



## ANDHRA PRADESH STATE ROAD TRANSPORT CORPORATION

Lr No. OP4/COVID(02)/2020-MED

O/o the VC&MD,  
RTC House, VJA-13,  
Dt. 22.05.2020.

To

All Executive Directors(zone),  
Regional Managers,  
APSRTC.

Sub: HAND SANITIZATION & DISINFECTING OF PREMSIES/BUSES-

Provision of hand sanitizer to the passengers @2 to 3 ml prepared from Sodium hypochlorite solution of concentration 0.25% ( 2500 ppm) during boarding and cleaning of premises/ spraying inside the buses with Sodium hypochlorite solution 0.5% concentrate-  
Instructions issued - Reg

Ref: 1. Lr.no OP5/Gen(01)/COVID/2020-MED, dated 16.03.2020  
2. This office Lr. No even dated 20.05.2020

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Due to COVID-19 pandemic, the Govt has declared lockdown since 23.03.2020 and operation of buses restored w.e.f 21.05.2020. We are very well aware that disinfection of buses has to be taken care as well as the passengers hands are to be sanitized besides wearing of masks by the passengers and staff to contain the spreading of COVID-19 pandemic.

Vide reference 1<sup>st</sup> cited, it was instructed to disinfect every bus operated with Sodium hypochlorite solution 1% after completion of service after entering into garage. But, now, as per the guidelines from WHO, Sodium hypochlorite solution of 0.5% concentration ( equivalent to 5000 ppm) is sufficient for disinfection of frequently touched surfaces in home or health care facilities and 0.25% concentration (equivalent to 2500 ppm) solution is sufficient for hand sanitization. The matter was discussed with the R&D section , M/s Andhra sugars Ltd, Kovvur who are the manufacturers of the Sodium hypochlorite solution and they also recommended the guidelines by WHO along with their bulletins on the precautions to be taken.

In this connection, here afterwards, all the Managers are requested to use the 1% Sodium hypochlorite solution for disinfecting metal surfaces, 0.5% Sodium hypochlorite solution to disinfect the painted surfaces. Further, the ½ Ltr bottle supplied in all the buses through driver and also for the touch free sensor based dispensing units supplied for important bus stations has to be filled with Sodium hypochlorite solution of 0.25% concentrate to disinfect the hands of passengers while boarding the buses.

It is also informed that the ½ Ltr bottle may be placed at a suitable location in all types of buses so as to use through leg operation by passengers themselves.

Guidelines for handling and storage as well as precautions to be taken while using Sodium hypochlorite solution are enclosed overleaf with the attachments of leaflets supplied by M/s Andhra sugars Ltd, Kovvur.

Hence, all EDs and RMs are requested to inform the depots/units to take immediate action please.

  
Executive Director(E)

Copy to ED(A), ED(O), FA&CAO for information

Copy to Executive Assistant to VC&MD for information

## Guidelines & precautions for utilisation of Sodium Hypochlorite solution

- Sodium hypochlorite usually called as "Bleach" is a very hazardous substance used as a disinfecting agent
- 3.5 Ltr of concentrate (14%) to be added into 96.5 Ltrs of water to prepare a solution of Sodium hypochlorite 0.5% ( 5000 ppm) solution recommended for spraying purpose (disinfecting the surfaces). For hand wash, 0.25% solution ( 2520 ppm) is recommended.
- If the solution available is 5% concentrated for example, in such cases, 1 part of the solution shall be diluted with 4 parts of water (1:4) so that it becomes 1% solution.
- For spray purpose, 1% solution shall be mixed with water in 1: 1 ratio
- For hand wash to passengers, 1% solution shall be mixed with water in 1:3 ratio
- It is highly reactive to corrosive components and metals like iron, nickel, cobalt, copper etc. Hence to be stored in corrosion resistant containers ( plastic, ceramic, dark glass, cement)
- Never add water to the solution during handling or storage. Add solution into water for dilution purpose.
- Deterioration is rapid and accelerated by exposure to light, heat and ventilation
- Decomposes with heat and builds up pressure that may result in explosion
- Keep away from heat
- Personal contact shall be avoided
- Keep the container closed except when transferring material
- Wash thoroughly after handling
- Store in a cool , dry , well ventilated area
- Avoid exposure to direct sun light
- Long term storage for more than 30 days may result in decomposition
- Exposure to eye cause eye damage/ irritation . In such case, immediately hold the open and rinse gently with plenty of water for 15 minutes
- Exposure of skin causes burns/ irritation. In such case, remove the contaminated clothes and rinse with water for 15 minutes
- If swallowed, immediate treatment is advised. In such a case, never give anything through mouth unless advised by medical authorities.
- Use goggles as eye protection and also face shield if required
- Wear gloves made of nitrile rubber and protective clothing to protect skin
- Use air purifying respirator with an acid gas cartridge to safeguard from respiratory problems
- Provision to be made for eye wash and shower in the immediate work area

