



Good food. Responsibly®

Smithfield Foods
800 Industrial Dr
Denison, Iowa 51442

4-29- 2020

Russel Perry
Iowa OSHA Administrator
Iowa Division of Labor Des Moines
150 Des Moines
Des Moines, Iowa, 50309

Re: 1577952

Dear Mr. Perry,

This letter is in response to the correspondence and 1577952 received from your office on April 24, 2020.

Our facility has had 12 employees who have confirmed to have COVID-19. We have conducted a risk assessment and have attached a copy. The risk assessment includes the control measures implemented as noted throughout this document. Consistent with our Hazard ID and Risk Assessment process, the Covid-19 HIRA has also been shared with our employees throughout the facility. The HIRA was posted and elements have been shared verbally as described below.

Smithfield Foods, is considered a critical infrastructure operating facility in the food and agriculture industry, as defined by the U.S. Department of Homeland Security. As such, our workers are needed to maintain the continuity of our processing functions. We have instituted policies and protocols that strictly follow guidance from the Centers for Disease Control and Prevention (CDC) and OSHA. Among other things, we have taken the following steps:

- Educated employees about COVID-19 including symptoms and how to prevent spread of the virus;
- Instructed employees to stay home if sick, if they have exposure to someone diagnosed with COVID-19, or have traveled internationally;
- Encouraged good hygiene, including frequent and thorough hand washing and use of alcohol based hand sanitizer, and covering coughs and sneezes.

- Personnel self-identified with potential elevated risk are allowed to work from home or stay home.

We have communicated these protective measures verbally in meetings and in individual communications. Employees receive additional reminders as they enter pre-screening each day. In addition to verbal communications, we have signage and postings up throughout the facility. We also had a video message from our CEO, Ken Sullivan that played on our televisions in the break rooms. Additional communications are sent out via our Bee Keeper App which we've encouraged for all employees to download and subscribe to on their smartphones. In addition to the steps noted above, we have prohibited all non-essential visitors to our facility.

Our facility has implemented health screenings for all personnel prior to entering the facility to include temperature scans. This takes place on all shifts. We have also set up an area for secondary screening for anyone identified with an elevated temperature at initial screening. Employees who present with fevers during the secondary screening, or have any other COVID-19 symptoms, are sent home with instructions to quarantine for 14 days. We have designated a trained individual for each shift as the primary contact for employees with questions, symptoms or other concerns with regards to COVID-19. Employees who become sick while at work are sent home.

Due to the nature of our business, employees in production areas are issued nitrile gloves to prevent the spread of germs as part of their required attire. This PPE was in place prior to COVID-19. Washing and sanitizing hands multiple times daily also is part of our pre-existing normal required work practices, but we have reiterated and emphasized the importance of these steps in our communications during this pandemic. We have also added additional sanitizer stations throughout the facility. Upon entry to the facility, personnel (including non-production employees) have been issued facemasks and face shields. These infection management steps are monitored by management and quality assurance personnel while non-management employees are encouraged to monitor themselves and others.

Our production facility undergoes regular cleaning and sanitation by a third-party service contractor. Soon after news of COVID-19 broke, we began additional cleaning and disinfecting of frequently touched surfaces in welfare and common areas of our facility including restrooms and locker rooms with cleaning solutions approved by the EPA for this purpose. This additional cleaning and disinfecting is completed multiple times throughout each day. Areas cleaned and disinfected outside the production areas include:

- Countertops,
- copy machine control panel,
- tables, sink, faucets,
- all door panels and handles
- handrails on all stairwells
- time clock control panels
- light switch covers

In our breakrooms, we have disconnected vending machines and microwaves to assist in preventing the spread of Covid-19. In addition to routine cleaning and disinfecting the common areas during the work week, we initiated fogging in the welfare areas of the facility twice each week. Prior to this process, meetings were conducted to provide information regarding the process and chemical utilized in the process. We have also added safety signage/postings for the process.

