience (Y. Verot)
TSEM 97/240 - Containment of Chlorine Equipment (R.W. Curry)
TSEM 97/241 - Safe Transport of Chlorine in Rail Tankers (H-J. Kellerhaus)
TSEM 97/242 - Safety of Chlorination Reactions (J.L. Gustin)
TSEM 97/243 - Safety Management (F. Schollemann)

TSEM 01/257 - Chemical Industry and Environment (F.Puig)
TSEM 01/258 - Sustainability in Chlorine Production (B.S. Gilliatt)
TSEM 01/259 - Current and Future Trends on Chlorine, Caustic and Chlorinated Derivatives Production (D.J.Hutchison)
TSEM 01/260 - Environmental Voluntary Agreements: The Case of the Spanish Chlor-Alkali Sector (V. Macia)
TSEM 01/261 - Overview of Future Technologies: Impact on the Chlorine Industry (G. Intille)
TSEM 01/262 - Chlorine Safety: A Worldwide Responsibility (B. Smerko)
TSEM 01/263 - The Information Exchange on “Best Available Techniques” for Chlor-Alkali Manufacture under the Integrated Pollution Prevention and Control Directive (D. Litten)
TSEM 01/264 - Aspects of Converting an Electrolysis Plant from Mercury (K.Geisler)
TSEM 01/264 SLIDES - Aspects of Converting an Electrolysis Plant from Mercury (K.Geisler)
TSEM 01/265 - Organo-Chlorine Emissions and Exposure Levels (A. Lecloux)
TSEM 01/266 - Product-Related Risk Assessments (V. Garny)
TSEM 01/267 - Chlorine: Intended Occupational Exposure Limits and Medical Treatment (J.S. Huismans)
TSEM 01/268 - Mercury: New Findings, New Rules (J. Efskind)
TSEM 01/269 - Electro-Magnetic Fields in the Chlorine Electrolyses: Effects on Health and Recommended Limits (J-C. Besson)
TSEM 01/270 - Quantitative Risk Assessment (J.T. Marshall)
TSEM 01/271 - Chlorine Industry Safety Performance: Statistical Approach (G. Mesrobian)

TSEM 01/272 - New Developments in Euro Chlor: Chlorine Safety (J-P. Debelle)
TSEM 01/273 - Reliability Assessment of Chlorine Absorption Unit (G. Picciolo)
TSEM 01/274 - Nitrogen Trichloride: a Continuing Challenge (H. Piersma)
TSEM 01/275 - Safe Transport of Chlorine (S. Heyworth)
TSEM 01/276 - Chlorine Absorption Unit (D. Curry)

TSEM 05/286 - The Behavior of Anions in the Ion Exchange Membrane Process for Production of Caustic Soda (T. Kimura)
TSEM 05/287 - Energy Saving Type Membrane Electrolyser (I. F. White)
TSEM 05/288 - Innovative Technologies for Electrochemical Production of Chlorine (A. Ottaviani)
TSEM 05/289 - Project Genesis and Bichlor™ (G. Bellamy)
TSEM 05/290 - Goals and Latest Achievements in the Uhde Membrane Electrolysis Technology (A. Zimmermann)
TSEM 05/291 - Opening Remarks by the Chairman of the Euro Chlor General Technical Committee (J-P. Debelle)
TSEM 05/292 - Participation of the Czech Republic in the Preparation of Reach (K. Bláha)
TSEM 05/293 - Balancing World Markets for Chlorine and Caustic Soda (C. Fryer)
TSEM 05/294 - Chlorine Institute: Initiatives and Coordination with Euro Chlor (K. Shaver)
TSEM 05/295 - The World Chlorine Council Global Safety Programme (B.S. Gilliatt)
TSEM 05/296 - The European Chlorine Industry on the Move towards Sustainable Industry (A. Seys)
TSEM 05/297 - Review of Online Availability of Technical Documentation (G. Mesrobian)
TSEM 05/298 - Meeting New EU Legislative Requirements on Electromagnetic Fields (EMFS) Exposure (J-C. Besson)
TSEM 05/299 - On-Line Determination of Nitrogen Trichloride in Solvay Chlorine Production Units (N. Breton)
TSEM 05/300 - Emergency Intervention with a Mobile Chlorine Absorption Unit (J. Hariefeld)
TSEM 05/301 - Accident Reporting (P. Engel)
TSEM 05/302 - Learning from Experience: Flooding of the Neratovice Chlorine Plant in 2002 (J. Fajkus)
TSEM 05/303 - Risk and Hazard -How they Differ (L. Kistenbrügger)
TSEM 05/304 - Future Occupational Exposure Limits for Mercury and Chlorine in EU: How to Comply (V. Garny)
TSEM 05/305 - Personal Protective Equipment for Chlorine and Mercury (W. Asnong)
TSEM 05/306 - Low-Level Exposure to Mercury in People Living near Chlor-Alkali Plants -The EMECAP Project (L. Barregard)
TSEM 05/307 - Exposure to Low Levels of Mercury Vapor, an Epidemiology Approach (J. Efskind)
TSEM 05/308 - Using Health Audits for Improvement of the Working Environment (J. S. Huismans)
TSEM 05/309 - Update on the Implementation of the IPPC Directive and BREFS (N. Emmott)
TSEM 05/310 - IPPC Directive and BREF in the Chlor-Alkali Manufacturing Industry (B. Schmidt)
TSEM 05/311 - Decommissioning of a Mercury Chlor-Alkali Plant (J. Baune)
TSEM 05/312 - New Proposals to Improve Workability of Reach Contribution of the European Chemical Industry (C. Arregui)
TSEM 05/313 - Protecting the Environment from Mercury Plant Emissions (B-O. Jorlöv)
TSEM 05/314 - Conclusions (U. Bergmann)
TSEM 05/315 - Recent Improvement of Asahi-Kasei's Electrolyser -Zero-Gap Technology (H. Houda)

