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Chromium(VI) Rapid Testing and So-Called Neutralization of Chromium(VI) Compounds During Maintenance Work

Regulatory requirements that must be met before an employer can order or recommend testing or treating Chromium(VI) deposits on thermally stressed chromium-alloyed industrial components

Regulatory analysis of the German Hazardous Substances Ordinance (GefStoffV), the Ordinance on Occupational Medical Care (ArbMedVV), the Occupational Safety and Health Act (ArbSchG), TRGS 400, 401, 410 and 561 and DGUV Regulation 1, with country chapters on the Netherlands, Great Britain and Poland · Regulations checked as of 25 October 2026

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Testing deposits for Chromium(VI) and their so-called neutralization, which chemically is a reduction, are activities involving a category 1B carcinogenic hazardous substance. They require a risk assessment carried out by a competent person, the protection regime for carcinogenic substances, the employer's own written operating instructions, documented instruction of the workers and mandatory occupational medical care, which applies to these activities because a risk from skin contact cannot be excluded. A technical instruction issued by the plant manufacturer replaces none of these requirements. Neither the rapid test nor the reduction fulfills the function attributed to them in such instructions.

This regulatory analysis sets out why this is so for Germany, the Netherlands, Great Britain and Poland.

1. Subject

The subject of this analysis is technical instructions, warning notices and service information in which plant manufacturers ask or advise the personnel of operators and service companies to check deposits on thermally stressed chromium-alloyed industrial components for Chromium(VI) with a rapid test and to "neutralize" any Chromium(VI) compounds found on site. The formation of such compounds on these components and their deposition in insulation materials and assembly pastes is described by the German TRGS 561 in section 3.3.4 paragraph 5 and section 5.9.3; the regulatory analysis of The Chromate Experts on the exposure register (version 1.0, October 2026) deals with this situation and is presupposed here.

The term neutralization is technically incorrect. In the process described, hexavalent chromium is reduced to trivalent chromium. This analysis therefore uses the expression "so-called neutralization" where it takes up the wording of the instructions, and otherwise reduction.

The analysis asks which requirements the regulations place on an employer who wishes to order or recommend these two work steps, what competence the person carrying them out must have, and what position a manufacturer's instruction holds in this framework. It is concerned with the duties of the employer. This document is based on the German regulations. The country-specific derivations are found in chapter 9 for the Netherlands, chapter 10 for Great Britain and chapter 11 for Poland.

2. Regulations Examined and Currency

All versions used were checked for validity on 24 and 25 October 2026.

Regulation	Version examined
Hazardous Substances Ordinance (GefStoffV)	As of February 2026; last amended by Ordinance of 17 December 2025 (BGBl. I No. 337), correction of 20 February 2026 (BGBl. I No. 44)
Ordinance on Occupational Medical Care (ArbMedVV)	§ 4 and Annex Part I as published on gesetze-im-internet.de , retrieved 25 October 2026
Occupational Safety and Health Act (ArbSchG)	§ 15 as published on gesetze-im-internet.de , retrieved 25 October 2026
TRGS 400 Risk assessment	Edition July 2017, GMBI 2017 p. 638 (No. 36)
TRGS 401 Risks resulting from skin contact	Edition October 2022, last amended GMBI 2024 p. 769
TRGS 410 Exposure register	Edition September 2026, GMBI 2026 pp. 528-532 (No. 23)
TRGS 561 Carcinogenic metals	Edition May 2026, GMBI 2026 pp. 308-336 (No. 14-15)
DGUV Regulation 1 Principles of prevention	Edition November 2013
MAK and BAT Values List	2025 edition of the German Research Foundation (DFG)
Arbeidsomstandighedenbesluit (NL)	Consolidated version, „Geldend van 01-08-2026 t/m heden“, retrieved 24 October 2026
Arbeidsomstandighedenwet (NL)	Consolidated version BWBRO010346 of 1 July 2026, official BWB repository
Nederlandse Arbeidsinspectie	Werkinstructie „Blootstelling Gevaarlijke stoffen“, approved 27 August 2024, last amended 18 December 2024, issued May 2025
COSHH Regulations 2002 (GB)	SI 2002/2677, consolidated version legislation.gov.uk , “no known outstanding effects”
Management of Health and Safety at Work Regulations 1999 (GB)	SI 1999/3242, consolidated version legislation.gov.uk , “no known outstanding effects” for Reg. 3, 7, 13 and 14
EH40/2005 Workplace exposure limits (GB)	Fourth Edition 2020
Kodeks pracy (PL)	Consolidated text Dz.U. 2026 poz. 1245 of 1 September 2026
Rozporządzenie Ministra Zdrowia, czynności rakotwórcze (PL)	Ordinance of 26 July 2024, Dz.U. 2024 poz. 1126, in force since 28 July 2024; replaces the ordinance of 24 July 2012
Rozporządzenie Ministra Zdrowia, badania i pomiary (PL)	Consolidated text Dz.U. 2025 poz. 949 of 3 July 2025