Where possible, we have implemented social distancing and are continuously evaluating additional social distancing measures we could take consistent with maintaining food production as an essential business. These efforts include staggering breaks to assist in keeping with social distancing in the breakroom and locker room. We have also installed partitions on break room tables and added additional seating in hallways and throughout welfare areas. To assist with social distancing we erected a large tent and picnic tables with dividers for additional break and lunch space and opened conference rooms for additional seating at break times. In As noted with production areas, personnel are also scheduled to monitor social distancing of breakrooms and welfare areas.

While our plant is operating, we have reduced line speed and are working half day on cut & kill and have also staggered the work schedule to assist with social distancing. Employees self-identifying as high risk are allowed to quarantine at home and others with jobs that allow them to do so are working from home.

Attached are photos with examples of some of the measures described in this document. At Smithfield Foods, we are committed to the health and wellbeing of our employees. We are confident that the measures we've taken are protecting our employees; as we have not had any diagnosed case among our workers at this location. If you have further questions, or I can be of further assistance, please contact me.

Respectfully,


Darrin Walker
General Manager
Bill Mischnick
Plant Safety Manager

Location	Denison
Area	General Hazards
Date last reviewed	4/29/2020
Lead Assessor	William Mischnick

HAZARD Consider all tasks, activities, situations, conditions	HAZARD CATEGORY Routine, non-routine, or emergency	CONTRIBUTING FACTORS, PROCESSES, TASKS. (Why does the hazard exist?)	CONTROLS What is done to prevent exposure to this hazard?	7 SEVERITY	8 EXPOSURE	9 LIKELIHOOD	MONITORING OF CONTROL Monitoring for effectiveness
Large-scale outbreaks of infectious disease that can greatly increase morbidity and mortality of employees	Non-Routine	Increased global travel and integration, urbanization, working / socializing in close quarters, fellow employees continuing to work while ill	Engineering: Work Space Partitions, Cafeteria Table Separation, Common Area Partitions: Administrative: Temp Screen Plant Entry, Touch Point Cleaning, Workstation Sanitizers, Social Distancing Rules, HandWash Rules; PPE: Face Masks, Face Shields Determined per CDC guidance Restrict plant entry to one. Allow essential visitors only. Screen all visitors' travel history and health. Conduct helath screening of all personnel prior to entering the facility including body temperature scans; turn away those with fever and/or symptoms. Training to all employees on infectious disease, good health and hygiene practices, stay at home if symptoms arise, cover coughs, frequent hand washing / sanitizing and social distancing, face mask use. Communicate CDC posters in various languages in the facility and play training or disease on TVs using video loops in the break room and main hallway. Install additional sanitizing stations at entrances and shared areas. Perform additional surface sanitizing of general welfare areas and offices. Limit gatherings to less than ten. Stagger breaks and start times to limit ee contact. Separate break room seating and add partions to allow for 6' distance between ees. Conduct meetings via electronic media. Install physical barriers between work stations / welfare areas. Wear PPE - disposable face mask and face shields; nitrile gloves, full face hairnet. Demarking on the flooring in designated areas and rearrange conference room to provide social distancing.	10	13	4	Security Dept.. / Safety Dept.. monitors screening of essential visitors. Safety Dept. monitors / reports body temperature screening results. HR Dept. monitors and tracks potential exposures and directs employee quarantines. HR Dept. & Mgmt. monitors postings and video loops. Mgmt. monitors all employees for PPE usage and good hygiene practices.