*Yun*  
22/5/2020

*B*  
22/5/2020



Hand wash:

100 Lts water + 1.8 Lts 14% Hypo Solution  
(Conc 0.5%)  
(5000 ppm)

Floor clean:

100 Lts water + 3.6 Lts 14% Hypo Solution  
(Conc 0.5%)  
(5000 ppm)

# PREVENTION IS THE CURE

The World Health Organization  
(WHO) recommends use of  
Sodium Hypochlorite  
at 0.5% (equivalent 5000ppm)  
for disinfection of frequently  
touched surfaces in home or  
healthcare facilities.



డి ఆంధ్రా సుగర్స్ లిమిటెడ్, కొవ్వూరు / సగ్గోండు

PHONE: 08813-231577/231578/231579

కెమికల్ పేరు : శానిటైజర్ సోడియం హైపోక్లోరైట్

పిచికారి చేయు సమయంలో తీసుకోవలసిన జాగ్రత్తలు :

1) ఈ ద్రావణమును ట్యాంక్ డబ్బాలలో మూతలు విలువ ఉంచవలెను. స్థిలు ట్యాంక్లలో నలువ ఉంచరాదు.

2) దీనిని సరిసరిముతను శుభ్రపరచుటకు, క్రిములను హాశము చేయుటకు బయట స్పృశ చేయవలెను. స్పృశ చేయు సమయంలో వేరుచు గ్లాజులు, నోటికి నూన్స్, కళ్ళుకు కళ్ళజోడులను వేసుకొనవలెను.

3) ఈ ద్రావణము కంటియందు ఒంటి మీద పడినచో వెంటనే ఎక్కువ నీళ్ళతో ఎక్కువ సమయం కడుగవలెను.

4) త్రాగు నీటిలో కలుపరాదు. ఈ ద్రావణమును జంతువులకు గాని, మొక్కలకు గాని పిచికారి చేయకూడదు.

5) పిచికారి చేసే ప్రదేశాలలో తక్కువ వయస్సుగల పిల్లలు ఎవరు లేకుండా జాగ్రత్తలు తీసుకొనవలెను.

6) ఈ ద్రావణమును ఉదయం సమయంలో గాని లేదా సాయంకాలం సమయంలో గాని పిచికారి చేయాలి.

7) శానిటైజర్ సోడియం హైపోక్లోరైట్ మిశ్రమము కలుపుకొను విధానము ప్రక్క పేజీలో సూచింపబడినది.

(P. T. O.)



# Preparation of 0.5% (5000 ppm) Sodium Hypochlorite Sanitizer for Spraying Purpose

Sl. No.	Method of Preparation of 0.5% (5000 ppm) Sodium Hypochlorite Sanitizer	Sanitizer Quantity
1)	0.9 Ltrs. of Concentrate (14%) to be added into 24.1 Ltrs. of Water	25 Ltrs.
2)	1.8 Ltrs. of Concentrate (14%) to be added into 48.2 Ltrs. of Water	50 Ltrs.
3)	3.5 Ltrs. of Concentrate (14%) to be added into 96.5 Ltrs. of Water	100 Ltrs.
4)	7 Ltrs. of Concentrate (14%) to be added into 193 Ltrs. of Water	200 Ltrs.
5)	10.5 Ltrs. of Concentrate (14%) to be added into 289.5 Ltrs. of Water	300 Ltrs.
6)	14 Ltrs. of Concentrate (14%) to be added into 386 Ltrs. of Water	400 Ltrs.
7)	17.5 Ltrs. of Concentrate (14%) to be added into 482.5 Ltrs. of Water	500 Ltrs.
8)	35 Ltrs. of Concentrate (14%) to be added into 965 Ltrs. of Water	1000 Ltrs.
9)	70 Ltrs. of Concentrate (14%) to be added into 1930 Ltrs. of Water	2000 Ltrs.
10)	105 Ltrs. of Concentrate (14%) to be added into 2895 Ltrs. of Water	3000 Ltrs.
11)	140 Ltrs. of Concentrate (14%) to be added into 3860 Ltrs. of Water	4000 Ltrs.
12)	175 Ltrs. of Concentrate (14%) to be added into 4825 Ltrs. of Water	5000 Ltrs.
13)	350 Ltrs. of Concentrate (14%) to be added into 9650 Ltrs. of Water	10000 Ltrs.
14)	700 Ltrs. of Concentrate (14%) to be added into 19300 Ltrs. of Water	20000 Ltrs.

ppm = Parts Per Million = mgpl)