TSEM 08/319 - Opening remarks (J. Baune)
TSEM 08/320 - Comparison of fuel cells and ODC for energy recovery from hydrogen (T. Turek)
TSEM 08/321 - Impact of electricity costs on European chlor-alkali industry (A. Steel)
TSEM 08/322 - The World Chlorine Council (WCC) Activities and progress (A. Seys)
TSEM 08/323 - French update on chlorine industry (C. Durand)
TSEM 08/324 - North American update (F. Reiner)
TSEM 08/325 - RusChlor technical recommendations and Russian legislation on chlorine (B. Jagud)
TSEM 08/326 - Modernisation of existing chlor-alkali electrolysis plants in Russia / CIS - A big challenge for engineering companies (H.D. Winkler)
TSEM 08/327 - Training (P. Engel)

TSEM 08/328 - Moisture measurement in chlorine gas by tunable diode laser absorption spectroscopy (TDLAS) (H. Welmink)
TSEM 08/329 - Chlorine valves recommendations (M. Jessop)
TSEM 08/330 - New obligations and solutions for safe chlorine rail transportation in Europe (R. Mattick)
TSEM 08/330 A - New obligations and solutions for safe chlorine rail transportation in Europe - Overbuffering film (R. Mattick)
TSEM 08/330 B - New obligations and solutions for safe chlorine rail transportation in Europe - Ermewa solution film (R. Mattick)
TSEM 08/331 - Chlorine liquefaction (S. Ingleby)
TSEM 08/332 - EU Regulation on mercury export ban and storage obligation (C. Andersson)
TSEM 08/333 - Update on IPPC chlor-alkali BREF - Dismantling phased out electrolysis units (J-P. Valentin)
TSEM 08/334 - Evolution of mercury emissions (H. Krehenwinkel)
TSEM 08/335 - Implication of REACH for the chlor-alkali industry (D. Farrar)
TSEM 08/336 - Impact of EMF in the chlor-alkali industry (J-C. Besson)
TSEM 08/337 - EU directive 2004/40/C Impact of EMF Directive on the chlor-alkali industry (measurements) (J. Lange)
TSEM 08/338 - Mercury and chlorine - Establishment of OEL at EU level (H. Bender)
TSEM 08/339 - Chlorine gassing - Mercury exposure / Best practices in worker protection and treatment (J.S. Huismans)
TSEM 08/340 - Swimming pools and chlorinated by-products (V. Garny)
TSEM 08/341 - Thermodynamics in control valves on liquid chlorine (S. Misrachi)
TSEM 08/342 - Control valves for chlorine in accordance with GEST 98/245 - Practical experience and ways to expand application (G. Wodara)
TSEM 08/343 - Assessment of various H2/Cl2 pressure control systems in membrane electrolysis (Y. Ropars)
TSEM 08/344 - Arkema's new chlor-alkali facility at Sant Auban France (N. Prout /J-C. Millet)
TSEM 08/345 - Intelligent systems & the chlor-alkali industry - realizing maximum efficiencies (G. Tremblay)
TSEM 08/346 - In-line hydrogen specific sensors for chlorine industry (P. Soundarrajan)
TSEM 08/347 - New on-line analyzer technology for safety and control (C. Du Bois)
TSEM 08/348 - Analysis of effect of brine impurities to membrane properties (K. Umemura)
TSEM 08/349 - Advantages of the new GORE filtration tube for brine purification (R. Lenhardt)
TSEM 08/350 - Developments in the use of CPVC systems in critical industrial environments (T. Breiner)
TSEM 08/351 - Modular skid mounted chlor-alkali plants (C. Kotzo)
TSEM 08/352 - Underground waste disposal (A. Baart)
TSEM 08/353 - Creative value from chlorocarbon by-products (G. Malugani)
TSEM 08/353 A - Creative value from chlorocarbon by-products -burner film (G. Malugani)
TSEM 08/354 - Cathodic re-activation and retrofitting by zero gap technique (A. Ottaviani)
TSEM 08/355 - The INEOS experience - More than just power (R. Pilkington)
TSEM 08/356 - Development of electrolysis technology and next steps for CEC (A. Manabe)
TSEM 08/357 - Setting new standards - The next generation of Uhde electrolysis cells (J. Marciniak)
TSEM 08/358 - Recent development of Asahi Kasei Chemicals' IM technology (H. Houda)
TSEM 08/359 - Power generation with PEM fuel cells at a chlor-alkali plant (A. Verhage)

TSEM 11/363 - Welcome to the Conference Participants (M. Träger)
TSEM 11/364 - AkzoNobel mTA-salt: improved safety at lower costs (A. Giatti)
TSEM 11/365 - Effect of brine impurities on cell voltage (T. Nishio)
TSEM 11/366 - Application of membrane technologies in the chlor-alkali industry (T. Drackett)
TSEM 11/367 - R2 EMOS: More than Monitoring - A Global Approach to Safety (G. Tremblay)
TSEM 11/368 - New zero-gap electrolysis system of AKCC (T. Hachiya)
TSEM 11/369 - Technical considerations of membrane cellroom operation (T. Healy)
TSEM 11/370 - Cell development and technical concerns for IEM plant operation (A. Manabe)

