

City of Hastings

Employee Right-to-Know Manual

PURPOSE

This program manual is designed to implement the provisions of the Minnesota Employee Right to Know Act of 1983. This manual presents the major aspects of the standards. These standards require employers to evaluate their workplaces for the existence of hazardous substances, harmful physical agents, and infectious agents and to provide training and information to those employees covered under this act who are routinely exposed to those substances and agents.

SCOPE OF THE EMPLOYEE RIGHT TO KNOW PROGRAM

This Employee Right to Know Program has been developed under applicable state and federal regulations. It has been approved as the City's right-to-know program by the appropriate administrative or governing authority identified below. The use of the word City shall be construed to mean the municipal and such other departments of city government for which this program has been adopted.

This Employee Right to Know Program will be reviewed for relevant updates by the Safety Committee every two years.

See Appendix A for Approval and Revision History

Administrative Responsibilities

The following person is responsible for administering the Employee Right to Know Program in the City. This person has the primary responsibility to oversee the ERTK program and ensure that it is organized, implemented, and updated as required by the Employee Right to Know Standard.

Program Administrator for City Departments Covered in this program.

Megan Schlei – Human Resources Generalist

To ensure an effective Employee Right to Know Program, the following supervisors are responsible for carrying out the details of this program in their work areas.

Supervisor	Department
Bryan Schowalter	Police Department
Chris Paulson	Fire Department
Cory Likes	Parks & Recreation Department
Charlies Judge	Facilities Management
Joe Spagnoletti	Public Works Superintendent

Hazard Determination

The City inventories a list of hazardous substances, harmful physical agents, and infectious agents listed in subparts 5206.0400, 5206.0500, and 5206.0700 of the Employee Right to Know rules. The City will exercise reasonable diligence in evaluating the workplace for the presence of recognized hazardous substances, harmful physical agents, and infectious agents and ensure that employees are provided with the rights stated in the standard. The City understands that the hazardous substances list includes the majority of hazardous substances that will be encountered in Minnesota (or other states) and that it does not include <u>all</u> hazardous substances and may not always be current. Therefore, the evaluations conducted by the specific manufacturer of the substances used in the City will be accepted and employees provided with the rights stated in the standard.

HAZARDOUS SUBSTANCES

The City has developed a list of all hazardous substances and the operations where they are used. The intent is to inform employees about the hazardous substances they may encounter in the workplace.

Work area supervisors or delegated employees will update the list whenever a new hazardous substance is introduced into that work area. Supervisors will report the name of the new hazardous substance and the operation where it will be used to the chemical management system so that it can be added to the list before employees in the work area use it.

Velocity Chemical Management

The list of hazardous substances used in the City is available for review at the following location(s).

Location
City Intranet Page
Chem Management System
Chem Management App

Hazardous Substance Container Labeling

The Safety Committee and its members are responsible for coordinating labeling activities among supervisors and employees to make sure they are uniform and follow the rules of the City.

The City understands that the manufacturer of a hazardous substance or mixture of hazardous substances, or of equipment that generates a harmful physical agent is obligated to provide the information necessary for the City to comply with Employee Right to Know requirements. Supervisors at the City will evaluate containers arriving in their work area to ensure that the label, tag, or markings meet the following requirements:

- 1) Identifies the hazardous substance.
- 2) Appropriate hazard warning(s).
- 3) Name and address of the chemical manufacturer, importer, or other responsible parties.

Should a product be received that does not meet the above-stated labeling requirements, the supervisors will immediately label, tag, or mark any hazardous substance container at the City so that it:

- 1) Identifies the hazardous substance and the identity corresponds with the name used on the SDS/MSDS and inventory list.
- 2) Indicates the appropriate hazard warning
- 3) Does not conflict with labels from the Department of Transportation.

Supervisors will also ensure:

- 1) The label, tag, or marking is legible, in English, and is prominently displayed.
- 2) The incoming containers of hazardous substances include the manufacturer's name and address.
- 3) Chemical labels for OSHA-specific standards comply with those regulations.
- 4) The labels on incoming containers of hazardous substances are not removed or defaced unless the container is immediately marked, tagged, or labeled with the required information.
- 5) Stationary processes that contain hazardous substances have the appropriate label or alternative warning attached that conveys the required information.
- 6) Contracted employers working at the facility are notified of the labeling procedure and understand the label (warning) system.
- 7) The City recognizes labeling that complies with the following regulations and meets the requirements of the Employee Right to Know Program:
- 8) Pesticides labeled under the Federal Insecticide, Fungicide, and Rodenticide Act.
- 9) Any food, food additive, color additive, drug, or cosmetic including materials intended for use as ingredients in products labeled under the requirements of the Federal Food, Drug, and Cosmetic Act.
- 10) Distilled spirits (beverages alcohols), wines, or malt beverages labeled under the Federal Alcohol Administration Act.
- 11) Any consumer products as defined in the Consumer Product Safety Act and labeled under the requirements of that act.
- 12) Any hazardous substance as defined in the Federal Hazardous Substance Act and labeled under the requirements of that act.

In-House Label Explanation and Description

Supervisors will ensure that all secondary containers in the workplace are labeled according to the following requirements:

- 1) Identifies the product and any hazardous substances.
- 2) Appropriate hazard warning(s).
- 3) The label, tag, or marking is legible, in English, and is prominently displayed.

Material Safety Data Sheets

The City will obtain and collect the safety data sheets (SDS) for all hazardous substances purchased from manufacturers, importers, and distributors of said substances. A current hard copy or an electronic copy will be on file.

Where an in-house process generates hazardous substances, a "generic" SDS/MSDS of the hazardous substance will be obtained and placed in the City SDS/MSDS file. The intent is to provide a "safety data sheet" for all hazardous substances encountered by employees in the workplace.

The following committee/person is responsible for making sure the SDS/MSDS file at the City is maintained and updated as necessary:

Safety Committee & Human Resources Generalist

Supervisors will notify this person before the time that a new hazardous substance is used in the workplace so that the appropriate SDS can be obtained.

The MSDS file (electronic) at the City is located at the following location(s):

Location
City Intranet
Chem Management Website
Chem Management App

These files are available to all employees at the SDS/MSDS file location or for more information contact your immediate supervisor.

HARMFUL PHYSICAL AGENTS

The City recognizes the list of harmful physical agents listed/inventoried below. The City will exercise reasonable diligence in evaluating the workplace for the presence of recognized harmful physical agents at a level that may be expected to approximate or exceed the permissible exposure limit or the applicable action level. The City understands that the list/inventory of harmful physical agents includes the majority of harmful physical agents that will be encountered in Minnesota (or other states). The City will make a diligent effort to ensure that this list is updated as necessary. The City will ensure that exposed employees are afforded their rights as established in the Employee Right to Know rules.

List of Harmful Physical Agents

- 1) Heat
- 2) Noise
- 3) Ionizing Radiation
- 4) Nonionizing Radiation

Harmful Physical Agent Labeling

The City will ensure that equipment or work areas that specifically generate harmful physical agents at a level that may be expected to approximate or exceed the permissible exposure limit or applicable action will be labeled, marked, or tagged. Labeling will include:

- 1) The name of the physical agent.
- 2) The appropriate hazard warning.