3. Classification as an Activity Involving a Carcinogenic Hazardous Substance

§ 2(5) GefStoffV defines an activity as any work with substances, mixtures or articles. Sampling deposits for a rapid test and applying a reducing agent to contaminated surfaces are work with the Chromium(VI) compounds present there and therefore activities within the meaning of the Ordinance. In the reduction, the reducing agent is added as a further substance; under § 6(I) its hazardous properties are to be included in the same risk assessment.

The classification is made for the group of substances. Under TRGS 561, 3.3.4 paragraph 1, Chromium(VI) compounds, with the exception of barium chromate and the compounds listed by name in Annex VI of the CLP Regulation, are classified as carcinogenic category 1B and as skin sensitizing and in part respiratory sensitizing category 1. Which Chromium(VI) compound is present on a given component is generally not known on site; TRGS 561, 5.9.3 paragraph 2 states that different Chromium(VI) compounds can form depending on the starting materials. Whoever does not know the compound cannot rely on any of the exceptions named and must apply the classification of the group.

The same applies to the skin route. The 2025 MAK and BAT Values List lists "Chromium(VI) compounds (inhalable fraction)" with the designation "H" (skin absorption) and "Sh" (skin sensitizing); only barium, lead, strontium and zinc chromate are excepted from the H designation. Independently of this, substances of category Carc. 1B are to be treated like skin-absorbable substances under TRGS 401, 3.2.3 paragraph 3 where no information is available. In the risk matrix of Table 2 of TRGS 401, the row "skin-absorbable and at the same time Carc. 1A or 1B (H350)" yields a high risk in all cells.

The fallback rule in TRGS 400, 5.2 paragraphs 9 and 12, which provides for released dusts without sufficient information protective measures corresponding to the classifications Acute Tox. 3, Skin Irrit. 2, Muta. 2, Skin Sens. 1 and STOT RE 2, lies below this level. It does not apply, because the information on the group of substances is available.

A rapid test and a reduction are only ordered where a Chromium(VI) contamination is suspected. For this situation TRGS 561, 5.9.3 paragraph 5 provides that, for activities on industrial components "on which a Chromium(VI) contamination is present or cannot be excluded", the protective measures of chapters 4.1 and 4.2 are to be implemented and supplemented by dust minimization, type 5 chemical protective suits with hood, nitrile-coated textile gloves, eye protection and respiratory protection of at least FFP2 for short-term and half masks with P3 filters for longer activities. Both work steps fall under this provision.

4. Requirements Before the Activity Begins

The sequence in time is laid down by § 7(1) GefStoffV: "The employer may only allow an activity involving hazardous substances to begin after a risk assessment under § 6 has been carried out and the necessary protective measures under section 4 have been taken." § 6(11) GefStoffV provides that the assessment "may only be carried out by competent persons"; if the employer does not have the knowledge himself, "he must obtain competent advice". § 6(8) requires documentation before the activity begins, including the result of the substitution assessment. Competent persons of the manufacturer can advise the employer. A general manufacturer's instruction, however, replaces neither competent advice in the individual case nor the site-specific risk assessment and its documentation under paragraph 8.

For activities with substances of category 1A or 1B, § 10 applies. Paragraph 1 requires a closed system where substitution is not technically possible, otherwise minimization of exposure according to the state of the art. Paragraph 2 obliges the employer to determine exposure by workplace measurements or other suitable determination methods (no. 1), to delimit and mark the work areas (no. 2), to restrict access to the employees who must enter them for their tasks (no. 3), and to ensure that these employees "are competent or have received corresponding activity-related instruction" (no. 4).