TSEM 11/371 - Uhde/ Uhdenora - A strong partner meeting tomorrow's challenges of the chlorine industry (C. Noeres)
TSEM 11/372 - Newer generation De Nora cathode coatings for IEM technology (L.A. Antozzi)
TSEM 11/373 - Early warning on-line hydrogen detection in wet chlorine (C. Du Bois)
TSEM 11/374 - Integrated 1 MW fuel cell power unit for chlor-alkali plants (A. Verhage)
TSEM 11/375 - Plastic piping systems in chlorine process applications (S. Patel & D. Scherer)
TSEM 11/376 - Remote Controlled Chlorine Production - A new concept to meet customer demand; sustainable and convenient (E. Holmen)
TSEM 11/377 - A safe disposal solution for liquid mercury by formation of mercury sulphide (S. Kummel)
TSEM 11/378 - Disposal of mercury and mercury containing waste in underground facilities according to the latest EU-Legislation (V. Lukas)
TSEM 11/379 - Technical activities in Euro Chlor (J. Baune)
TSEM 11/380 - Introduction of new legislation on Waste Management in Hungary (A. Ringelhann Kolozsiné)
TSEM 11/381 - Economic Upheavals Disrupt Traditional Chlor-alkali Market Patterns (C. Fryer)
TSEM 11/382 - EU Emission Trading Scheme and the chlor-alkali industry (C. Andersson)
TSEM 11/383 - Safety: the next step forwards (J. Groeneweg)
TSEM 11/384 - North American Chlor-alkali Industry Situation (F. Reiner)
TSEM 11/385 - Euro Chlor 10 years Sustainability Programme results (J.-P. Debelle)
TSEM 11/386 - Managing environmental protection issues in the chlor-alkali industry / Liaison with WCC and UNEP (H. Krehenwinkel)
TSEM 11/387 - New Industrial Emissions Directive: implications for the chlor-alkali industry (D. van Wijk)
TSEM 11/388 - Update of the chlor-alkali BREF document (J.-C. Millet)
TSEM 11/389 - Decommissioning of mercury electrolysis units (P. Ancery)
TSEM 11/390 - Export ban and safe storage of surplus mercury (H. Krehenwinkel)
TSEM 11/391 - Managing safety issues in the chlor-alkali industry (P. Engel)
TSEM 11/392 - Benefit of Euro Chlor guidelines demonstrated in transport accidents (R. Mattick)
TSEM 11/392 - Benefit of Euro Chlor guidelines demonstrated in transport accidents (R. Mattick) - Film 1 Overbuffering
TSEM 11/392 - Benefit of Euro Chlor guidelines demonstrated in transport accidents (R. Mattick) - Film 2 Ermewa
TSEM 11/393 - Project Jack Rabbit: Spring 2010 chlorine and ammonia field releases (S. Fox)
TSEM 11/394 - Nitrogen trichloride monitoring in chlorine gas by UV spectroscopy (R. Bloemenkamp)
TSEM 11/395 - Inspection of non-metallic process equipment (J. McGough)
TSEM 11/396 - Dry chlorine / metal fire (C. Paarmann)
TSEM 11/397 - Liquid chlorine storage at a producer's site (K. Roelofs)
TSEM 11/398 - Managing health issues in the chlor-alkali industry (J.S. Huismans)
TSEM 11/399 - Update on REACH and classification of chlorine (D. van Wijk)
TSEM 11/400 - Medical aspects of personal protective equipment use in the chlor-alkali industry (J.S. Huismans)
TSEM 11/401 - Accidental release of Chlorine: acute health effects, emergency limit values and concentration-response relationships (J. Arts)
TSEM 11/402 - Swimming pool attendance and respiratory symptoms and allergies among Dutch children: where are we now? (D. Heederik)
TSEM 11/403 - New drafted EMF directive / CENELEC measurement standard proposal (J. Lange)
TSEM 11/404 - Control of workers' mercury exposure during electrolysis decommissionning (J.-C. Besson)
TSEM 11/405 - Urinary mercury results and synthesis of mercury workshop (S. Presow)

TSEM 14/410 - Advantages of vacuum salt in mercury to membrane conversions (A. Gatti)
TSEM 14/411 - Characteristics of Flemion Membranes in KCl Electrolysis Operation (Y. Yamaki)
TSEM 14/412 - New insight into corrosion of RuO2-based cathodes during reverse currents (S.Holmin)
TSEM 14/413 - EZ-BRINE® on-line full control brine purification process (C. Du Bois)