INFECTIOUS AGENTS

The City recognizes the list of infectious agents listed in Minnesota rule 5260.0600. The City will exercise reasonable diligence in evaluating the workplace for the presence of recognized and other infectious agents. The City understands that the list of infectious agents includes the majority of communicable infectious agents that will be encountered in Minnesota. The City will make a diligent effort to ensure that the most current list is provided in this program. The City will ensure employees who are routinely exposed are provided with the rights established in the Employee Right to Know rules.

Bloodborne Pathogens

The City maintains a separate bloodborne pathogens program that complies with the OSHA 1910.1030 regulations. This program covers all reasonably anticipated infectious agent exposures in the City.

EMPLOYEE TRAINING AND INFORMATION

The City provides each employee with information and training about the hazardous substances used in its operations and any exposure to harmful physical agents and/or infectious agents at a level that may be expected to approximate or exceed the permissible exposure limits. Additional employee training will be conducted whenever a new hazardous substance is introduced and/or the work situation changes that may increase the level of exposure to any harmful physical agent or infectious agent. New or transferred employees will receive the appropriate training and information specific to their work assignment, before beginning that assignment.

The following person is responsible for coordinating the employee information and training programs in the City.

Megan Schlei, Human Resources Generalist
(Safety Coordinator)

The City will inform the employees of:

- 1) The requirements of the Minnesota Employee Right to Know law.
- 2) The operations where hazardous substances are used including the hazardous substances that are contained in unlabeled pipes.
- 3) The operations where exposure to harmful physical agents and harmful infectious agents may be expected.
- 4) The location of the written Employee Right to Know Program, the list/inventory of hazardous substances, and the corresponding safety data sheets for those substances.
- 5) The labeling system employed in the City.

The City will train employees routinely exposed to hazardous substances:

- 1) The name or names of the substance including any generic or chemical name, trade name, and commonly used name.
- 2) The level, if any and if known, at which exposure to the substance has been restricted according to standards. If no standard has been adopted, according to guidelines established by competent professional groups, which have researched to determine the hazardous properties of potentially hazardous substances.
- 3) The primary routes of entry and the known acute and chronic effects of exposure at hazardous levels.
- 4) The known symptoms of the effects.
- 5) Any potential for flammability, explosion, or reactivity of the substance.
- 6) Appropriate emergency treatment.
- 7) The known proper conditions for use of and exposure to the substance.
- 8) An explanation of the use and limitations of methods of control that will prevent or reduce exposure to appropriate engineering controls and work practices, personal protective equipment, and housekeeping.
- 9) An explanation of the basis for the selection of personal protective equipment, including information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment.
- 10) Procedures for cleanup of leaks and spills.
- 11) The name, phone number, and address of a manufacturer of the hazardous substance.
- 12) The location of a written copy/electronic (SDS/MSDS) of the above information

The City will train employees who may be routinely exposed to harmful physical agents. This training will include:

- 1) The name or names of the physical agent including any commonly used synonym.
- 2) The level, if any and if known, at which exposure to the physical agent has been restricted according to adopted standards, or, if no standard has been adopted, according to guidelines established by competent professional groups including but not limited to the American Conference of Governmental Industrial Hygienists, the Center for Disease Control, the Bureau of Radiological Health, and the American National Standards Institute.
- 3) The known acute and chronic effects of exposure at hazardous levels.
- 4) The known symptoms of exposure at hazardous levels.
- 5) The appropriate emergency treatment.
- 6) The known proper conditions for safe use of and exposure to the physical agent.
- 7) An explanation of the use and limitations of methods of control that will prevent or reduce exposure to appropriate engineering controls and work practices, personal protective equipment, and housekeeping.
- 8) An explanation of the basis for the selection of personal protective equipment, including information on the types, proper use, limitations, and location of personal protective equipment.
- 9) The name, phone number, and address, if appropriate, of the manufacturer of the equipment that generates the harmful physical agent.
- 10) A written copy of all of the above information which shall be readily accessible in the area or areas in which the harmful physical agent is present and where the employee may be exposed to the agent through use, handling, or otherwise.

The City will train employees who may be routinely exposed to infectious agents. This training will include:

- 1. A general explanation of the epidemiology and symptoms of infectious diseases including the hazards to special at-risk employee groups.
- 2. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to infectious agents including blood and other infectious materials.
- 3. An explanation of the chain of infection, or infectious disease process, including agents, reservoirs, modes of escape from reservoirs, modes of transmission, modes of entry into host, and host susceptibility.
- 4. An explanation of the employer's exposure control program.
- 5. An explanation of the use and limitations of methods of control that will prevent or reduce exposure including universal precautions, appropriate engineering controls and work practices, personal protective equipment, and housekeeping.
- 6. An explanation of the basis for the selection of personal protective equipment, including information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment.
- 7. An explanation of the proper procedures for the cleanup of blood or body fluids.
- 8. An explanation of the recommended immunization practices, including, but not limited to, the HBV vaccine, and the efficacy, safety, and benefits of being vaccinated.
- 9. Procedures to follow if an exposure incident occurs, method of reporting the incident, and information on the post-exposure evaluation and medical follow-up that will be available.
- 10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- 11. An explanation of the signs, labels, tags, or color coding used to denote biohazards.
- 12. The location of the regulatory text of this standard and explanation of its contents.
- 13. The location and contents of other pertinent information that explain the symptoms and effects of each infectious agent that the employee may be exposed to.

NOTE: The Bloodborne Pathogens Program addresses the aspects outlined in the above-stated information.

The City generally schedules employee right-to-know training. Other sessions will be arranged as needed.

Attendance records employee training and information sessions are located:

Location
LaserFiche
KnowBe4

The following supervisors are responsible for ensuring that employees for the respective department receive training whenever a new hazardous substance is introduced and/or the work situation changes that may increase the level of exposure to any harmful physical agent or infectious agent; and new or transferred employees receive the appropriate training and information specific to their work assignment, before beginning that assignment.

Supervisor	Department
Joe Spagnoletti	Public Works
Cory Like	Parks & Recreation
Megan Schlei	Administration
Bryan Schowalter	Police
Chris Paulson	Fire
Charlie Judge	Facilities

SPECIAL CONSIDERATIONS

Non-routine and Special Tasks

The program administrator, in cooperation with the Safety Committee, will review known physical and health hazards with employees who must do non-routine and special tasks. This instruction will generally occur at the time the work is scheduled. However, in an emergency, the review may occur immediately before the work begins.

If appropriate, the instruction will include:

- 1) Identification of the hazardous substance involved.
- 2) Methods of detecting the presence or release of the substances.
- 3) Specific physical and health hazards of the substance involved.
- 4) Measures the employee(s) can take to protect themselves from these hazards such as appropriate work practices, emergency procedures, and proper protective equipment.
- 5) An opportunity for employees to review the safety data sheets for any of the hazardous chemicals involved.