§ 14(1) requires written operating instructions "that take account of the risk assessment under § 6", with information on the hazardous substances present or arising, hygiene rules, measures to prevent exposure, the wearing and use of personal protective equipment and conduct in the event of operational disruptions and emergencies. § 14(2) requires oral instruction on the basis of these operating instructions "on all risks arising and corresponding protective measures", including general occupational-medical and toxicological advice, before employment begins and at least annually thereafter; content and date are to be recorded in writing and confirmed by the signature of the person instructed. TRGS 561, 4.1 paragraph 4 no. 2 letters e and f gives concrete form to this for carcinogenic metals: the operating instructions are to be made available before the activity begins, and the instruction covers "the level of exposure and the associated risk range". Under section 6 paragraph 2, the occupational-medical and toxicological advice explains the possible health consequences, their avoidance and "the possibility of carry-over of hazardous substances". (Quotations from German regulations: author's translation.)

Under ArbMedVV Annex Part 1 paragraph 1 no. 1, mandatory occupational medical care is to be arranged for "Chromium(VI) compounds" where repeated exposure to a substance of category 1A or 1B cannot be excluded (letter b) or where the substance is skin-absorbable and a health risk from skin contact cannot be excluded (letter c). § 4(1) ArbMedVV requires it to be arranged before the activity begins, and § 4(2) provides: "The employer may only allow an activity to be carried out if the employee has taken part in the mandatory occupational medical care."

Entry in the exposure register under § 10a GefStoffV already follows from the fact that TRGS 561, 5.9.3 paragraph 5 prescribes respiratory protection (TRGS 410, section 4 paragraph 1 no. 5) and specifies chemical protective gloves (section 4 paragraph 3). Finally, under DGUV Regulation 1, § 7(1), the employer must take into account, when assigning tasks, whether the insured persons "are capable of complying with the provisions and measures to be observed for safety and health protection in performing the task".

5. Competence of the Person Carrying Out the Work

A specific certificate of expertise for activities with Chromium(VI) compounds, such as the GefStoffV provides for asbestos in § 11a in conjunction with Annex I no. 3, does not exist. The GefStoffV does not name chromium. Competence follows from § 10(2) no. 4, which TRGS 561 repeats in 4.1 paragraph 4 no. 2 letter a for carcinogenic metals.

“The employer must ensure that activities with carcinogenic metals are only carried out by competent persons or persons who have received corresponding activity-related instruction in accordance with § 10(2) no. 4 GefStoffV.” (TRGS 561, 4.1 paragraph 4 no. 2 letter a, author's translation)

The exception in § 10(2) sentence 2 GefStoffV applies only to activities for which an occupational exposure limit has been published and is complied with. No occupational exposure limit has been published for Chromium(VI) compounds; TRGS 561, 3.3.4 paragraph 2 sets the concentration of 1 µg/m³ to be applied. No. 4 therefore applies without exception.

Under § 2(16) GefStoffV, a person is competent who has the necessary specialist knowledge to perform a task specified in the Ordinance; the requirements include relevant vocational training, relevant professional experience or relevant recent professional activity “as well as participation in specific further training measures”. Reading a manufacturer's instruction does not establish competence in this sense.

The alternative of activity-related instruction is not a formality. The regulations set no minimum duration for instruction, but they do set minimum content (chapter 4). The word “corresponding” in § 10(2) no. 4 ties the instruction to the specific activity. For a rapid test and a reduction on a contaminated component, it covers, in addition to the hazards of the Chromium(VI) compounds and of the reducing agent, the protective measures under TRGS 561, 5.9.3 paragraph 5, putting on and taking off contaminated protective clothing without carry-over, the use of respiratory protection, the disposal of disposable protective clothing, conduct in the event of disruptions and the occupational-medical and toxicological advice. Instruction that does not convey this content does not satisfy § 14(2), even if it has been signed.

Competence is therefore not a characteristic of the person alone. It arises only through the fulfillment of duties by the person's employer: a competent risk assessment, operating instructions, documented instruction with occupational-medical and toxicological advice, participation in mandatory occupational medical care and the check under DGUV Regulation 1, § 7(1). A service technician who has only the manufacturer's instruction is neither competent within the meaning of § 2(16) nor instructed in relation to the activity within the meaning of § 14(2), and § 4(2) ArbMedVV stands in the way of assigning him as long as he has not taken part in mandatory occupational medical care.

6. The Chromium(VI) Rapid Test

In none of the German regulations examined does a rapid test, a wipe sample, a test strip or a comparable indicative surface method appear, either as a trigger of the protection regime or as a justification for not triggering it. Consequently none of these regulations contains a detection limit or a statement of suitability for such a method. Information from the manufacturers of individual test systems is not the subject of this analysis.