TSEM 14/414 - Development of F6800 Series Membrane for Reliable Operation (Y. Sekiguchi)
TSEM 14/415 - Latest Development in Electrode Coatings Technology for Chlor-Alkali Industry (L. Iacopetti)
TSEM 14/416 - Mercury to membrane conversion projects – How to make it a success (C. Noeres)
TSEM 14/417 - Advantages of preassembled skid mounted chlorine production plants (A. Zimmermann)
TSEM 14/418 - Power Up The demonstration of alkaline fuel cells for Chlor Alkali Plants (R. Kelly)
TSEM 14/419 - Selection for Perfection (T. Healy)
TSEM 14/420 - How to mitigate risks in your membrane cellroom (G. Tremblay)
TSEM 14/421 - Use of improved dual-laminate materials for piping in the chlorine industry (R. Troschitz)
TSEM 14/422 - Bluestar Technologies (S. Wang)
TSEM 14/423 - High Strength Low Salt Hypo (HSLS Hypo): Improved Hypo Quality and Production (B. Hardman)
TSEM 14/424 - Highly Corrosive Applications in Chloralkali Plants Fluoropolymer PFA Lined Process Pumps and Valves (K. Al-Sheikh)
TSEM 14/425 - Pneumatically operated valves for use on liquid chlorine storage tanks (J-P Richer)
TSEM 14/426 - HCl Reactor Technology for Chlor-Alkali Plant (J. Benoit)
TSEM 14/427 - nx-BiTAC: latest development in zero-gap membrane cell technology (Hamamoto)
TSEM 14/428 - General Technical Committee (GTC): Technical Activities in Euro Chlor (K. Jerg)
TSEM 14/429 - Industrial environmental policy in Spain Mercury issues (M-B Larka Abellán)
TSEM 14/430 - European Chlor-Vinyls: Too Many Cooks Spoil the Broth but will there be enough cooks in the future? (A. Brown)
TSEM 14/431 - Energy issues in Europe: Impact on the chlor-alkali industry (A. Steel)
TSEM 14/432 - Safety Maturity Tool: The next step for improving Safety Performance (S. de Bont)
TSEM 14/433 - Key Issues Confronting the North American Chlor-Alkali Industry (F. Reiner)
TSEM 14/434 - Current situation of the Russian chlor-alkali industry (B. Yagud)
TSEM 14/435 - Euro Chlor sustainability programmes (J-P Debelle)
TSEM 14/436 - Managing environmental issues in the chlor-alkali industry (P. Ancery)
TSEM 14/437 - The new Best Available Techniques (BAT) : Reference Document for the Production of chlor-alkali (CAK BREF) (T. Brinkmann)
TSEM 14/438 - Decommissioning of mercury electrolysis units and re-use of cell room buildings (R. Eek)
TSEM 14/439 - The UNEP Mercury Convention and Partnership: Characteristics and consequences for chlor-alkali production (D. van Wijk)
TSEM 14/440 - NICOLE Mercury Working Group: Sharing best practice for the risk-based management of Hg-impacted sites (R. Jacquet & O. Phipps)
TSEM 14/441 - Managing safety issues in the chlor-alkali industry (T. Manders)
TSEM 14/442 - The Importance of drying Chlorine sufficiently (C. Paarmann)
TSEM 14/443 - Plastic materials in chlorine plants: Past experiences and ongoing research activities (K. Jacobson)
TSEM 14/444 - Euro Chlor Valves recommendation GEST 06/318 for liquid chlorine (R. Mattick)
TSEM 14/445 - Chlorine Release Experiments for Improved Modeling and Emergency Response (S. Fox)
TSEM 14/446 - Managing health issues in the chlor-alkali industry (J.S. Huismans)
TSEM 14/447 - Chlorine for drinking water disinfection – benefits, risks and trends (J. Pickup)
TSEM 14/448 - New EMF Directive 2013/35/EU and industry measurement standard proposal (J. Lange)
TSEM 14/449 - Electromagnetic Interference of Cardiac Implants in the Chlorine Industry (D. Studer)
TSEM 14/450 - Cautious with Caustic Keep it healthy and safe (J.S. Huismans & T. Manders)
TSEM 14/451 - Urinary mercury results and chlorine adverse incident reporting (N. McGrath)
TSEM 14/452 - Decommissioning of the Hg cell room at Solvic Antwerp (A. Hugé & D. Debacker)
TSEM 14/453 - New health guidelines including synthesis of the mercury workshop (M. Pauwels)

TSEM 17/454 - A step towards chlorine 4.0 (G. Tremblay)
TSEM 17/455 - New Flemion membrane for zero gap configuration (T. Kaneko)

TSEM 17/456 - Asahi Kasei's membrane updates (A. Nakajima)
TSEM 17/457 - tk UCE leading chlorine production technologies (F. Fulvio)
TSEM 17/458 - The state-of-art technology and comprehensive service from Bluestar (N. Zhao)
TSEM 17/459 - New chlorine burner for membrane cells to optimize the OPEX for the clients production site (J. Benoit)
TSEM 17/460 - EZ-HCl® on-line analyser systems for the safety and control of HCl synthesis (C. Du Bois)
TSEM 17/461 - Passivation and other wear mechanisms for anodes used in the chlor-alkali industry (E. Zimmerman & S. Holmin)
TSEM 17/462 - Nuberg's success in emerging markets for chlorine derivatives (A. Tyagi)
TSEM 17/463 - New sensor methods during the non-destructive testing in fiberglass reinforced plastic (M. Müggenburg & S. Tahery)
TSEM 17/464 - Underground disposal of mercury waste for long term safety (J. Steinbach)