CONTRACTORS

Contractors will be notified of the hazardous substances, harmful physical agents, and infectious agents they may encounter in the City and the protective measures that can be taken to avoid them.

The following supervisors will complete the "Contractor Notification" form and give it to the contractor before the work begins.

Supervisor	Department	
Joe Spagnoletti	Public Works	
Bryan Schowalter	Police	
Chris Paulson	Fire	
Cory Likes	Parks & Recreation	
Charlie Judge	Facilities	
Megan Schlei	Administration	

Contractors are required to notify the City of any hazardous substance brought onto a city work site and shall provide the city with a material safety data sheet for each chemical. The department supervisor is responsible for obtaining this information and conveying it to any exposed City employee.

FORMS

City of Hastings

Identification:

Employee Right to Know, Contractor Notification Form



Purpose:

The Minnesota Employee Right to Know law requires that the above-named City notify on-site contractors of the hazardous substances, harmful physical agents, and/or infectious agents they may encounter at this workplace and the appropriate protective equipment necessary to avoid those hazards. This form is to be completed by the Department Supervisor and given to the contractor prior to starting the contracted work in an effort to meet the intent of that law.

Contractor Name:	Phone:	
Contractor Address:		
Project Name/Location:		
Department Supervisor/Title:		
The hazardous substances used by the City to which the	e contractor's employees may be exposed are listed or	the reverse side.
The material safety data sheets for these chemicals car	n be found at the following location(s):	
Building/Office	Location/Contact Person	
City Hall	Charlie Judge or Megan Schlei	
Public Works	Joe Spagnoletti	
Parks	Cory Likes	
Fire	Chris Paulson	
Police	Bryan Schowalter	
		'
Acknowledged receipt of this form:		
Contractor Representative	Date	
Municipal City Representative	Date	

Harmful Substances Harmful Physical Agents Infectious Agents	Measures to take to avoid exposure	Personal Protective Equipment Required (Contractor Responsibility)

THE LIST/INVENTORY OF HAZARDOUS CHEMICALS

	City of Hastings	
Department	Location/Work Area	
Contact Person/Phone Number		_

Operation	on SDS	Extremely Hazardous	Hazard Rating		
Y/N	Substance Y/N	н	F	R	

APPENDIX A
Approval and Revision History

January 2024

APPENDIX B -

Safety Data Sheet Checklist

Each SDS must contain the following information:

- Product or chemical identity used on the label.
- Manufacturer's name and address.
- Chemical and common names of each hazardous ingredient.
- Name, address, and phone number for emergency information.
- Preparation or revision date.
- The hazardous chemical's physical and chemical characteristics (such as vapor pressure and flashpoint).
- Physical hazards, including the potential for fire, explosion, and reactivity.
- Known health hazards.
- OSHA permissible exposure limits (PEL), ACGIH Threshold Limit Value (TLV) or other exposure limits.
- Emergency and first-aid procedures.
- Whether OSHA, NTP or IARC lists the ingredients as a carcinogen.
- Precautions for safe handling and use.
- Control measures such as engineering controls, work practices, or personal protective equipment.
- Primary routes of entry.
- Procedures for spills, leaks and clean-up.

eBinder Product List
Product Name
Industrial Enamel HS Ultradeep Base
KRYLON Crystal Clear Acrylic Coating
Ursa Super Plus EC SAE 15W-40
ZEP GLASS CLEANER_20N19_12CT
KILZ 2 All-Purpose Interior/Exterior Primer
NAPA PREM PERF GEAR OIL SAE 80W-90 Gear Oil
SPADNS Reagent for Fluoride
ZEP DZ-7 NEUTRAL DISINFECTANT CLEANER 2.5GL
Stride Citrus SC Neutral Cleaner
3M Neutral Cleaner Concentrate
ACE RUST STOP Protective Enamel Indoor/Outdoor Black Gloss
WD-40 MULTI-USE PRODUCT - [Aerosol]
Wet Ones Antibacterial Hand Wipes Fresh Scent
Clorox Disinfecting Wipes1 - Crisp Lemon
Armor All Original Protectant - Spray
CONSUME ECO-LYZER GOJO Green Certified Foam Hand, Hair & Body Wash
CLR CALCIUM, LIME & RUST REMOVER
Woolite Clean & Care Laundry Detergent - Sparkling Falls Scent
Hard Surface Cleaner
Easy-Off Heavy Duty Oven Cleaner
TURTLE WAX RUBBING COMPOUND HEAVY DUTY CLEANER
845 Insulator Wax
Castrol Super Clean AccuVision Direct Apply
Gold Class Car Wash Shampoo & Conditioner G71 [G7101 G7116 G7164 G7148K]
Brasso Metal Polish
PlastX Clear Plastic Cleaner & Polish G123 [G12306 G12310]
Ultimate Liquid Wax G182 [G18216 G18220]
Rain-X Pro Cerami-X Glass Cleaner + Water Repellent
Charcoal Lighter Fluid
ACE Premium Enamel Paint + Primer White Gloss
ACE RUST STOP INTERIOR/EXTERIOR OIL-BASED PRIMER, GRAY
DECK CORRECT REDWOOD
STA-BIL Storage Fuel Stabiliser
Stops Rust Advanced / Semi-Gloss Protective Enamel Spray Paint
RUST-OLEUM SPECIALTY COATINGS FLUORESCENT AEROSOL
KRYLON Interior/Exterior Paint Pumpkin Orange
Professional / High Performance Enamel Spray Paint - Metallic Coating
Hoppes Elite Gun Oil GO4 No. 9 Gun Bore Cleaner
Centerfire rifle and pistol ammunition (all calibers)
PURELL Hand Sanitizing Wipes
SPR200 Small Particle Reagent- White
Aervoe Construction Marking Paint - Aerosol
MetriCide OPA Plus
GRAZONNEXT High Load Herbicide
Hydrochloric Acid Solution
John Deere Hy-Gard and Hy-Gard LV Transmission and Hydraulic Fluid
Brighton Professional Surface Disinfectant Spray
Kingsford Odorless Charcoal Lighter
ACCENTS 2X +SSPR 6PK MATTE BLACK
Sea Foam Motor Treatment
SPRAY PRODUCTS STARTING FLUID
TruFuel 4-cycle Fuel
F-500 Multi-Purpose Encapsulator Agent
ORTHO HOME DEFENSE INSECT KILLER FOR INDOOR & PERIMETER CONCENTRATE
AUTORF +SSPR 6PK AUTO PRIME SELF ETCHNG
MAG1 HI-TEMP DISC BRAKE WHEEL BEARING GREASE
Coil Cleaner (aerosol)
MOBIL 1 5W-30 Shall Patella FLC Dra diluted 50/50