If the rapid test is used in the risk assessment as a method of determining exposure, § 7(10) GefStoffV applies.

“Whoever carries out workplace measurements of hazardous substances must be competent and have the necessary equipment, and whoever applies suitable methods for determining exposure at the workplace must likewise be competent.” (§ 7(10) sentence 1 GefStoffV, author's translation)

The provision presupposes a suitable method. For inhalation exposure, TRGS 561, 3.2 paragraph 1 and 3.3 paragraph 2 require determination under TRGS 402 by workplace measurements or other suitable determination methods. A surface finding does not measure an air concentration and says nothing about exposure during dismantling. If the rapid test is a determination method, the user needs competence under § 2(16) and the suitability of the method must be demonstrated. If it is not, it has no place in the determination of exposure. The presumption of correctness under § 7(10) sentence 2 applies only to the findings of accredited measuring bodies.

Independently of this, sampling itself is an activity within the meaning of § 2(5). Since a Chromium(VI) contamination on the component to be tested cannot be excluded before the test, the protection regime under TRGS 561, 5.9.3 paragraph 5, the competence requirement under § 10(2) no. 4 and mandatory occupational medical care under ArbMedVV Annex Part 1 paragraph 1 no. 1 letter c, with the bar on the activity under § 4(2), already apply to the test. Whether sampling falls under “sampling in non-closed systems” in TRGS 410, section 4 paragraph 4 no. 4 is a matter of interpretation; the register duty follows in any case from section 4 paragraph 1 no. 5 and paragraph 3.

This leads to a finding that holds regardless of the informative value of the test system. The rapid test cannot be the gateway to the protection regime, because carrying it out already requires the protection regime; under § 7(1) GefStoffV the activity may only begin once the risk assessment and protective measures are in place. Whoever has workers “test first” without protective equipment, instruction and medical care already violates, with the test itself, the provisions whose application the test is supposed to clarify.

A positive finding proves that contamination is present. A negative finding proves under none of the regulations examined that exposure is excluded, and it does not satisfy the duty to justify a non-entry in the register under TRGS 410, section 4 paragraph 7.

7. The So-Called Neutralization

None of the regulations examined describes the reduction of Chromium(VI) compounds on components, insulation materials or deposits as a protective measure. TRGS 561 mentions reduction only in other contexts, for instance pig iron production by reduction of iron ore and the reduction of metal salts to carcinogenic metals; it does not appear as a measure for eliminating a Chromium(VI) contamination. The hierarchy of measures under § 10(1) GefStoffV and TRGS 561, 4.1 paragraph 2 (substitution, closed system, minimization with priority of technical over organizational and personal measures) contains no work step that chemically converts an existing contamination on site and would thereby make the protection regime unnecessary.

If reduction is nevertheless used as a measure, it is subject to the effectiveness check under TRGS 400, section 7. If this shows that the protective measures taken are insufficient, "the risk assessment is to be carried out again and additional measures are to be taken" (section 7 paragraph 6). A reliable demonstration of effectiveness must take into account the contamination present and the material matrix, the areas actually reached, the remaining Chromium(VI) and the exposure during subsequent work. The work sequence described in manufacturers' instructions provides none of this information. Describing such a treatment as "effective" is unsupported by the regulations.

The reaction product is not a harmless substance either. The 2025 MAK and BAT Values List lists "Chromium(III) compounds" with the designation "Sh" (skin sensitizing), excepting only "chromium(III) oxide and comparably poorly soluble chromium(III) compounds", and assigns them to section IIb, "substances for which no MAK values can currently be established". Which chromium(III) compound forms and whether it is soluble is as unknown to the user as the starting compound. Describing the result as "harmless" or "non-hazardous" chromium(III) compounds has no basis in the regulations.

The reduction is thus an activity involving the Chromium(VI) present and a reducing agent whose hazardous properties must be examined for the specific product and application, with a reaction product that may itself have hazardous properties, and with a result that cannot be verified without determination. All requirements of chapters 4 and 5 apply to it.