TSEM 17/465 - Increasing your competitiveness by using flexible power (D. Rosenstock)
TSEM 17/466 - New generation of plastic piping material for the chlor-alkali process (R. Troschitz)
TSEM 17/467 - tk UCE service activities – chlor alkali competence meets client demands (F. Uesbeck)
TSEM 17/468 - BATREC's mercury stabilization technology (G. Chifflier)
TSEM 17/469 - New Technologies for hypochlorite production (B. Hardman)
TSEM 17/470 - Combined test transformer and rectifier (M. Ponzetto)
TSEM 17/471 - Technical activities in Euro Chlor (K.R. Jerg)
TSEM 17/472 - Using benchmarking for chlor-alkali industry improvements (M. Eggleston)
TSEM 17/473 - The Euro Chlor Sustainability Programme (T. Manders)
TSEM 17/474 - State of play on the new mercury regulation and application of the Minamata Convention (C. Allen)
TSEM 17/475 - Euro Chlor members gathering and sharing practical experiences in dismantling mercury electrolysis units (J-P. Debelle)
TSEM 17/476 - The mercury remediation challenge: matching regulatory closure goals and proven remediation techniques in the clean-up of chlor-alkali sites (D. Cazaux)
TSEM 17/477 - Chlorine release after change of pressure transducer technology (A. Fobelets)
TSEM 17/478 - North American update (F. Reiner)
TSEM 17/479 - Improving safety in the plant by means of automation and how to keep operators alert in highly automated plants (C. Paarmann)
TSEM 17/480 - The Euro Chlor Safety Initiative (T. Manders)
TSEM 17/481 - Recent health protection developments (protection against EMF, synthesis of mercury workshop …) (A. Hugé)
TSEM 17/482 - How to deal with the EMF Directive (J-C. Besson)
TSEM 17/483 - The health effects of shift work (M. Boeckx)
TSEM 17/484 - Transport of chlorine by rail in Switzerland – Developments in the last few years (E. Sigrist)
TSEM 17/485 - Emission of chlorate from chlor-alkali units (R. Mariner)
TSEM 17/486 - Dispersion model predictions of the Jack Rabbit II chlorine release experiments (S. Gant)
TSEM 17/486 - Dispersion model predictions of the Jack Rabbit II chlorine release experiments (S. Gant) – Trial 7 CFD video A
TSEM 17/486 - Dispersion model predictions of the Jack Rabbit II chlorine release experiments (S. Gant) – UVU Trial 7 2016 UAV video B
TSEM 17/487 - Plastic materials in chlorine plants – Lessons learnt from failure analyses and success stories (K. Jacobson)
TSEM 17/488 - Carbon-steel wall thickness of chlorine equipment in view of corrosion and erosion protection (R. Mattick)
TSEM 17/489 - Safety in bulk delivery of sodium hypochlorite (N. Sutherland)
TSEM 17/489 - Safety in bulk delivery of sodium hypochlorite (N. Sutherland) – Unique Fitting Concept video
TSEM 17/491 - Jack Rabbit II Overview (S. Fox)

TSEM 21/495 - The journey towards a safe, competitive, climate neutral and circular European chlor-alkali industry (M. Pauwels)
TSEM 21/496 - Euro Chlor Safety training and lessons learned (T. Manders)
TSEM 21/497 - Euro Chlor Safety Game (T. Manders)
TSEM 21/498 - Euro Chlor Euro Chlor Commitment Safe Loading and Unloading (W. Bleukx)
TSEM 21/499 - Communications Resources to support the Euro Chlor MCS (C. Birkner)
TSEM 21/500 - How to protect our Industry? (K. May)
TSEM 21/501 - Developments around PFAS (R. Mariner)
TSEM 21/502 - Euro Chlor Sustainability Programme 2021-2030 (T.Manders)
TSEM 21/503 - Euro Chlor Eco-Profile Project (T. Manders)
TSEM 21/504 - EU Hydrogen Strategy and how to reach 100% hydrogen utilisation (K. May)
TSEM 21/505 - How to become carbon neutral? (T. Manders, K. May)

TSEM 22/508 - Welcome to the Conference (M. Pauwels)
TSEM 22/509 - The Euro Chlor Mid Century Strategy (W. Bleukx)
TSEM 22/510 - Sustainability Programme results (T. Manders)
TSEM 22/511 - European Chlorine and its Derivatives: What does the future hold? (H. Warren)
TSEM 22/512 - Dry Chlorine: Understand the limit of moisture and consequences (C. Paarmann)
TSEM 22/513 - Development of a Training Game (T. Manders)
TSEM 22/514 - Accidental Mixing: Dangers, Incidents and Prevention (R. Brooks)
TSEM 22/515 - How to make Chlor Alkali Plants Greener with Intelligent Safety - Smart Cell room (H. Ladermann)
TSEM 22/516 - Safety around Hydrogen (K. Roelofs)
TSEM 22/517 - New Way of Working (M. Boeckx)
TSEM 22/518 - Greener Electrolysis Technology presented by Bluestar (W. Guo)
TSEM 22/519 - The importance of fine Filtration of Brine in Chlor-Alkali manufacturing Process (S. Schöpf)
TSEM 22/520 - Technology developments for energy saving in the chlor-alkali process (S. Kaihara)
TSEM 22/521 - The Latest Development on FLEMION Membranes (C. Eckerscham)
TSEM 22/522 - Increased safety and energy saving with Mersen HCl synthesis unit (J. Benoit)
TSEM 22/523 - Today's Energy Saving Solutions for the Chlor-Alkali Industry (S. Karrenbrock)
TSEM 22/524 - The 1 2 3 must have online analyzer systems in chlorine production (C. Du Bois)
TSEM 22/525 - Water Electrolysis: one of the keys to a C02 Free Economy (D. McArthur)
TSEM 22/526 - DENKAI Electrolysis to The Future (Y. Sakuma)
TSEM 22/527A - Update on Euro Chlor PFAS activities (R. Mariner)
TSEM 22/527B- The Future of Hydrogen (T. Manders)
TSEM 22/528 - Hypochlorite: New Technologies Contributing to a Cleaner Planet for All (B. Hardman)
TSEM 22/529 - Designed for sustainable benefits: HCl synthesis units by SGL carbon (D. Hoff)
TSEM 22/530 - AMSC-Neeltran for a cleanier future (M. Ponzetto)
TSEM 22/531 - Optimizing Power Consumption in Chlor-Alkali (U-S. Bäumer)
TSEM 22/532 - Carbon Leakage Prevention (K. May)
TSEM 22/533 - re-Approval of Process Valves (W. Romanski)
TSEM 22/534 - Innovations in NDT technologies and future applications on valves (V. Richer)
TSEM 22/535 - Design features of bellow sealed valve in relation to safety (A. Kumar)
TSEM 22/536 - Update on Pamphlet 74 Jack Rabbit Presentation (R. Brooks)
TSEM 22/537 - Safe Loading & Unloading Commitment (T. Manders)
TSEM 22/538 - Safe and reliable use of plastic materials in chlorine plants (K. Jacobson)
TSEM 22/539 - Conclusion of the Conference (M. Pauwels)