Shell Rotella ELC Pre-diluted 50/50

MOBIL 1 15W-50

Manufacturer THE SHERWIN-WILLIAMS COMPANY Krylon Products Group Chevron Products Company a division of Chevron U.S.A. Inc. ZEP Inc. Masterchem Industries LLC Valvoline Global Operations Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	Revision Date 2/4/2024 12:00:00 AM 1/21/2024 12:00:00 AM 3/27/2024 12:00:00 AM 10/1/2023 12:00:00 AM 3/7/2024 12:00:00 AM 1/17/2024 12:00:00 AM 1/26/2024 12:00:00 AM 1/26/2024 12:00:00 AM 12/19/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM	CAS#	Date Added 4/3/2024 4/3/2024 4/3/2024 4/3/2024 3/22/2024 3/22/2024 3/22/2024 2/22/2024
Krylon Products Group Chevron Products Company a division of Chevron U.S.A. Inc. ZEP Inc. Masterchem Industries LLC Valvoline Global Operations Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	1/21/2024 12:00:00 AM 3/27/2024 12:00:00 AM 10/1/2023 12:00:00 AM 3/7/2024 12:00:00 AM 1/17/2024 12:00:00 AM 1/26/2024 12:00:00 AM 10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/16/2023 12:00:00 AM		4/3/2024 4/3/2024 4/3/2024 3/22/2024 3/22/2024 3/22/2024
Chevron Products Company a division of Chevron U.S.A. Inc. ZEP Inc. Masterchem Industries LLC Valvoline Global Operations Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	3/27/2024 12:00:00 AM 10/1/2023 12:00:00 AM 3/7/2024 12:00:00 AM 1/17/2024 12:00:00 AM 1/26/2024 12:00:00 AM 10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/16/2023 12:00:00 AM		4/3/2024 4/3/2024 3/22/2024 3/22/2024 3/22/2024
ZEP Inc. Masterchem Industries LLC Valvoline Global Operations Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	10/1/2023 12:00:00 AM 3/7/2024 12:00:00 AM 1/17/2024 12:00:00 AM 1/26/2024 12:00:00 AM 10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/3/2023 12:00:00 AM		4/3/2024 3/22/2024 3/22/2024 3/22/2024
Masterchem Industries LLC Valvoline Global Operations Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	3/7/2024 12:00:00 AM 1/17/2024 12:00:00 AM 1/26/2024 12:00:00 AM 10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/16/2023 12:00:00 AM		3/22/2024 3/22/2024 3/22/2024
Valvoline Global Operations Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	1/17/2024 12:00:00 AM 1/26/2024 12:00:00 AM 10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/3/2023 12:00:00 AM		3/22/2024 3/22/2024
Hach Company ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	1/26/2024 12:00:00 AM 10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/3/2023 12:00:00 AM		3/22/2024
ZEP Inc. Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	10/1/2023 12:00:00 AM 12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/3/2023 12:00:00 AM		
Diversey, Inc. 3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	12/19/2023 12:00:00 AM 11/16/2023 12:00:00 AM 11/3/2023 12:00:00 AM		
3M - Commercial Solutions Division ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	11/16/2023 12:00:00 AM 11/3/2023 12:00:00 AM		2/5/2024
ACE HARDWARE CORPORATION WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	11/3/2023 12:00:00 AM		1/24/2024
WD-40 Company Limited Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.			1/7/2024
Edgewell Personal Care, LLC The Clorox Company Energizer Manufacturing, Inc.	2/9/2023 12:00:00 AM		1/7/2024
The Clorox Company Energizer Manufacturing, Inc.	6/6/2023 12:00:00 AM		1/7/2024
Energizer Manufacturing, Inc.	5/9/2022 12:00:00 AM		12/8/2023
	9/11/2023 12:00:00 AM		11/21/2023
Spartan Chemical Company, Inc.	5/17/2023 12:00:00 AM		11/21/2023
GOJO Australasia Pty Ltd	11/21/2021 12:00:00 AM		11/21/2023
Jelmar, LLC	7/25/2023 12:00:00 AM		10/23/2023
Reckitt Benckiser LLC	8/1/2018 12:00:00 AM		10/23/2023
The Dial Corporation	2/26/2009 12:00:00 AM		10/23/2023
Reckitt Benckiser LLC	1/20/2021 12:00:00 AM		10/23/2023
Selleys, a division of DuluxGroup (New Zealand) Pty Ltd	5/31/2021 12:00:00 AM		10/23/2023
Collinite Corporation	5/20/2019 12:00:00 AM		10/23/2023
BP Lubricants USA Inc.	12/10/2004 12:00:00 AM		10/23/2023
MEGUIARS'S CANADA INC.	3/31/2020 12:00:00 AM		10/23/2023
Reckitt Benckiser LLC	6/5/2020 12:00:00 AM		10/23/2023
Meguiars United Kingdom Limited	10/8/2020 12:00:00 AM		10/23/2023
Meguiar's, Inc.	2/12/2020 12:00:00 AM		10/23/2023
ITW Global Brands	6/24/2021 12:00:00 AM		10/23/2023
Royal Oak Enterprises, LLC	5/20/2019 12:00:00 AM		10/23/2023
ACE HARDWARE CORPORATION	11/22/2022 12:00:00 AM		10/23/2023
Ace Hardware Corp.	8/8/2023 12:00:00 AM		10/23/2023
The Valspar Corporation - Architectural Coatings Division	3/30/2015 12:00:00 AM		10/23/2023
Trico Products	12/8/2017 12:00:00 AM		10/23/2023
Rust-Oleum Corporation	9/28/2020 12:00:00 AM		10/23/2023
Rust-Oleum Corporation	1/22/2008 12:00:00 AM		10/23/2023
Krylon Products Group	10/13/2020 12:00:00 AM		10/23/2023
Rust-Oleum Corporation Bushnell Holdings Inc	8/21/2023 12:00:00 AM 2/8/2019 12:00:00 AM		10/23/2023 10/20/2023
Bushnell Holdings Inc	10/13/2022 12:00:00 AM		10/20/2023
Federal Cartridge Company d/b/a CCI/Speer	11/30/2020 12:00:00 AM		10/20/2023
GOJO Industries, Inc.	6/8/2020 12:00:00 AM		10/20/2023
SIRCHIE	2/16/2021 12:00:00 AM		10/20/2023
Aervoe Industries Inc.	3/12/2014 12:00:00 AM		10/20/2023
Metrex Research	7/11/2022 12:00:00 AM	643-79-	£ 10/20/2023
Dow AgroSciences LLC	5/8/2015 12:00:00 AM	040 73	10/20/2023
Transchem Inc	5/30/2018 12:00:00 AM	7647-01	1 10/20/2023
Phillips 66 Company Lubricants Division	5/9/2019 12:00:00 AM		10/20/2023
Staples Contract & Commercial, Inc.	4/1/2017 12:00:00 AM		10/20/2023
The Clorox Company	3/6/2019 12:00:00 AM	64742-4	4 10/19/2023
Rust-Oleum Corporation	10/18/2022 12:00:00 AM		10/19/2023
Sea Foam International, Inc.	6/8/2021 12:00:00 AM		10/19/2023
SPRAY PRODUCTS CORPORATION	7/12/2023 12:00:00 AM		10/19/2023
Calumet Branded Products, LLC	5/8/2023 12:00:00 AM		10/19/2023
Hazard Control Technologies Inc	2/18/2021 12:00:00 AM		10/19/2023
The ORTHO Group	10/12/2020 12:00:00 AM		10/19/2023
Rust-Oleum Corporation	12/5/2022 12:00:00 AM		10/19/2023
Warren Distribution, Inc.	12/31/2002 12:00:00 AM		10/19/2023
PPA Industries Inc	8/30/2022 12:00:00 AM		10/19/2023
Exxon Mobil Corporation	10/28/2022 12:00:00 AM		10/19/2023
Shell Oil Products US	7/16/2021 12:00:00 AM		10/19/2023
	11/9/2021 12:00:00 AM		10/19/2023