8. Position of the Manufacturer's Instruction

The duties under GefStoffV, ArbMedVV and DGUV Regulation 1 fall on the employer of the employees carrying out the work. A technical instruction from the plant manufacturer replaces none of these employer duties. It is not a risk assessment, because under § 6(11) GefStoffV that is prepared by competent persons on behalf of the employer. It is not a set of operating instructions, because under § 14(1) these must take account of the employer's risk assessment. It is not instruction, because under § 14(2) that is given orally, related to the workplace, with occupational-medical and toxicological advice and countersigned. It does not replace mandatory occupational medical care under § 4 ArbMedVV.

The duties of employees are tied to the instruction and directions of their own employer. § 15(1) ArbSchG obliges them to take care of their safety and health "according to their abilities and in accordance with the instruction and directions of the employer"; DGUV Regulation 1, § 15(1) refers to the "corresponding instructions of the employer". A manufacturer's instruction becomes an operational requirement only when the employer adopts it into his risk assessment, operating instructions and instruction, and with that adoption he takes on the duties of chapters 4 and 5. If the technician carrying out the work is employed by the plant manufacturer itself, the manufacturer is at the same time the employer and owes the same requirements.

An employer who orders or recommends the rapid test or the reduction on the basis of a manufacturer's instruction without having created these requirements orders an activity involving a category 1B carcinogenic hazardous substance that may not be carried out under § 6(8) and (11), § 10(2) no. 4 and § 14 GefStoffV and § 4(2) ArbMedVV. For the author of an instruction that describes testing and reduction as a simple work step, the legitimate question arises whether he should have noticed that no recipient can lawfully implement it on its basis alone.

9. Netherlands

The Netherlands implement Directive 2004/37/EC in the Arbobesluit, Hoofdstuk 4. There is no level of regulation below the Besluit corresponding to the German TRGS. The Arbobesluit contains no specific qualification rule for activities with Chromium(VI); the expertise provision for sampling in Article 4.47 lid 7 applies only to asbestos. Dutch quotations are given in the original with the author's translation in brackets.

Duty	Germany	Netherlands
Assessment	§ 6(I), (8) and (II) GefStoffV	Article 4.2 lid 1 Arbobesluit: assessment of nature, degree and duration as soon as workers „worden of kunnen worden blootgesteld“ (are or may be exposed); lid 5 onder a: to be included is the „noodzakelijke aanvullende informatie van de leverancier of uit andere gemakkelijk toegankelijke bronnen“ (necessary additional information from the supplier or other readily accessible sources); Werkinstructie, question A2: the exposure assessment „moet worden opgesteld of getoetst door een gecertificeerde deskundige“ (must be prepared or reviewed by a certified expert)
Substances without a supplier	§ 6(I) sentence 1 GefStoffV (arise or are released)	Werkinstructie, question A1: also to be recorded are substances „die tijdens het proces kunnen ontstaan“ (that may arise during the process; stoffen zonder eigenaar); „Er is meer nodig dan alleen een stapel veiligheidsinformatiebladen“ (more is needed than a stack of safety data sheets)
Determination	§ 7(10), § 10(2) no. 1 GefStoffV	Article 4.2 lid 4: „geschikte, genormaliseerde meetmethodes, dan wel andere voor het doel geschikte meetmethodes of kwantitatieve evaluatiemethodes“ (suitable standardized or other suitable measurement methods or quantitative evaluation methods)
Measures	§ 10(I) GefStoffV; TRGS 561, 5.9.3 paragraph 5	Article 4.1c lid 1 onder c: „adequate voorzieningen bij het uitvoeren van reparatie- of onderhoudswerkzaamheden“ (adequate provisions when carrying out repair or maintenance work); lid 2: „in overeenstemming met de stand van de wetenschap en techniek“ (in accordance with the state of science and technology); Articles 4.17 and 4.18
Instruction	§ 14 GefStoffV; TRGS 561, 4.1 paragraph 4 no. 2	Article 8 lid 1 to 3 Arbowet: information on the work and its risks, „aan hun onderscheiden taken aangepast onderricht“ (instruction adapted to their respective tasks), purpose and use of protective equipment; Article 4.10d Arbobesluit: hazards „op grond van de resultaten van de beoordeling, bedoeld in artikel 4.2“ (on the basis of the results of the assessment under Article 4.2), limit values, precautions, hygiene
Tie to the employer	§ 15(I) ArbSchG	Article 11 Arbowet: „overeenkomstig zijn opleiding en de door de werkgever gegeven instructies“ (in accordance with his training and the instructions given by the employer); Article 8 lid 4: the employer supervises compliance with the instructions
Value for Chromium(VI)	1 µg/m³, TRGS 561, 3.3.4 paragraph 2	1 µg/m³ as statutory limit value, Arboregeling Bijlage XIII