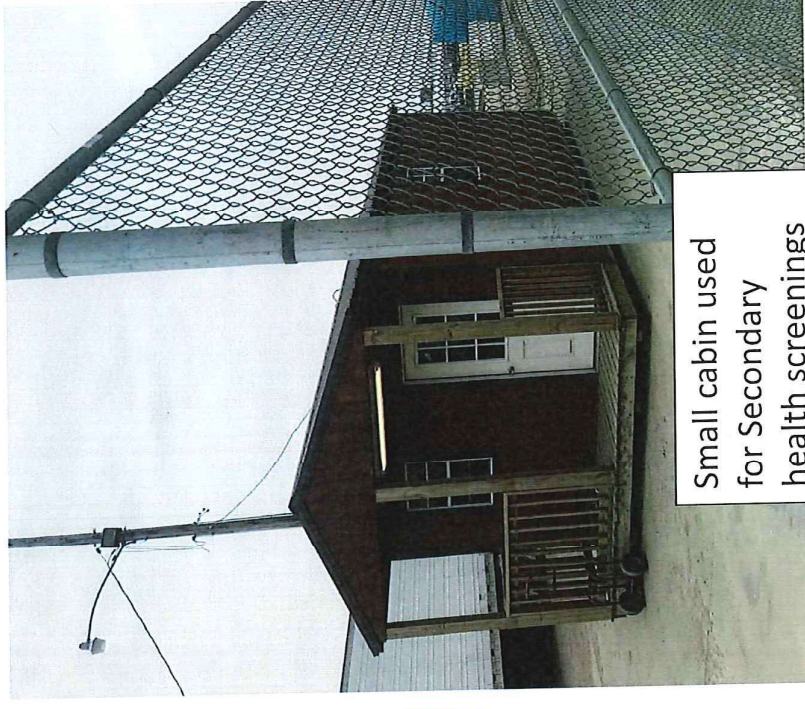
Initial and Secondary Screening



Initial temperature screenings



Infrared Scanner used for temp screenings



Small cabin used for Secondary health screenings

Signs, Postings & Communications

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Take Steps to Protect Others from COVID-19 (Coronavirus)

Stay Home if You Are Sick

Cover Coughs and Sneezes

Throw Used Tissues in the Trash

Wear A Face Mask if You Are Sick

Clean and Disinfect frequently touched Surfaces Daily

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How Smithfield is Protecting You from COVID-19 (Coronavirus)

Added Extra Hand Sanitizing Stations

Isolated Personal Protective Equipment

Consulting to Drive Improvements of Personal Hygiene

Enhanced Cleaning and Disinfection

Expanded Employee Health Benefits

Implemented Thermal Screening

Increased Social Distancing in Common Areas

Isolated Employees' Benches

Isolated Processing and Inspection

Follow CDC Guidelines

Reducing All Nonessential Visitation

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Cómo Smithfield lo protege del COVID-19 (Coronavirus)

Evitación de una exposición para el riesgo de infección

Cuando se encuentra la exposición a la bacteria se evita

Procedimientos de limpieza y desinfección

Aplicación de los protocolos de salud para los empleados

Implementación de medidas de bienestar

Implementación de la distancia social en áreas comunes

Implementación de protocolos de salud

Implementación de protocolos de salud

Implementación de protocolos de salud

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Siga estos pasos para proteger a los demás del COVID-19 (Coronavirus)

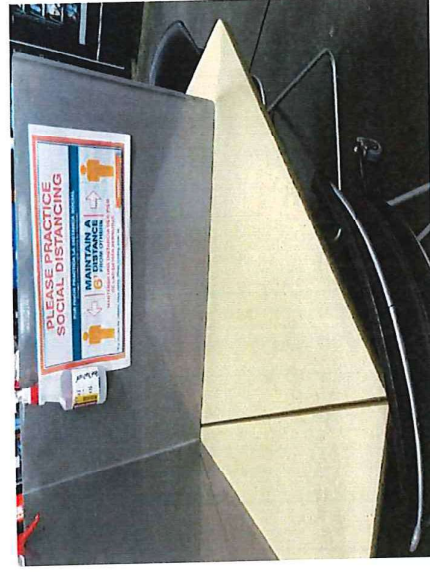
Quédese en casa si está enfermo

Cubrase al toser y estornudar

Deséchelos en los cubos de basura

Use mascarilla si está enfermo

Todos los días, limpie y desinfecte con frecuencia las superficies que le toque



Thank you for fighting COVID-19 by ensuring our food supply during these unprecedented times.

As part of our #ThankAFoodWorker initiative, your lunch is on us today!

You are responsible for making our tables. THANK YOU! #ThankAFoodWorker

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Gracias por luchar contra la COVID-19 asegurando nuestra cadena de suministro en estos momentos sin precedentes.