Final Charge Global 50/50 Prediluted Antifreeze and Coolant STIHL WOODCUTTER BAR & CHAIN LUBRICANT Pennzoil High Mileage Vehicle SAE 10W-30 Motor Oil MM PSF W/SL UNIVRSL 12/32OZ XPS 2T Synthetic Blend Engine Oil Arctic Cat Chain Lube DIESEL 9-1-1 Geocel PRO FLEX RV Flexible Sealant Bright White BG In-Force Penetrating Oil (Bulk) 3-IN-ONE Multi-Purpose Oil - [Aerosol] Battery Terminal Protector - 7.5 oz QD Electronic Cleaner - 11 oz Goof Off Pro Strength Remover Aerosol NAPA Mac's Ignition & Battery Sealer Valvoline Professional Series DOT 3 Brake Fluid Clorox Toilet Bowl Cleaner Bleach - All Scents ZEP PROFESSIONAL HEAVY-DUTY DEGREASER 1GL 4CT FRMLA ZEP FORMULA 50 3M Yellow Super Weatherstrip and Gasket Adhesive, 08001, 08002 CAT ELC (Extended Life Coolant) NAPA Quality AW Hydraulic Oil PEAK -30 °F ALL-IN-ONE Windshield Wash Synthetic Compressor Oil 3M General Purpose Adhesive Cleaner, PN 08987 Goo Gone Pro Power Alex Plus Acrylic Latex Caulk Plus Silicone - All Colors LPS 1 - Greaseless Lubricant A07327 ZEP 45 NC 014901 20N15OBS Liquid Wrench Lock & Hinge Dry Lube Valvoline Heavy Duty Carb & Throttle Body Cleaner NAPA Foam Sealant YAMALUBE Utility Performance Four Stroke 5W-30 Instant Cyanoacrylate Adhesive NAPA Automatic Transmission Fluid INSTANT HULL CLEANER GEL FORMULA HOT SAUCE NAPA Mac's Engine Cleaner & Degreaser Isopropyl Alcohol (IPA) ZEP CONCENTRATED GLASS CLEANER Georgia-Pacific Heavy Duty Industrial Hand Cleaner ZEP ORIGINAL ORANGE 20GL Cottonelle Flushable Wipes Great Value Clear Ammonia All Purpose Cleaner PROFESSIONAL DRAIN OPENER TOUGH ON GREASE HDX Cleaning Vinegar 64 fl oz WINDEX CLEANER OUTDOOR RUG DOCTOR Professional Oxy Deep Cleaner Concrobium Mold Control Clorox Pro Results Outdoor Bleach OFF! ACTIVE PUMP SPRAY INSECT REPELLENT (REG. NO. 28058 P.C.P. ACT) Equate DF-374-33-2 Sport Performance SPF50 CS Formula 409 Multi-Surface Cleaner - Lemon Fresh ZEP ZEPYNAMIC A II SURFACE DISINFECTANT enMotion Gentle Foam Soap with Moisturizers Fragrance Free S.O.S Steel Wool Soap Pads Clorox Disinfecting Wipes - Lemon Fresh Clorox Disinfecting Wipes - Fresh Scent Tide PODS Ultra Oxi Bounce Fresh Fabric Softener Sheets Cascade Complete Gel Dishwasher Detergent, Citrus Scent Cascade ActionPacs Complete Lemon

HDX Germicidal Bleach2

Old World Industries, LLC 11/1/2019 12:00:00 AM 10/19/2023 **OMNI Specialty Packaging** 8/9/2019 12:00:00 AM 10/19/2023 Shell Oil Products US 2/17/2023 12:00:00 AM 10/19/2023 Niteo Products, LLC 3/29/2023 12:00:00 AM 10/19/2023 BRP US Inc. 8/29/2019 12:00:00 AM 10/19/2023 Arctic Cat Inc. 5/26/2015 12:00:00 AM 10/19/2023 Power Service Products Inc. 10/19/2023 3/23/2022 12:00:00 AM 8/2/2023 12:00:00 AM 10/19/2023 Geocel Products Group A Business Unit of The Sherwin-Williams Company BG PRODUCTS, INC. 4/16/2019 12:00:00 AM 10/19/2023 WD-40 Company Limited 9/26/2022 12:00:00 AM 10/19/2023 CRC Industries, Inc. 6/30/2021 12:00:00 AM 10/19/2023 CRC Industries Inc. 8/18/2023 12:00:00 AM 10/19/2023 W. M. Barr 6/28/2022 12:00:00 AM 10/19/2023 Balkamp Inc. 9/3/2017 12:00:00 AM 10/19/2023 Valvoline LLC 5/17/2023 12:00:00 AM 10/19/2023 The Clorox Company 10/18/2023 9/8/2020 12:00:00 AM 7FP Inc 2/16/2023 12:00:00 AM 10/18/2023 ZEP Inc. 1/25/2023 12:00:00 AM 10/18/2023 3M - Construction and Home Improvement Products 3/28/2023 12:00:00 AM 10/19/2023 10/19/2023 Chevron Products Company Global Lubricants 2/23/2023 12:00:00 AM Warren Oil Company, LLC 5/28/2019 12:00:00 AM 10/19/2023 Old World Industries, LLC 6/15/2020 12:00:00 AM 10/19/2023 Amsoil Inc 9/8/2023 12:00:00 AM 10/19/2023 3M Canada Company 5/19/2023 12:00:00 AM 10/19/2023 Goo Gone 11/19/2021 12:00:00 AM 10/19/2023 DAP Global Inc. 8/22/2023 12:00:00 AM 10/19/2023 KIMBALL-MIDWEST 7/1/2008 12:00:00 AM 10/19/2023 ZEP Inc. 1/5/2018 12:00:00 AM 10/19/2023 Blumenthal Brands Integrated, LLC 5/27/2020 12:00:00 AM 10/19/2023 Valvoline LLC 9/11/2018 12:00:00 AM 10/19/2023 ICP Adhesives & Sealants, Inc. 10/19/2023 7/26/2016 12:00:00 AM Phillips 66 Spectrum Corporation 1/7/2021 12:00:00 AM 10/19/2023 J-B WELD COMPANY 10/19/2023 11/11/2014 12:00:00 AM Valvoline LLC 5/22/2017 12:00:00 AM 10/18/2023 Star brite Inc. 1/21/2015 12:00:00 AM 10/18/2023 Boat Bling Inc. 10/18/2023 1/16/2020 12:00:00 AM Balkamp, Inc. 2/3/2017 12:00:00 AM 10/18/2023 Cumberland Swan 7/1/2006 12:00:00 AM 10/18/2023 Noble Chemical 11/10/2014 12:00:00 AM 10/18/2023 ZEP Inc. 4/22/2020 12:00:00 AM 10/18/2023 Georgia-Pacific Consumer Products LP 7/2/2019 12:00:00 AM 10/18/2023 ZEP Inc. 10/18/2023 3/25/2019 12:00:00 AM Kimberly-Clark Corporation 6/10/2019 12:00:00 AM 10/18/2023 KIK International LLC 1/8/2018 12:00:00 AM 10/18/2023 G.K. Chemical Specialties Co 8/25/2021 12:00:00 AM 7664-93 10/18/2023 Spartan Chemical Company, Inc. 10/30/2014 12:00:00 AM 10/18/2023 KIK International LLC 1/26/2021 12:00:00 AM 10/18/2023 S.C. Johnson and Son, Limited 10/18/2023 6/10/2014 12:00:00 AM Rua Doctor, LLC 2/5/2016 12:00:00 AM 10/18/2023 Siamons International 6/12/2018 12:00:00 AM 10/18/2023 The Clorox Company 12/9/2020 12:00:00 AM 10/18/2023 S.C. Johnson and Son, Limited 7/31/2017 12:00:00 AM 10/18/2023 10/18/2023 Fruit of the Earth, Inc. 2/6/2018 12:00:00 AM The Clorox Company 5/16/2018 12:00:00 AM 10/18/2023 ZEP Inc. 2/12/2018 12:00:00 AM 10/18/2023 Georgia-Pacific Consumer Products LP 2/27/2020 12:00:00 AM 10/18/2023 The Clorox Company of Canada Ltd. 8/27/2021 12:00:00 AM 10/18/2023 The Clorox Company of Canada Ltd. 8/27/2021 12:00:00 AM 10/18/2023 10/18/2023 The Clorox Company of Canada Ltd. 8/27/2021 12:00:00 AM Procter & Gamble, Fabric and Home Care Division 10/18/2023 3/14/2022 12:00:00 AM Kleen Test Products Corp 11/28/2018 12:00:00 AM 10/18/2023 Procter & Gamble, Fabric and Home Care Division 9/16/2021 12:00:00 AM 10/18/2023 Procter & Gamble, Fabric and Home Care Division 5/27/2022 12:00:00 AM 10/18/2023 KIK International LLC 10/18/2023 8/16/2019 12:00:00 AM