TSEM 25/540 - Welcome to Conference Participants in Barcelona (J. Nouwen)
TSEM 25/541 - Chlor-Alkali: Achieving Climate Neutrality (E. Skrivervik & R. Mariner)
TSEM 25/542 - Sustainability Programme and Results (T.Vanfleteren)
TSEM 25/543 - Global Chlor-Vinyls a View from the Trough (N. Kovics)
TSEM 25/544 - New Chlorine Storage Material Based on Polychlorides (S. Riedel)
TSEM 25/545 - Small steps, Big impact: Rethink anode use and precious metal recycling. (D. Mannessen, K. de Smet)

TSEM 25/546 - New developments in Sulphate Removal & Concentration (SRCS) Membrane System & RO and NF Membranes for Zero Liquid Discharge (ZLD) (N. Jose)
TSEM 25/547 - DIABON® HCl Synthesis Units– a perfect match between energy efficiency and highest HCl concentration up to 38% (D. Hoff)
TSEM 25/548 - Advancing Circular Economy in the Chlor-Alkali Industry Pioneering Recycling of Used Membranes for a Sustainable Future (J.P. An)
TSEM 25/549 - Bluestar's Latest Chlor-Alkali Electrolyser Technology (W. Guo)
TSEM 25/550 - Insight into European Hydrogen: Challenges and Opportunities (V. Granadeiro)
TSEM 25/551 - Asahi Kasei's latest Technology Innovations in Alkaline Water Electrolysers for Green Hydrogen (R. Lino)
TSEM 25/552 - Lessons Learned on Hydrogen Safety (K. Roelofs)
TSEM 25/553 - Mersen Sintaclor® Resource Efficiency and System Safety by Design (J. Benoit)
TSEM 25/554 - How to Detect Short Circuits and Damaged Diaphragms Membranes in Electrolysers for Chlor-Alkali and Water Electrolysis ? (H. Lademann)
TSEM 25/555 - Behavioural Aspects of Safety (M. Boeckx)
TSEM 25/556 - Experience of Decarbonisation in the US (R. Brooks)
TSEM 25/557 - Strategies to Increase Efficiency and Sustainability in Chlor-Alkali Plants (S. Karrenbrock)
TSEM 25/558 - Introduction of F-9060 - The Latest Generation Membrane (Y. Hisada)
TSEM 25/559 - Powering Progress Continuous Improvement in Chlor-Alkali Power Conversion (M. Stucchi)
TSEM 25/560 - Asahi Kasei's Latest Technology Innovations in Membrane Electrolysis for Sustainability (Y. Endo)
TSEM 25/561 - The Current Situation of Sustainable Development in China's Chlor Alkali Industry (Z. Peichao)
TSEM 25/562 - Energy and CO2 Saving with Corrosionless Silicone Carbide Equipment and System for the Chlor-Alkali industry (A. Wilk)
TSEM 25/563 - Advanced Electrolysis Technology and Services Applied to Electrochemical Industry (X. Yuxiang)
TSEM 25/564 - Utilising Hydrogen by-Product to Create Carbon-Free Transportation (M. Knoche)
TSEM 25/565 - descote Double Lock Sealing System: A Globally Recognised Technology for the Safe Storage and Transportation of Hazardous Chemicals (C. Du Bois)
TSEM 25/566 - Innovative Titanium Applications in Chlor-Alkali Balancing Cost and Durability for Industrial Success (T. Vansanit)
TSEM 25/567 - Energy Optimisation and CO2 reduction in Caustic Evaporation & Concentration Systems (R. Hagenloch)
TSEM 25/568 - Chlor-Alkali Leadership - Paving the Way for Bankable Green Hydrogen Projects (T. Healy)
TSEM 25/569 - Current Trends and Challenges in the Chlor-Alkali Service Industry (F. Uesbeck)
TSEM 25/570 - A Special Briefing on PFAS (M-C. Detragiache)