Como parte de nuestra iniciativa #ThankAFoodWorker, su almuerzo va por nuestra cuenta hoy!

Usted es responsable de hacer nuestras mesas. ¡GRACIAS! #ThankAFoodWorker

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BEEKEEPER

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Bee in the know on Company Updates with BEEKEEPER!

To Use BEEKEEPER:

1. Go to the App Store or Google Play
2. Search for BEEKEEPER-Digital Workplace
3. Install and Open the App

See your local HR Manager for step-by-step login instructions!

Note: Utilizando las pantallas de actualización de la empresa, los empleados pueden estar al tanto de las últimas noticias de la empresa.

BEEKEEPER

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Bee informado de las actualizaciones de la empresa con BEEKEEPER!

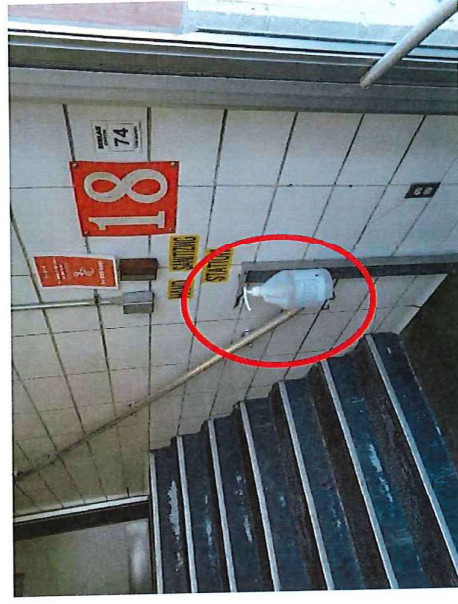
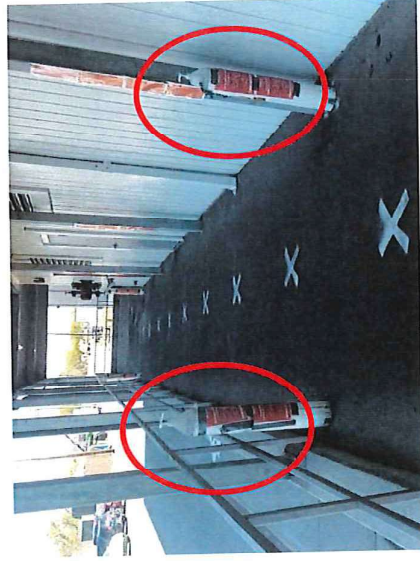
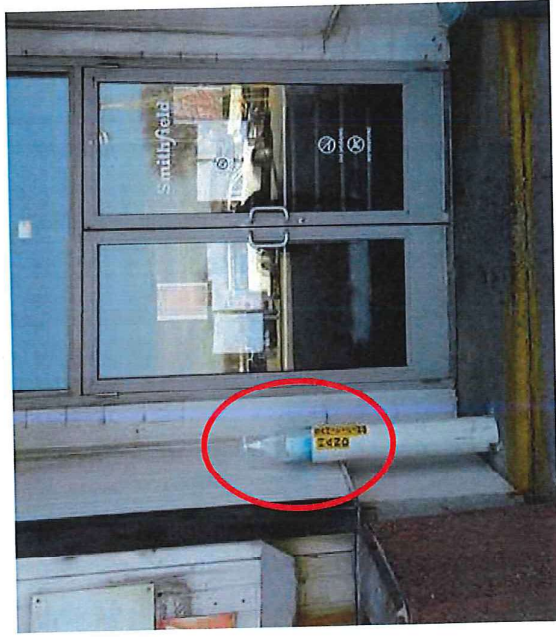
Para utilizar BEEKEEPER:

1. Vaya a la App Store o Google Play
2. Busque BEEKEEPER-Digital Workplace
3. Instálelo y abra la aplicación

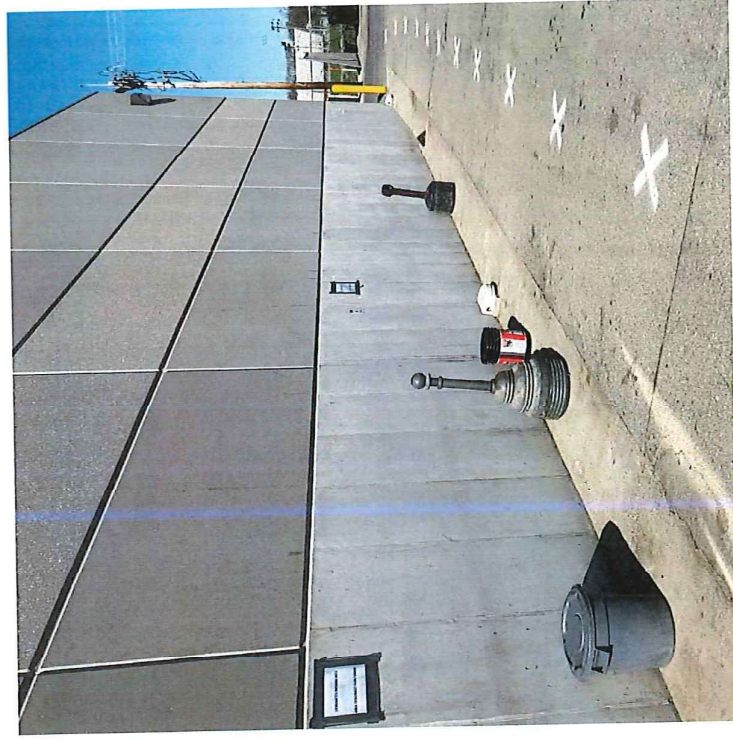
Consulte con su gerente de Recursos Humanos para obtener las instrucciones de cómo utilizar la aplicación.

Note: Utilizando las pantallas de actualización de la empresa, los empleados pueden estar al tanto de las últimas noticias de la empresa.

Hand Sanitizing



Social Distancing



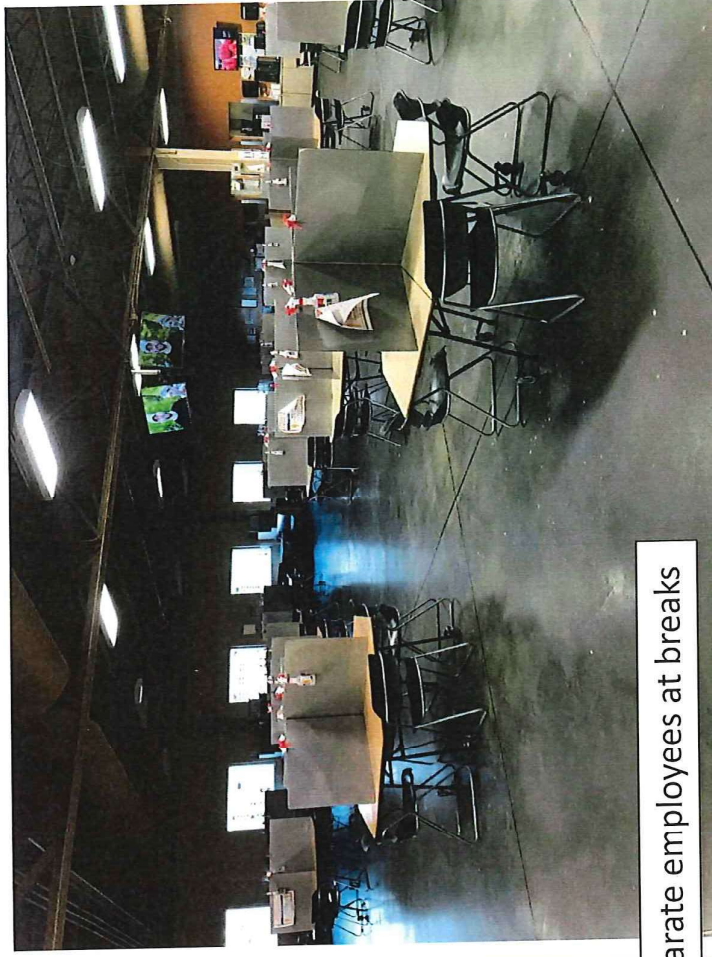
Signs and floor markings to assist with keeping 6 ft distance between people