The derivation does not change in substance. The assessment under Article 4.2 and the instruction under Article 8 Arbowet and Article 4.10d Arbobesluit are duties of the employer, tied to the employer's own assessment. A manufacturer's instruction is information within the meaning of Article 4.2 lid 5 onder a and replaces neither the assessment nor the instruction. For a rapid test, Article 4.2 lid 4 requires standardized or other suitable measurement or quantitative evaluation methods, and the Werkinstructie ties the exposure assessment to a certified expert; a qualitative surface finding by a service technician meets neither requirement.

10. Great Britain

In Great Britain the COSHH Regulations 2002 and the Management of Health and Safety at Work Regulations 1999 (MHSWR) apply. There is no specific qualification rule for activities with Chromium(VI). Northern Ireland has its own regulations and is not examined here.

Duty	Germany	Great Britain
Assessment	§ 6(1), (8) and (11) GefStoffV	COSHH Reg. 6(1): no work "which is liable to expose any employees" without a "suitable and sufficient assessment"; Reg. 6(2)(e): "activities, such as maintenance, where there is the potential for a high level of exposure"; MHSWR Reg. 3(1)
Carcinogen	TRGS 561, 3.3.4 paragraph 1	COSHH Reg. 2(1): category 1A or 1B under CLP, "whether or not the substance or mixture would be required to be classified"
Competence	§ 2(16), § 6(11) GefStoffV	MHSWR Reg. 7(1): appointment of "competent persons" to assist; Reg. 7(5): competent with "sufficient training and experience or knowledge and other qualities"; Reg. 13(1): taking into account "capabilities as regards health and safety" when entrusting tasks
Determination	§ 7(10) GefStoffV	COSHH Reg. 10(1): monitoring "in accordance with a suitable procedure"; Reg. 10(2): "another method of evaluation" demonstrating compliance with Reg. 7(1)
Measures	§ 10 GefStoffV	COSHH Reg. 7(5): designation of areas "which may be contaminated by carcinogens"; Reg. 7(7)(c)(i): for H350, control only "adequate" if exposure is reduced to "as low a level as is reasonably practicable"
Instruction	§ 14 GefStoffV	COSHH Reg. 12(1) and (2): "suitable and sufficient information, instruction and training", including the "significant findings of the risk assessment"; Reg. 12(3)(b): appropriate to the level, type and duration of exposure; Reg. 12(4): also for persons "whether or not his employee"; MHSWR Reg. 13(2)(b)(iv): training on a new or changed system of work
Tie to the employer	§ 15(1) ArbSchG	MHSWR Reg. 14(1): use of dangerous substances in accordance with training and instructions "provided to him by the said employer in compliance with the requirements and prohibitions imposed upon that employer"; Reg. 14(2)(b): reporting any "shortcoming in the employer's protection arrangements"
Limit values	1 µg/m³ Chromium(VI)	EH40 Table 1: Chromium(VI) compounds 0.01 mg/m³, 0.025 mg/m³ "process generated"; Chromium(III) compounds 0.5 mg/m³

Two British findings deserve emphasis. MHSWR Reg. 14(1) ties the employee's duty to instructions that the employer has given in fulfillment of his own duties; a manufacturer's instruction that the employer has not adopted into his assessment under COSHH Reg. 6 and his instruction under Reg. 12 is not such an instruction. And EH40 lists a separate Workplace Exposure Limit for chromium(III) compounds; under COSHH Reg. 2(1)(b) they are therefore a "substance hazardous to health". Describing the reduction product as harmless directly contradicts the British limit value list.

11. Poland

In Poland the Labor Code (Kodeks pracy), the Ordinance of the Minister of Health on carcinogenic, mutagenic and reprotoxic substances of 26 July 2024 and the Ordinance on testing and measurement of agents harmful to health in the working environment apply. There is no specific qualification rule for activities with Chromium(VI). Poland does, however, expressly tie admission to work to qualifications and knowledge, and measurement to accredited laboratories. Polish quotations are given in the original with the author's translation in brackets.