Defend Continental Research Corporation 1/20/2023 12:00:00 AM 10/18/2023 Windex Streak-free Shine! Original (liquid) S.C. Johnson & Son Ptv Ltd 1/10/2023 12:00:00 AM 10/18/2023 Great Value Bleach Concentrated 81 fl oz KIK International LLC 5/26/2020 12:00:00 AM 10/18/2023 Shout Advanced Action Gel S.C. Johnson & Son. Inc. 8/12/2020 12:00:00 AM 10/18/2023 Formula 409 Multi-Surface Cleaner The Clorox Company 2/14/2022 12:00:00 AM 10/18/2023 TOUGH ON GREASE Spartan Chemical Company, Inc. 5/1/2020 12:00:00 AM 10/17/2023 PLEDGE EXPERT CARE WIPES - LEMON SCENT S.C. Johnson & Son, Inc. 12/22/2021 12:00:00 AM 10/16/2023 FREEZE + P NF Aerosols various sizes AERKO INTERNATIONAL 10/13/2023 3/22/2018 12:00:00 AM Satellite Dalco 11/3/2016 12:00:00 AM 10/13/2023 Lime Solvent Dalco 4/7/2019 12:00:00 AM 10/13/2023 Stainless Steel Cleaner Multi-Clean 1/1/2020 12:00:00 AM 10/12/2023 Raid Ant Killer 16 - Unscented (Aerosol) S.C. Johnson & Son. Inc. 5/15/2003 12:00:00 AM 10/12/2023 Blast Off Dalco Enterprises 8/7/2015 12:00:00 AM 10/12/2023 The Wave 1.5 Fresh Products, LLC 10/12/2023 6/3/2019 12:00:00 AM Crew Super Blue Diversey, Inc. 5/11/2017 12:00:00 AM 10/12/2023 ZEP DRAIN DEFENSE PIPE BUILD-UP RMVR ZEP Inc. 10/12/2023 7/1/2019 12:00:00 AM BACTERIAL DRAIN MAINTAINER W.W. Grainger, Inc. 2/3/2020 12:00:00 AM 10/12/2023 CHEMSICO DIV OF UNITED INDUSTRIES CORP Ace Wasp & Hornet Killer4 4/16/2015 12:00:00 AM 10/12/2023 Northland Chemical Supply 10/12/2023 Bia O 5/13/2015 12:00:00 AM 10/12/2023 Industrial Choice Aerosol - Solvent Based Inverted Marking Paint Rust-Oleum Corporation 6/7/2006 12:00:00 AM Noxon Metal Polish Liquid Reckitt Benckiser LLC 6/9/2016 12:00:00 AM 10/12/2023 SHINE CONTINENTAL RESEARCH CORP 1/13/2015 12:00:00 AM 10/12/2023 Original Krud Kutter concentrated Cleaner / Degreaser Rust-Oleum Europe - Martin Mathys NV 2/15/2022 12:00:00 AM 10/12/2023 8031-18 10/12/2023 Big D Granular Deodorant All Fragrances Big D Industries, Inc. 1/30/2023 12:00:00 AM MURPHY OIL SOAP WOOD CLEANER LIQUID - ORIGINAL B02906500003 Colgate-Palmolive Company 10/18/2022 12:00:00 AM 10/12/2023 3M Quat Disinfectant Cleaner Ready-to-Use (Product No. 5, 3M Chemical Management Systems) 3M Canada Company 10/20/2020 12:00:00 AM 10/12/2023 Tri-Flow Industrial Lubricant with Teflon- 12 oz. aerosol (TF20027) KIMBALL-MIDWEST 1/1/2013 12:00:00 AM 10/12/2023 ORTHO HOME DEFENSE ANT, ROACH & SPIDER KILLER2 The ORTHO Group 4/26/2017 12:00:00 AM 10/12/2023 Hot Shot Ant, Roach & Spider Killer (Fragrance Free) Spectrum Group - Division of United Industries 8/19/2019 12:00:00 AM 10/12/2023 DRANO MAX GEL CLOG REMOVER S.C. Johnson & Son, Inc. 5/25/2021 12:00:00 AM 10/12/2023 DPD Free Chlorine Reagent 10/5/2023 Hach Company 2/8/2023 12:00:00 AM STATE INDUSTRIAL PRODUCTS SCRUB ENDER 5/3/2022 12:00:00 AM 7/27/2023 ClearLane enhanced deicer Cargill Incorporated 4/16/2018 12:00:00 AM 6/5/2023 TYPHOON Hillyard Industries 8/24/2021 12:00:00 AM 5/5/2023 Suprox - Heavy Duty Hillyard Industries 5/22/2019 12:00:00 AM 5/5/2023 Phenol Red Indicator Solution Hach Company 2/8/2023 12:00:00 AM 3/15/2023 NATURALIZER ED CERTIFIED LABS, DIV. OF NCH CORP. 4/8/2022 12:00:00 AM 2/26/2023 Original Pine-Sol Multi-Surface Cleaner The Clorox Company 1/23/2023 12:00:00 AM 2/20/2023 Mr Clean Clean Freak Zero Procter & Gamble, Fabric and Home Care Division 9/26/2022 12:00:00 AM 2/15/2023 Lenox Saw Blades Lenox Tools 11/10/2022 12:00:00 AM 1/27/2023 CHEMSEARCH DIV. OF NCH CORP. VIELD AFROSOL 1/11/2023 12:00:00 AM 1/22/2023 Clorox Urine Remover For Stains & Odors The Clorox Company 12/1/2021 12:00:00 AM 11/27/2022 ICE FIGHTER PLUS 8/25/2022 12:00:00 AM 11/27/2022 Moraro, Inc. CHEMSEARCH DIV. OF NCH CORP. NATURALIZER VC 4/8/2022 12:00:00 AM 11/27/2022 WINDEX CLEANER WITH VINEGAR S.C. Johnson & Son, Inc. 7/15/2020 12:00:00 AM 11/3/2022 WINDEX Glass & Surface Wipes Original Intermediate (Material 213067) S.C. Johnson & Son, Inc. 8/26/2021 12:00:00 AM 11/3/2022 NOVUS PLASTIC POLISH #1 (Plastic Clean & Shine, NOVUS No 1) NOVUS 211 C 10/21/2020 12:00:00 AM 9/28/2022 CHEMSEARCH DIV. OF NCH CORP. 6/2/2022 12:00:00 AM THREAD-EZE ULTRA AEROSOL 9/22/2022 Potassium lodide Hach Company 8/10/2021 12:00:00 AM 8/12/2022 DOWTHERM SR-1 Heat Transfer Fluid, Dyed Dow Chemical Canada ULC 5/5/2022 12:00:00 AM 107-21-17/18/2022 DPD Total Chlorine Reagent Hach Company 6/1/2022 12:00:00 AM 7/11/2022 Fluoride Standard Solution 1.00 mg/L as F Hach Company 8/10/2021 12:00:00 AM 4/18/2022 SPADNS2 (Arsenic-Free) Fluoride Reagent 9/7/2021 12:00:00 AM 4/12/2022 Hach Company Construction Marking Paint Aervoe Industries Inc. 1/4/2022 12:00:00 AM 3/9/2022 ICEB'GONE Taconic Maintenance 5/13/2020 12:00:00 AM 2/17/2022 ICEB'GONE MAGIC Taconic Maintenance 5/13/2020 12:00:00 AM 7647-14 2/17/2022 AA-315 International Chemtex Corporation 7/24/2018 12:00:00 AM 2/15/2022 NEUTRALIZER Hillyard Industries 12/2/2021 12:00:00 AM 2/5/2022 Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N. Hach Company 8/10/2021 12:00:00 AM 12/12/2021 Foremost 5051-ES Weedzout DELTA FOREMOST CHEMICAL CORPORATION 12/6/2021 9/9/2020 12:00:00 AM CAN DO Continental Research Corporation 3/25/2015 12:00:00 AM 9/20/2021 Turbochef Oven Cleaner CHEMCO CORP 7/29/2019 12:00:00 AM 8/27/2021 ORANGE TOUGH 15 Spartan Chemical Company, Inc. 7/2/2021 12:00:00 AM 7/29/2021 KaiO Water Soluble Cleaner Kaiyac Inc. 2/26/2021 12:00:00 AM 7/12/2021