2. Analytical Recommendations

Analytical 3 - Determination of Mercury in Solids (Ed. 3, Sept. 2009)
Analytical 6 - Determination of Mercury in Gasses (Ed. 4, Jan. 2014)
Analytical 7 - Determination of Mercury in Liquids (Ed. 3, May 2009)
Analytical 8 - Determination of Chlorine in Workplace Air (Ed. 2, Aug. 2010)
Analytical 10 - Determination of the Total Weight of Mercury in the Electrolysis Cells by Radio-isotopes (Ed. 2, Jan. 2003)
Analytical 11 - Determination of Mercury and Creatinine in Urine (Ed. 1, Feb. 2007)
Analytical 13 - Determination of Moisture in Dry Gaseous Chlorine (Ed. 3, December 2025)

GEST 94/211 - Code of Practice for Sampling Liquid Chlorine (Ed. 2, Sept. 2021)
GEST 17/490 - Hydrogen in Chlorine Safety (Ed.1, June 2019)

3. Environmental Protection Recommendations

Env Prot 3 - Decommissioning of Mercury Chlor Alkali Plants (Ed. 7, Aug. 2015)
Env Prot 5 - Guidelines for the Measurement of Air Flow and Mercury in Cell Room Ventilation (Ed. 3, Jan. 2009)
Env Prot 11 - Code of Practice - Mercury Housekeeping (Ed. 6, July 2012)
Env Prot 12 - Guidelines for Making a Mercury Balance in a Chlorine Plant (Ed. 5, March 2010)
Env Prot 13 - Guideline for the Minimisation of Mercury Emissions and Waste from Mercury Chlor-Alkali Plants (Ed. 3, Jan. 2014)
Env Prot 15 - Management of Mercury Contaminated Sites (Ed. 4, November 2018)
Env Prot 17 - Guideline for Preparing an Audit of the Mercury Balance in a Chlorine Plant (Ed. 1, Jan. 2003)

TID 001 - Technical Information Document: Ecoprofile of Chlorine Production (Ed. 1, Oct. 2000)

BREF 2014 - Best Available Techniques (BAT)
Reference document for the Production for Chlor-alkali (Ed. 1, Nov. 2014)

4. Fixed Equipment Recommendations

GEST 73/17 - Storage of Liquid Chlorine (Ed. 9, November 2025)
GEST 73/25 - Transfer of Dry Chlorine by Piping Systems (Ed. 13, April 2023)
GEST 75/43 - Flexible Steel Pipes and Flexible High Nickel Alloys Hoses for the Transfer of Dry Gaseous or Liquid Chlorine (Ed. 11, September 2022)
GEST 75/47 - Design and Operation of Chlorine Vaporisers (Ed. 13, March 2024)
GEST 76/52 - Equipment for the Treatment of Gaseous Effluents Containing Chlorine (Ed.15, December 2022)
GEST 79/79 - Transfer of Liquid Chlorine by Padding with a Chlorine Compressor (Ed. 5, Jan. 2017)
GEST 83/119 - Seal-less Pumps for Use with Liquid Chlorine (Ed. 6, April 2022)
GEST 87/130 - Possible Hazards for Chlorine Plants and their Proposed Mitigations (Ed. 10, July 2020)
GEST 87/133 - Overpressure Relief of Liquid Chlorine Installations (Ed. 7, March 2024)
GEST 88/134 - Stud Bolts Hexagon Head Bolts and Nuts for Liquid Chlorine (Ed. 5, September 2022)
GEST 88/138 - Small Chlorine Containers Construction and Handling (Ed.7, April 2023)
GEST 94/216 - Gaskets Selection for the Use in Liquid Chlorine and Dry or Wet Chlorine Gas Service (Ed. 5, Sept. 2019)
GEST 08/360 - Design and Operation of Chlorine Liquefaction Units (Ed. 2, Sept 2019)

GEST 10/361 - Dry Chlorine Gas Compressors (Ed. 3, March 2024)
GEST 10/362 - Corrosion Behaviour of Carbon Steel in Wet and Dry Chlorine (Ed. 4, Nov 2022)
GEST 12/406 - Best Practices in the Production and Handling of Caustic Soda/Potash (Ed.3, Jan. 2022)
GEST 18/494 - Safe Loading and Unloading of Chlor-Alkali related Chemicals (Ed. 3, Oct 2022)