Duty	Germany	Poland
Assessment	§ 6(I), (8) and (II) GefStoffV	Art. 226 pkt 1 KP: the employer „ocenia i dokumentuje ryzyko zawodowe” (assesses and documents the occupational risk); pkt 2: informing employees of the risk
Admission to work	§ 10(2) no. 4 GefStoffV; § 4(2) ArbMedVV	Art. 237 ³ § 1 KP: „Nie wolno dopuścić pracownika do pracy, do której wykonywania nie posiada on wymaganych kwalifikacji lub potrzebnych umiejętności, a także dostatecznej znajomości przepisów oraz zasad bezpieczeństwa i higieny pracy” (an employee may not be admitted to work for which he lacks the required qualifications or necessary skills and sufficient knowledge of occupational safety and health rules); Art. 237 ⁹ § 1 KP: no admission without the prescribed personal protective equipment
Instruction	§ 14 GefStoffV	Art. 237 ³ § 2 KP: training before admission and periodically; Art. 237 ⁴ § 2: „szczegółowe instrukcje i wskazówki” (detailed instructions and guidance) of the employer for the workplace, § 3: written or electronic confirmation; § 11 pkt 2 of the 2024 Ordinance: periodic training on risk, hygiene, protective equipment and conduct in accidents
Measures	§ 10(I) GefStoffV	Art. 222 § 1 KP: substitution or other means of reducing exposure „przy odpowiednim wykorzystaniu osiągnięć nauki i techniki” (making appropriate use of scientific and technical progress); § 4 ust. 2 and 3 of the 2024 Ordinance: closed system, otherwise minimization „do tak niskiego poziomu, na jaki pozwalają możliwości techniczne” (to as low a level as technically possible)
Determination	§ 7(10) GefStoffV	§ 4 ust. 1 of the 2024 Ordinance referring to the measurement ordinance; § 15 ust. 1 measurement ordinance: measurements by laboratories „które uzyskały akredytację w tym zakresie” (accredited for this scope); § 16: methods under Polish Standards or validated; § 6 ust. 1: measurement intervals for carcinogens
Medical care, register	§ 4 ArbMedVV; § 10a GefStoffV	§ 11 pkt 3 of the 2024 Ordinance: health checks; Art. 222 § 2 KP: register of work and of employees
Tie to the employer	§ 15(1) ArbSchG	Art. 211 pkt 2 KP: working „w sposób zgodny z przepisami” (in compliance with the regulations) and following the „polecenia i wskazówek przełożonych” (orders and guidance of superiors); pkt 5: attending the prescribed medical examinations

The Polish regulations expressly formulate two requirements that are particularly relevant to this work sequence. Art. 237³ § 1 KP formulates the bar on admission without qualifications, skills and knowledge of the regulations as an express prohibition addressed to the employer. And § 15 of the measurement ordinance reserves testing and measurement of harmful agents to accredited laboratories, and subsidiarily to scientific, state or certified laboratories with quality assurance. A surface rapid test by a service technician is accordingly not a measurement and cannot replace one. For the reduction, Art. 222 § 1 KP, §§ 4 and 11 of the 2024 Ordinance and Art. 237³ KP apply in the same way as to any other activity involving contact with a carcinogenic substance.

12. Conclusion

Testing deposits on thermally stressed chromium-alloyed industrial components for Chromium(VI) and the so-called neutralization of these deposits are activities involving a category 1B carcinogenic hazardous substance (§ 2(5) GefStoffV; TRGS 561, 3.3.4 paragraph 1). Since the compound present is not known on site, the classification of the group, with skin absorption and skin sensitization, is to be applied (MAK and BAT Values List 2025; TRGS 401, 3.2.3 paragraph 3). The protection regime under TRGS 561, 5.9.3 paragraph 5 applies to both work steps, because contamination is presupposed in both.

Before an employer can order or recommend either of these work steps, he must, under § 7(1) GefStoffV, carry out and document a competent risk assessment (§ 6(8) and (11) GefStoffV), implement the measures under § 10, prepare his own operating instructions and carry out documented instruction with occupational-medical and toxicological advice (§ 14 GefStoffV; TRGS 561, 4.1 paragraph 4 no. 2 and section 6), arrange mandatory occupational medical care, which applies to these activities under ArbMedVV Annex Part 1 paragraph 1 no. 1 letter b or c and without which he may not allow the activity to be carried out (§ 4 ArbMedVV), and enter the employees in the register (§ 10a GefStoffV). The activity may only be carried out by competent persons or persons with corresponding activity-related instruction (§ 10(2) no. 4 GefStoffV); for Chromium(VI) there is no exception, since no occupational exposure limit exists.