Social Distancing

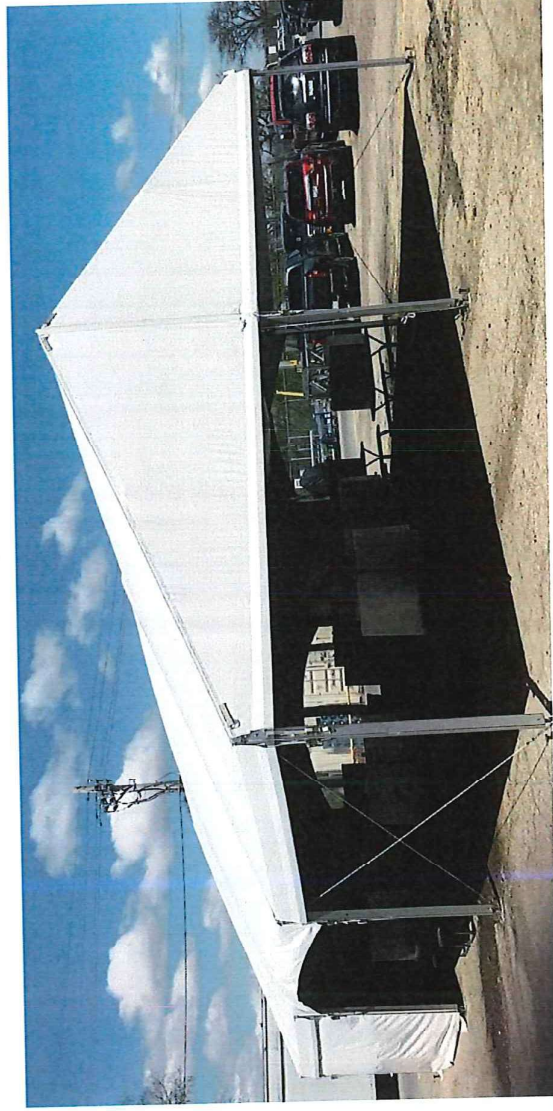


Tables separated and partitions to separate employees at breaks



Social Distancing

Tents and tables installed to provide additional room for distancing during breaks



Social Distancing



Barriers / Partitions installed



Alcohol Antiseptic 80% Topical Solution

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Alcohol Antiseptic 80% Topical Solution

Other means of identification : not applicable

Recommended use : Hand Sanitizer

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : Product is sold ready to use.

Company : Cedar Ridge Distillery
1441 Marak Rd.
Swisher, Iowa 52338
1-319-857-4300

Emergency telephone : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 03/22/2020

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Flammable liquid and vapor.
Causes serious eye irritation.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
Store in a well-ventilated place. Keep cool.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

SAFETY DATA SHEET

Alcohol Antiseptic 80% Topical Solution

Chemical Name
ethanol

CAS-No.
64-17-5

Concentration (%)
80

SECTION 4. FIRST AID MEASURES

- In case of eye contact : Rinse with water.
- In case of skin contact : Rinse with water.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.
- Protection of first-aiders : No special precautions are necessary for first aid responders.
- Notes to physician : Treat symptomatically.

See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Fire Hazard
Keep away from heat and sources of ignition.
Flash back possible over considerable distance.
Beware of vapors accumulating to form explosive concentrations.
Vapors can accumulate in low areas.
- Hazardous combustion products : Carbon oxides
- Special protective equipment for fire-fighters : Use personal protective equipment.
- Specific extinguishing methods : Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SAFETY DATA SHEET

Alcohol Antiseptic 80% Topical Solution

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from fire, sparks and heated surfaces.
- Conditions for safe storage : Keep away from heat and sources of ignition. Keep in a cool, well-ventilated place. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
- Storage temperature : 0 °C to 35 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m ³	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m ³	OSHA Z1

- Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

- Eye protection : No special protective equipment required.
- Hand protection : No special protective equipment required.
- Skin protection : No special protective equipment required.
- Respiratory protection : No personal respiratory protective equipment normally required.
- Hygiene measures : No specific measures identified.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : clear
- Odor : alcoholic
- pH : 6.3 - 8.5, 100 %
- Flash point : 23 °C closed cup
- Odor Threshold : no data available
- Melting point/freezing point : no data available
- Initial boiling point and boiling range : no data available

SAFETY DATA SHEET

Alcohol Antiseptic 80% Topical Solution

Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapor pressure	: no data available
Relative vapor density	: no data available
Relative density	: 0.869 - 0.873
Water solubility	: no data available
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available
Molecular weight	: no data available
VOC	: no data available

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: None known.
Hazardous decomposition products	: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	: Causes serious eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.
Chronic Exposure	: Health injuries are not known or expected under normal use.

Experience with human exposure

SAFETY DATA SHEET

Alcohol Antiseptic 80% Topical Solution

Eye contact : Redness, Pain, Irritation
Skin contact : No symptoms known or expected.
Ingestion : No symptoms known or expected.
Inhalation : No symptoms known or expected.

Toxicity

Acute oral toxicity : Acute toxicity estimate > 5,000 mg/kg
Acute inhalation toxicity : no data available
Acute dermal toxicity : no data available
Skin corrosion/irritation : no data available
Serious eye damage/eye irritation : no data available
Respiratory or skin sensitization : no data available

Carcinogenicity

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive effects : no data available
Germ cell mutagenicity : no data available
Teratogenicity : no data available
STOT-single exposure : The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT-repeated exposure : no data available
Aspiration toxicity : no data available

Ingredients

Acute Inhalation toxicity : ethanol
4 h LC50 rat: 117 mg/l

Ingredients

Acute dermal toxicity : ethanol
LD50 rabbit: 15,800 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Harmful to aquatic life.

SAFETY DATA SHEET

Alcohol Antiseptic 80% Topical Solution

Product

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Ingredients

Toxicity to fish : ethanol
96 h LC50 Fish: 11,000 mg/l

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste : D001 (Ignitable)

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

UN number : 1987
Description of the goods : Alcohol, n.o.s.
Class : 3
Packing group : II
Environmentally hazardous : no

Sea transport (IMDG/IMO)

UN number : 1987
Description of the goods : Alcohol, n.o.s.

SAFETY DATA SHEET

Alcohol Antiseptic 80% Topical Solution

Class : 3
Packing group : II
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

1907/2006 (EU) :
not determined

Switzerland. New notified substances and declared preparations :
not determined

United States TSCA Inventory :
On TSCA Inventory

Canadian Domestic Substances List (DSL) :
This product contains one or several components that are not on the Canadian DSL nor NDSL.

Australia Inventory of Chemical Substances (AICS) :
not determined

New Zealand. Inventory of Chemical Substances :
not determined

Japan. ENCS - Existing and New Chemical Substances Inventory :
not determined

Japan. ISHL - Inventory of Chemical Substances (METI) :
not determined

Korea. Korean Existing Chemicals Inventory (KECI) :
not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

SAFETY DATA SHEET

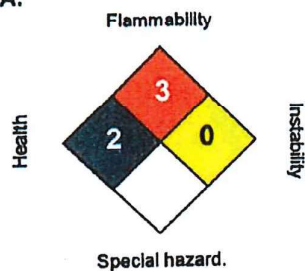
Alcohol Antiseptic 80% Topical Solution

not determined

China. Inventory of Existing Chemical Substances in China (IECSC) :
not determined

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Issuing date : 03/22/2020
Version : 1.0
Prepared by : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



Packers Chemical, Inc.
"The Company With Priorities"

Revision Date 21-Apr-2015

SAFETY DATA SHEET

Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **PURE Hard Surface**

Other means of identification

Product Code 30250

Recommended use of the chemical and restrictions on use

Recommended Use Ready To Use Hard Surface Disinfectant and Food Contact Surface Sanitizer

Uses advised against It is a violation of federal law to use this product in a manner inconsistent with its labeling

Details of the supplier of the safety data sheet

Manufacturer Address

Packers Chemical, Inc.
3729 Peddle Hollow Road
Kieler, WI 53812

Emergency telephone number

Company Phone Number 888-671-5366
Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health
Appearance Aqueous solution **Physical state** Liquid **Odor** Odorless

Hazards not otherwise classified (HNOC)

Not Applicable

Other Information

Unknown Acute Toxicity 4.849% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	weight-%
Water	7732-18-5	> 95
Citric acid	77-92-9	< 5.0
Silver ions		0.0030

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Eye contact

Hold eye(s) open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye(s). If eye irritation persists: Get medical advice/attention.

