



GUIDELINES FOR HANDLING CHEMICALS USED FOR DISINFECTING SURFACES AGAINST CORONAVIRUS (COVID-19)

WHAT IS CORONA VIRUS (COVID-19)

1.0 COVID-19 is an infectious disease caused by a newly discovered coronavirus. The disease affects the respiratory system and can be transmitted from person to person through contact with small droplets produced by coughing, sneezing or talking. These aerosolized droplets eventually settle on surfaces and objects, where they become avenues for secondary infection by people touching the surfaces and then eyes, nose or mouth.

CONTEXT

2.0 Within the context of the global pandemic of COVID -19, the Nigeria Centre for Disease Control (NCDC) recognizes the decontamination of surfaces using disinfectants. In combating the coronavirus not all disinfectants are employed rather those with antiviral activity such as chlorine and alcohol based.

3.0 In order to ensure environmentally sustainable use of chemicals, the Federal Government established the National Environmental Standards and Regulations Enforcement Agency (NESREA), by establishment Act 2007 LFN and NESREA amended Act 2018. The Agency has the powers to prohibit processes, equipment or technology that undermine environmental quality. Section (f) & (g) of the Act mandates the Agency, among others to:

Enforce compliance with any legislation on sound chemical management, safe use of pesticides and disposal of spent packages thereof; enforce compliance with regulations on the importation, exportation, production, distribution, storage, sale, use, handling and disposal of hazardous chemicals and waste other than in the oil and gas sector.

SURFACE DISINFECTANT CHEMICAL HANDLING

3.1 Pursuant to the above, NESREA is enforcing the provisions of the National Environmental (Chemical, Pharmaceuticals, Soap and Detergent Manufacturing Industry) Regulations S.I. No 36, 2009 and the National Environmental (Hazardous Chemicals and Pesticides) Regulations S.I. 65, 2014.

RECOMMENDATIONS

4.0 The following are recommended as the regulatory requirements for handling formulations and spraying of contaminated surfaces:

(a) Handling and spraying:

- i. Containers should be properly labelled in accordance with Globally harmonized System for Classification and Labelling of Chemicals (GHS);
- ii. Use freshly made formulation and follow manufacturer's instructions for appropriate dilution and use;
- iii. Personal Protective Equipment (PPEs) such as gloves, face mask cover- all etc. used in the process of disinfection should be chemical-resistant so that the chemicals do not attack the materials;
- iv. Personal Protective Equipment (PPE) should be water-resistant
- v. Recommended nose mask is the N-95 rating which retains 95% of the particles;
- vi. The sleeves of the PPE (cover-all) should cover the hand gloves (Not tucked-in); vii. The PPE (cover-all) should cover the boot (Not tucked-in);
- viii. Keep people and animals away during the application until the product is dry and there is no odour;
- ix. For indoors, open windows and use fans to ventilate. Step away from odours if they become too strong;
- x. Wash hands after using any disinfectant including surface wipes;
- xi. Keep lids of chemical container tightly closed when not in use. Spills and accidents are more likely to happen when containers are open;
- xii. Keep disinfectants and disinfectant wipes out of reach of children and pets;
- xiii. Dispose the non-reusable PPE's such as gloves and masks after use in line with Healthcare Waste
- xiv. Do not use disinfectant wipes to clean hands or as baby wipes; and
- xv. Do not spray on aquatic life i.e. fish ponds, etc.

(b) Preparation of Disinfectant Solution

- i. Disinfectant solution should be made up daily (simple guide for preparation is annexed):
- ii. Gloves should be worn when handling and preparing disinfectant solutions;
- iii. Protective eye wear should be worn in case of splashing;
- iv. Preparation and application should be mainly on hard, non-porous surfaces (it can damage textiles and metals); and
- v. After application, surfaces should be allowed a minimum contact time of 10 minutes.
Enough time is required to kill the virus.

(c) Collection and Storage of Chemical waste:

The collection and storage of chemical waste must always be done in a safe manner including the following:

- i. Always wear appropriate Personal Protective Equipment (PPE), such as gloves, safety glasses and overall;
- ii. Collection of chemical waste should be done in area that is well ventilated;
- iii. Use a funnel to facilitate transfer of liquid waste;
- iv. Secondary containment in the form of a spill tray or other container should be

- provided for all waste containers in order to control any spills or leaks resulting from waste transfer;
- v. For liquid waste, the secondary containment must be large enough to hold the total volume of the waste container;
 - vi. All chemical waste containers must always be fully identified, even when they are partially filled.

The following are mandatory information that must be provided:

- ▶ Chemical names: All chemicals added to the container must be listed on the label, including those considered non-hazardous (e.g.: water). Do not use abbreviations; use full chemical names (e.g.: "sodium hydroxide", rather than "NaOH").
- ▶ Percentages: For mixed waste, the amount of each chemical added to the container should be tracked so that final percentages can be provided. This includes percentages of non-hazardous components such as water.
- ▶ Collector information: Fill out the contact phone number of collectors, location and the date the container was filled and sealed.

(d) Disposal of spent containers:

Spent containers should be segregated and not disposed with other wastes. They should be handled by hazardous waste managers.

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Annexure-I

Guidelines for Preparation of 1% sodium hypochlorite solution

Product	Available chlorine	1percent	NaDCC (1.5 g/ tablet) – tablets	60%	11 tablets to 1 litre water
Sodium hypochlorite – liquid bleach	3.5%	1 part bleach to 2.5 parts water	Chloramine – powder	25%	80g to 1 litre water
Sodium hypochlorite – liquid	5%	1 part bleach to 4 parts water	Bleaching powder	70%	7g to 1 litre water
NaDCC (sodium dichloro-isocyanurate) powder	60%	17 grams to 1 litre water	Any other	As per manufacturer's Instructions	