The rapid test is not provided for in any regulation examined. As a determination method it requires competence and demonstrated suitability (§ 7(10) GefStoffV); a surface finding does not measure inhalation exposure. Carrying it out already requires the protection regime it is supposed to trigger or make unnecessary. Reduction is not provided for as a protective measure in any regulation examined, its effectiveness cannot be demonstrated without determining the areas reached, the remaining Chromium(VI) and the subsequent exposure (TRGS 400, section 7), and its product, chromium(III) compounds, is not a harmless substance (MAK and BAT Values List 2025, Sh; EH40, Workplace Exposure Limit 0.5 mg/m³).

A manufacturer's instruction replaces none of these requirements. It becomes an operational requirement only through adoption into the employer's risk assessment, operating instructions and instruction (§ 15(1) ArbSchG).

In the Netherlands the same follows from Articles 4.2, 4.1c and 4.10d Arbobesluit and Articles 8 and 11 Arbowet; under the Werkinstructie of the Arbeidsinspectie the exposure assessment is to be prepared or reviewed by a certified expert. In Great Britain it follows from COSHH Reg. 6, 10 and 12 and MHSWR Reg. 3, 7, 13 and 14; the employee's duty there expressly relates to instructions given by the employer in fulfillment of his duties, and chromium(III) compounds have their own limit value. In Poland it follows from Art. 222, 226, 237³, 237⁴ and 237⁹ Kodeks pracy and the Ordinance of 26 July 2024; admission to work without qualifications and knowledge is expressly prohibited there, and measurements are reserved to accredited laboratories.

Testing and so-called neutralization are therefore, in none of the four legal systems, a work step that an employer can order or recommend without further ado.

Version 1.0, October 2026, first edition. This regulatory analysis is confined to the regulations named in section 2 in the versions stated there and reproduces their wording with references. Assessments and interpretations are marked as such. Manufacturers and products are not named. Not covered by this analysis are the duties of the author of a technical instruction as manufacturer of the plant or as supplier of a reducing agent, the classification under REACH of treating contaminated components, and information from manufacturers of test systems. Quotations from German regulations are the author's translations; Dutch and Polish quotations are given in the original with the author's translation; British quotations are given in the original. In all cases the original wording governs.

Sources Examined

Hazardous Substances Ordinance (GefStoffV), BAuA reading version, as of February 2026. Ordinance on Occupational Medical Care (ArbMedVV), § 4 and Annex, [gesetze-im-internet.de](https://www.gesetze-im-internet.de). Occupational Safety and Health Act (ArbSchG), § 15, [gesetze-im-internet.de](https://www.gesetze-im-internet.de). TRGS 400, 401, 410 and 561 in the versions named in section 2 (Committee on Hazardous Substances, BAuA). DGUV Regulation 1 "Grundsätze der Prävention", November 2013. MAK and BAT Values List 2025, German Research Foundation (DFG), DOI 10.34865/mbwl_2025_deu. Netherlands: Arbeidsomstandighedenbesluit, consolidated version wetten.overheid.nl (Geldend van 01-08-2026); Arbeidsomstandighedenwet, BWBR0010346, version 2026-07-01, repository.officiële-overheidspublicaties.nl; Nederlandse Arbeidsinspectie, Werkinstructie "Blootstelling Gevaarlijke stoffen", last amended 18 December 2024, issued May 2025. Great Britain: The Control of Substances Hazardous to Health Regulations 2002, SI 2002/2677, Reg. 2, 6, 7, 10, 12; The Management of Health and Safety at Work Regulations 1999, SI 1999/3242, Reg. 3, 7, 13, 14, both [legislation.gov.uk](https://www.legislation.gov.uk); HSE, EH40/2005 Workplace exposure limits, Fourth Edition 2020, Table I. Poland: Kodeks pracy, consolidated text Dz.U. 2026 poz. 1245; Rozporządzenie Ministra Zdrowia z dnia 26 lipca 2024 r. w sprawie substancji chemicznych, ich mieszanin, czynników lub procesów technologicznych o działaniu rakotwórczym, mutagennym lub reprotoksycznym w środowisku pracy, Dz.U. 2024 poz. 1126; Rozporządzenie Ministra Zdrowia w sprawie badań i pomiarów czynników szkodliwych dla zdrowia w środowisku pracy, consolidated text Dz.U. 2025 poz. 949; all api.sejm.gov.pl.