KaiDri Kaiyac, Inc. 2/26/2021 12:00:00 AM 6/17/2021 VOLTZ II CHEMSEARCH DIV. OF NCH CORP. 5/31/2021 11/24/2020 12:00:00 AM LIME-A-WAY 3/11/2021 12:00:00 AM 4/14/2021 Ecolab Inc. Hydrofluosilicic Acid Hawkins Inc. 3/5/2021 12:00:00 AM 3/10/2021 Sodium Bicarbonate Rhone-Poulenc Basic Chemicals Co. 4/25/1994 12:00:00 AM 144-55-8 3/1/2021 CHEVRON Turbine Oil GST Chevron Products Company 6/1/2001 12:00:00 AM 3/1/2021 Red Line SuperCool Concentrate Antifreeze/Coolant RED LINE SYNTHETIC OIL CORP 1/21/2021 12:00:00 AM 2/26/2021 Equilon Enterprises, LLC 2/26/2021 REGAL R& O 1/4/1999 12:00:00 AM KaiBlooey (Concentrate and 64:1 water dilution) Kaiyac Inc 10/29/2020 12:00:00 AM 1/28/2021 Q.T. Plus Hillyard Industries 8/1/2019 12:00:00 AM 11/20/2020 Suprox - GLASS & FLOOR Hillyard Industries 5/22/2019 12:00:00 AM 11/20/2020 MURPHY OIL SOAP LIQUID - ORIGINAL BDC B02906500019 Colgate-Palmolive Company 8/20/2020 12:00:00 AM 11/8/2020 3M Quat Disinfectant Cleaner Ready-to-Use (Product No. 5, Twist 'n Fill System) 3M - Commercial Solutions Division 9/23/2014 12:00:00 AM 10/23/2020 PRI7M Drummond American Corporation 10/23/2020 9/15/2018 12:00:00 AM Molecules Dry NORTHLAND CHEMICAL CORPORATION 7/1/2010 12:00:00 AM 10/23/2020 LIMEAWAY Ecolab Inc. 4/30/1998 12:00:00 AM 10/23/2020 HighLight NORTHLAND CHEMICAL CORPORATION 8/1/2010 12:00:00 AM 68476-8: 10/23/2020 GENERAL PURPOSE SPOTTER Johnson Wax Professional 5/20/2003 12:00:00 AM 10/23/2020 FORMULA 815MX RTU BRULIN & COMPANY INC. 4/10/2015 12:00:00 AM 10/23/2020 ENGAGE Drummond American, A Lawson Products Company 1/27/2012 12:00:00 AM 10/22/2020 Citric Acid 50% FG Hawkins, Inc. 1/28/2020 12:00:00 AM 77-92-9 10/22/2020 Chlorine - EPA Reg. No. 7870-2 Hawkins, Inc. 7/6/2016 12:00:00 AM 7782-50 9/29/2020 DROP DEAD AEROSOL (15 OZ) CHEMSEARCH DIV. OF NCH CORP. 8/30/2013 12:00:00 AM 7/17/2020 CREW SUPER BLUE MILD ACID BOWL CLEANER JohnsonDiversey, Inc. 4/14/2004 12:00:00 AM 7/15/2020 CRACK BACK 3/20/2013 12:00:00 AM 7/15/2020 Drummond, A Lawson Brand CONJURE - MISTY MOUNTAIN Drummond American, A Lawson Products Company 1/27/2012 12:00:00 AM 7/13/2020 CONJURE - APPLE BLOSSOM Drummond American, A Lawson Products Company 1/27/2012 12:00:00 AM 7/13/2020 COMET DISINFECTANT CLEANSER w/CHLORINOL Namco Manufacturing Inc 2/15/1999 12:00:00 AM 7/7/2020 AJAX CLEANER POWDER-OXYGEN BLEACH Colgate-Palmolive Company 12/15/2016 12:00:00 AM 7/2/2020 BLACK BELT - Gloss & Satin Black CONTINENTAL RESEARCH CORP 10/10/2012 12:00:00 AM 6/3/2020 PERMATEX #133 Anti-Seize Lubricant - 8 oz. brush top bottle Permatex, Inc. 6/30/2012 12:00:00 AM 5/20/2020 Philips T8 Fluorescent Lamps - All Types All ALTO, non-ALTO, Standard, HO, Circular, U-Bent and TuffGuard All lengths, coatings, wattage Philips Lighting Company A Division of Philips Electronics North America Corporation 7/10/2013 12:00:00 AM 65997-1 5/20/2020 Ajax Oxygen Bleach Cleanser Colgate-Palmolive Company 6/4/2007 12:00:00 AM 1317-65 5/20/2020 CONSUME Spartan Chemical Company, Inc. 3/25/2020 12:00:00 AM 5/6/2020 FIX TERG-O-CIDE/FIX TERG-O-CIDE IN A CAN STATE INDUSTRIAL PRODUCTS 11/8/2019 12:00:00 AM 5/6/2020 Cleaning Companion Q.T. Plus Hillyard Industries 8/1/2019 12:00:00 AM 4/22/2020 THE WAVE 3D AIR FRESHENER (Mango) Hillvard 4/23/2015 12:00:00 AM 4/22/2020 WIWAX Cleaning and Maintenance Solution Diversey, Inc. 9/13/2018 12:00:00 AM 4/22/2020 Propane Enable Midstream Partners 1/1/2020 12:00:00 AM 4/22/2020 Northland Eliminate NORTHLAND CHEMICAL CORPORATION 10/1/2013 12:00:00 AM 4/22/2020 NABC URINAL SCREEN WITH DEODORIZING BLOCK & BLUE DYE INDICATOR Spartan Chemical Company, Inc. 9/17/2019 12:00:00 AM 4/22/2020 Deb-STOKO USA LLC Kresto Classic 6/1/2015 12:00:00 AM 4/22/2020 KAIBLOOEY 4/12/2016 12:00:00 AM 4/22/2020 Kaiyac, Inc. 3M - Commercial Solutions Division 3M Heavy Duty Multi-Surface Cleaner Concentrate (Product No. 2, 3M Chemical Management Systems) 1/19/2018 12:00:00 AM 4/22/2020 3M - Commercial Solutions Division 4/22/2020 3M Glass Cleaner Concentrate 1/19/2018 12:00:00 AM GERMICIDAL BOWL CLEANSE Spartan Chemical Company, Inc. 9/17/2019 12:00:00 AM 4/22/2020 HTP Energy 4/22/2020 Gasoline 4/13/2020 12:00:00 AM End Bac II Spray Disinfectant Diversey, Inc. 11/26/2019 12:00:00 AM 4/22/2020 DuPont FREON 22 Refrigerant DuPont 3/16/2015 12:00:00 AM 75-45-6 4/22/2020 CONCRETE ICE RINK SEALER, CLEAR Sierra Corp/TK Products 1/2/2007 12:00:00 AM 4/22/2020 Clorox Commercial Solutions Clorox Urine Remover for Stain & Odor Clorox Professional Products Company 1/5/2015 12:00:00 AM 4/22/2020 CS-4241 International Chemtex Corporation 9/21/2004 12:00:00 AM 4/22/2020 APS-20 International Chemtex Corporation 4/22/2020 7/8/2015 12:00:00 AM ARC-PREP ELECTRODE X-ERGON, A PARTSMASTER CO., DIV OF NCH 4/20/2020 6/3/2013 12:00:00 AM DURA-WELD ELECTRODE X-ERGON, A PARTSMASTER CO., DIV OF NCH 5/22/2007 12:00:00 AM 4/20/2020 SCOTCHGARD TILE AND GROUT PROTECTOR 3M - Building & Commercial Services Division 8/3/2011 12:00:00 AM 4/19/2020 Azone 15 - EPA Reg. No. 7870-5 Hawkins, Inc. 2/8/2019 12:00:00 AM 4/15/2020 4NA76 - Oil Multi Purpose 4 Oz LA-CO INDUSTRIES, INC. 10/26/2010 12:00:00 AM 4/15/2020 WASP AWAY NG Continental Research Corporation 10/23/2014 12:00:00 AM 4/15/2020 Vinegar Fleischmann's Vinegar Company 7/23/2019 12:00:00 AM 64-19-7 4/15/2020 Sani Screens NORTHLAND CHEMICAL CORPORATION 7/1/2010 12:00:00 AM 4/15/2020 Sani Flush Northland Chemical Supply 5/20/2015 12:00:00 AM 4/15/2020 Swirl Cleaner Drummond American, A Lawson Products Company 1/27/2012 12:00:00 AM 4/15/2020 Spotlite Swipes Drummond American, A Lawson Products Company 1/24/2012 12:00:00 AM 4/15/2020