Skin contact

Rinse with water. Get medical attention if irritation develops and persists.

Inhalation

If breathing is affected, remove victim to fresh air and consult a physician.

Ingestion

Consult a physician if discomfort occurs. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for symptom information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing agents appropriate for surrounding fire.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

No information available.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Use personal protection recommended in Section 8. Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes.

For emergency responders

Isolate area. Keep unnecessary personnel away.

Environmental precautions**Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Collect spillage. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Following product recovery, flush area with water.

7. HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Use personal protection recommended in Section 8. Avoid contact with eyes. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep tightly closed in a dry and cool place. Do not contaminate water, food or feed. Keep from freezing. Protect from direct sunlight.

Incompatible materials

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

No special protection or precautions have been identified for using this product under directed consumer use conditions. The following recommendations are given for production facilities and for other conditions and situations where there is increased potential for accidental, large-scale or prolonged exposure.

Appropriate engineering controls**Engineering Controls**

Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment**Eyeface protection**

Avoid contact with eyes. Safety glasses when the possibility of splashing exists.

Skin and body protection

For prolonged and frequent use of this product rubber gloves are recommended.

Respiratory protection

No protective equipment is needed under normal use conditions.

General Hygiene Considerations

Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing and shoes before reuse. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Physical state**

Liquid

Appearance

Aqueous solution

Color

Colorless

Property

Values

pH

2.1

Melting point/freezing point

No information available

Boiling point / boiling range

No information available

Flash point

No information available

Evaporation rate

No information available

Flammability (solid, gas)

No information available

Flammability Limit in Air**Upper flammability limit:**

No information available

Lower flammability limit:

No information available

Vapor pressure

No information available

Vapor density

No information available

Specific Gravity

1.0 g/cc

Water solubility

Soluble in water

Solubility in other solvents

No information available

Partition coefficient

No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

Kinematic viscosity

No information available

Dynamic viscosity

No information available

Odor

Odorless

Odor threshold

No information available

Remarks - Method

Explosive properties	No information available
Oxidizing properties	No information available
Other Information	
VOC Content (%)	0.00%

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

None known.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Inhalation**

None under normal use conditions.

Eye contact

May cause slight irritation.

Skin Contact

Prolonged contact may cause slight irritation.

Ingestion

Not an expected route of exposure.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
7732-18-5			
Citric acid	= 3000 mg/kg (Rat)	-	-
77-92-9			

Information on toxicological effects**Symptoms**

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information**Unknown Acute Toxicity**

4.849% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document . mg/kg mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0.003% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Citric acid 77-92-9	-	1516: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static	-

Persistence and degradability

Ionic silver is degraded into inert elemental silver or insoluble silver complexes in the environment.

Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Citric acid 77-92-9	-1.72

Mobility

Soluble in water.

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

PURE Hard Surface

Revision Date 21-Apr-2015

Contaminated packaging Dispose of in accordance with federal, state and local regulations.**14. TRANSPORT INFORMATION****DOT** Not regulated**15. REGULATORY INFORMATION****International Inventories****TSCA** Does not comply
DSL/NDSL Does not comply
EINECS/ELINCS Does not comply**Legend:****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories**Acute health hazard** No
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations**U.S. EPA Label Information****EPA Pesticide Registration Number** 72977-5-63679**16. OTHER INFORMATION**

NFPA	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties
				None
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection
				None

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Revision Note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The health hazards given on this SDS apply to this product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of exposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure of the diluted product under conditions of ordinary use.

End of Safety Data Sheet