5. Procedures/Installations Recommendations

GEST 76/55 - Maximum Levels of Nitrogen Trichloride in Liquid Chlorine (Ed. 14, Nov. 2021)
GEST 78/73 - Design Principles and Operational Procedures for Loading/Off-Loading Liquid Chlorine Road and Rail Tankers and ISO-Containers (Ed. 10, Nov. 2025)
GEST 79/82 - Materials of Construction for Use in Contact with Chlorine (Ed.14, April 2022)
GEST 80/84 - Commissioning and Decommissioning of Installations for Dry Chlorine Gas and Liquid (Ed. 8, October 2025)
GEST 87/130 - Possible Hazards for Chlorine Plants and their Proposed Mitigations (Ed. 10, July 2020)
GEST 87/133 - Overpressure Relief of Liquid Chlorine Installations (Ed. 7, March 2024)
GEST 90/162 - Emergency Transfer of Liquid Chlorine (Ed. 6, September 2022)
GEST 91/168 00 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Introduction (Ed. 2, Aug. 2017)
GEST 91/168 01 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Basic Properties (Ed. 1, Aug. 2017)
GEST 91/168 02 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Optical Properties (Ed. 1, Aug. 2017)
GEST 91/168 03 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Electric and Magnetic Properties (Ed. 1, Aug .2017)
GEST 91/168 04 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Density and Specific Volume (Ed. 1, Aug. 2017)
GEST 91/168 05 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Mechanical Properties (Ed. 2, Oct. 2016)
GEST 91/168 06 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Thermodynamic Properties (Ed. 2, Aug .2017)
GEST 91/168 07 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Physico-chemical Properties (Ed. 3, Aug. 2017)
GEST 91/168 08 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - The Chlorine ion and Electrochemical Properties (Ed. 1, Aug. 2017)
GEST 91/168 09 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Safety (Ed. 4, Aug. 2017)
GEST 91/168 10 - Physical, Thermodynamic and Selected Chemical Properties of Chlorine - Environmental Protection (Ed. 1, Aug. 2007)
GEST 92/171 - Personal Protective Equipment in the Chlorine Industry (Ed. 7, Oct. 2025)
GEST 92/175 - A Scheme for Safety Visits to Bulk Chlorine Customers Plants (Ed. 5, May 2023)
GEST 93/179 - Emergency Intervention in Case of Chlorine Leaks (Ed. 11, February 2023)
GEST 94/215 - Confinement of Units Containing Liquid Chlorine (Ed. 5, March 2024)
GEST 05/316 - Guideline for Site Security of Chlorine Production Facilities (Ed. 3, June 2022)
GEST 06/317 - The chlorine Reference Manual (Ed. 3, September 2021)
GEST 08/360 - Design and Operation of Chlorine Liquefaction Units (Ed. 2, Sept 2019)
GEST 10/361 - Dry Chlorine Gas Compressors (Ed. 3, March 2024)
GEST 10/362 - Corrosion Behaviour of Carbon Steel in Wet and Dry Chlorine (Ed. 4, Nov 2022)
GEST 17/492 - Specifications and Approval Procedure for Valves to be Used in Liquid Chlorine or Dry Chlorine Gas (Ed. 3, July 2023)
GEST 21/506 - Attention Points for Valves Used in Wet Chlorine Gas Applications (Ed. 1, July 2023)
GEST 22/507 - Electrical Safety in Chlor-Alkali Electrolysis Plants (Ed. 1, May 2023)

6. Health Recommendations

GEST 92/171 - Personal Protective Equipment in the Chlorine Industry (Ed. 7, Oct. 2025)
HEALTH 8 - Housekeeping DO'S and DON'TS when working in mercury cell rooms (Ed. 1, Jan. 2012)
HEALTH 10 - Electromagnetic Fields in Chlorine Electrolysis Units - What an occupational physician should know (Ed.3, Nov. 2020)
HEALTH 11 - Chemical Health Hazards of chlor-alkali production (Ed. 3, December 2022)
HEALTH 12 - Stress and Burnout Awareness (Ed. 1, April 2021)
HEALTH 13 - Chlorine Acute Exposure Advice (Ed. 1, December 2022)

7. Instruments Recommendations

GEST 94/207 - Code of Practice for the Installation of Pressure Sensing Devices on Dry Gaseous and Liquid Chlorine Applications (Ed. 4, Feb. 2023)
GEST 94/211 - Code of Practice for Sampling Liquid Chlorine (Ed. 2, Sept 2021)
GEST 94/213 - Guidelines for the Selection and Use of Fixed Chlorine Detection Systems in Chlorine Plants (Ed. 3, June 2020)
GEST 12/408 - Liquid Chlorine Level Measurement and Detection Devices (Ed. 2, Sept. 2021)

8. Transport Safety Recommendations

GEST 73/25 - Transfer of Dry Chlorine by Piping Systems (Ed. 13, April 2023)
GEST 75/43 - Flexible Steel Pipes and Flexible High Nickel Alloys Hoses for the Transfer of Dry Gaseous or Liquid Chlorine (Ed. 11, September 2022)
GEST 76/55 - Maximum Levels of Nitrogen Trichloride in Liquid Chlorine (Ed. 14, Nov 2021)
GEST 78/73 - Design Principles and Operational Procedures for Loading/Off-Loading Liquid Chlorine Road and Rail Tankers and ISO-Containers (Ed. 10, Nov. 2025)
GEST 87/130 - Possible Hazards for Chlorine Plants and their Proposed Mitigations (Ed. 10, July 2020)
GEST 88/138 - Small Chlorine Containers Construction and Handling (Ed. 7, April 2023)
GEST 90/162 - Emergency Transfer of Liquid Chlorine (Ed. 6, September 2022)
GEST 93/179 - Emergency Intervention in Case of Chlorine Leaks (Ed. 11, February 2023)
GEST 06/317 - The chlorine Reference Manual (Ed. 3, September 2021)
GEST 17/493 - Design & Construction of Containers for bulk Transport of Liquid Chlorine (Ed. 2, December 2023)

9. Water Treatment Recommendations

GEST 94/206 - Safe Use of Chlorine from Drums and Cylinders (Ed. 3, Sept. 2019)
GEST 96/218 - Safe Use of Sodium Hypochlorite at Swimming Pools (Ed. 4, Oct. 2025)
GEST 98/251- Safe Use of Solid Chlorinated Products at non-domestic Swimming Pools (Ed. 2, June 2018)