HEXChecks™

• DETECT • MONITOR • ELIMINATE •

ChromeKiller™ and *Hexavalent Chromium Neutralizer™* *Instructions for Use*

FIGURE ENGINEERING

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1 General Uses

HexChecks™ ChromeKiller™ and Hexavalent Chromium Neutralizer™ products provide an easy, safe, and effective way to instantly eliminate carcinogenic hexavalent chromium Cr(VI) to protect workers and stop hazardous material migration.

Use HexChecks ChromeKiller/Neutralizer daily to eliminate Cr(VI) from most surfaces, such as shop floors, restrooms, sinks, showers, office spaces, break rooms, and personal protective equipment (PPE), including clothing.

ChromeKiller/Neutralizer can be used to treat process wastewater and Cr(VI) spills.

Use HexChecks Hexavalent Chromium Test Swabs™ to verify complete Cr(VI) elimination, demonstrate regulatory compliance, and provide peace of mind.

2 Specific Uses

2.1 Using ChromeKiller/Neutralizer to Decontaminate Surfaces by Direct Application

1) Wet surface to be cleaned with ChromeKiller/Neutralizer solution. Solution may be applied by any conventional means, such as by spraying (e.g. trigger bottle, pump sprayer, or backpack sprayer), or by a wetted cleaning aid (e.g. paper towel, rag, brush, mop, or floor scrubber). Solutions are compatible with plunger cans. *Important: The soil to be cleaned must be sufficiently wetted to enable the chemical reaction.*
2) Let stand for 10 seconds. For best results, agitate by wiping or mopping (smooth surfaces) or brushing (porous surfaces) to ensure complete wetting of soil.
3) Use a HexChecks Hexavalent Chromium Test Swab to confirm the soil has been fully neutralized. If Cr(VI) remains, repeat steps 1-2.
4) Remove soiled solution by wiping, mopping, or vacuuming. In the case of porous, inaccessible, or large areas, rinse with water.
5) (Optional) If solution leaves undesirable streaking, it is easily removed with glass cleaner, stainless steel cleaner, soap and water, etc. All surfaces that will contact food must be rinsed with potable water.

2.2 Use ChromeKiller/Neutralizer to Decontaminate Textiles:

2.2.1 Disposable:

1) Spray solution directly onto garment to achieve full wetting (the moisture level of a towel after wringing is usually sufficient).
2) See “Disposal” section.

2.2.2 Reusable:

IMPORTANT NOTE: Tests have shown normal laundering does not fully remove Cr(VI), which is then transferred to other garments and dryers.

1) Thoroughly wet garment by spray or drench (i.e. a quick presoak). Excess can be wrung out to treat additional garments. ChomeKiller/Neutralizer is non-staining.
2) Machine wash as normal with your preferred detergent. Garment may enter the wash wet or after drying.
   - *As a best practice, launder garments treated for Cr(VI) contamination separately from other clothes.*

2.3 Use ChromeKiller/Neutralizer in Sanitizing Footbath Mats

1) Fill footbath mat to manufacturer's recommended capacity with ChromeKiller/Neutralizer solution. *If footbaths are currently in use with other sanitizing solutions, it may be possible to add powdered ChromeKiller/Neutralizer to the existing solution, however contact us to consult a HexChecks chemist and verify compatibility.*
2) Top up with water or solution as necessary.
3) Use a HexChecks Test Swab periodically to verify the mat solution is working properly. If Cr(VI) is detected, the ChromeKiller/Neutralizer active agents have been consumed. Replace with fresh solution or recharge the solution by adding ChromeKiller/Neutralizer powder evenly across mat.

2.4 Using ChromeKiller/Neutralizer to Treat Used Wash or Process Water

1) Add ChromeKiller/Neutralizer powder directly to wash water (e.g. a floor scrubber reclaim tank) or rinse water (e.g. in a plating line).
2) Agitate water to accelerate the reaction.
3) Use a HexChecks Test Swab to verify elimination. If Cr(VI) remains, repeat steps 1-2.
4) See Section 5 "Disposal."

2.5 Using ChomeKiller/Neutralizer to Treat Hexavalent Chromium Spills

Always know and observe federal, state, local, laws and company policy. This guidance is assuming there are no other hazardous contaminants present or extenuating circumstances involved. Consult your company's Environmental, Health, and Safety (EHS) policy.

1) Contain spill to prevent spreading, especially to common drains or the environment. Take care to voice spreading contamination via boots or tires.
2) Recover as much fluid as possible using conventional means (e.g. wet vac, absorbents).
3) ChromeKiller/Neutralizer may be applied dry by dusting onto still-wet surfaces. Dried surfaces will require a mixed solution to rewet the Cr(VI).
4) Clean surfaces according to Section 2.1 above. The amount of ChromeKiller/Neutralizer required will depend upon concentration and volume of the spill. HexChecks Test Swabs may be used mid-process, while the surfaces are still wet, to check for full neutralization.

3 Mixing

For maximum effectiveness, **mix only what is needed for 90 days**. Mixed neutralizer solution begins to lose strength beyond 90 days.

Add one 50g stick pack of ChromeKiller/Neutralizer to 32oz (1L) of water and **mix thoroughly** by stirring or shaking.

Water Volume		ChromeKiller/Neutralizer
32oz	1L	1 Stick Pack
1gal	4L	4 Stick Packs
5gal	20L	20 Stick Packs

For **heavy contamination**, ChromeKiller/Neutralizer may be mixed at higher concentrations, but no higher than allows for complete mixing.

Tap water is sufficient for most applications. Filtered or distilled water may be used if tap water conditions are undesirable for your use case. Water temperature does not affect performance, but it will affect the maximum concentration that allows for complete mixing.

4 Storage

4.1 Powder Stick Packs

Stick packs are sunlight- and temperature-stable, however avoid prolonged exposure to direct sunlight in a hot vehicle. Keep stick packs sealed until ready for mixing.

4.2 Mixed Solution

For best shelf life, avoiding prolonged exposures to direct sunlight and/or temperatures exceeding 90°F (32°C). Strength may degrade with prolonged sunlight and/or high temperature exposures. If mixed solution freezes, it may be thawed and used as normal.

5 Disposal

Always know and observe federal, state, local, laws and company policy. This guidance is assuming there are no other hazardous contaminants present or extenuating circumstances involved. Consult your company's Environmental, Health, and Safety (EHS) policy.

5.1 Solid Waste Disposal

Cleaning consumables (e.g. rags, brushes, mop heads) and **PPE** (e.g. gloves, coveralls, booties) treated in accordance with Section 2.2.1 should be free of Cr(VI). Verify using a HexChecks Test Swab, and dispose of them as nonhazardous general waste. Neutralize **HexChecks Test Swabs** that test positive by wetting with solution.

5.2 Liquid Waste:

ChromeKiller/Neutralizer solutions are nonhazardous and non-polluting, and therefore may be disposed of down common drains. If your facility has an onsite wastewater treatment system, be sure to **consult your EHS office** for approval.

5.3 Runoff:

Generally, use of ChromeKiller/Neutralizer solution outdoors does not require recapture or containment by itself and may be rinsed away with a hose. However, oftentimes equipment washdown releases other soils that may be regulated and require containment.

6 Safety

ChromeKiller/Neutralizer is nontoxic, nonflammable, and nonreactive (National Fire Protection Agency rated 0/0/0), however *you are working around Cr(VI), which is extremely toxic, and it is important you wear appropriate PPE for your environment and exposure.*

- *Cr(VI) dust is toxic by inhalation.*
- *Cr(VI) is toxic by ingestion.*
- *Cr(VI) is toxic by skin contact.*

Dress for your hazard, wash hands before eating or smoking, and shower as soon as possible after exposure. Take care to avoid tracking Cr(VI) out of the area, especially into break rooms, offices, vehicles, or home. Encourage others to do the same.

7 Additional Resources

Safety Data Sheets and **Frequently Asked Questions** are available at www.hexchecks.com/resources.