Northland Snake Drain Opener NORTHLAND CHEMICAL CORPORATION 10/27/2015 12:00:00 AM NORTHLAND CHEMICAL CORPORATION Shower Power 5/1/2012 12:00:00 AM TRI-FLOW Red Grease Sherwin-Williams Company - Consumer Group - Industrial 4/22/2013 12:00:00 AM TUFF STUFF CONTINENTAL RESEARCH CORP 4/18/2016 12:00:00 AM THREAD-EZE-#2 CAN CHEMSEARCH DIV. OF NCH CORP. 12/3/2009 12:00:00 AM TerraCair Ultrapure Diesel Exhaust Fluid Terra Environmental 10/22/2012 12:00:00 AM T-SHIFLD AFROSOL Mantek, Division of NCH Corp 8/30/2013 12:00:00 AM SUPER HUSKY 303 Toilet Bowl Cleaner Canberra Corporation 12/31/2014 12:00:00 AM HOST Pre-Clean RACINE INDUSTRIES, INC. 6/5/2019 12:00:00 AM Sodium Carbonate FMC Wyoming Corporation - Alkali Chemicals Division 8/3/2011 12:00:00 AM Sleet Drummond, A Lawson Brand 2/10/2014 12:00:00 AM STODDARD SOLVENT Phillips 66 Company 10/1/1985 12:00:00 AM Sani-Flush NORTHLAND CHEMICAL CORPORATION 3/1/2012 12:00:00 AM Salt Rinse 3/28/2013 12:00:00 AM Goldstar Products Inc. RECLAIM Drummond, A Lawson Brand 4/24/2014 12:00:00 AM Purple Power Concentrated Industrial Strength Cleaner/Degreaser Aiken Chemical Company, Inc. 9/16/2016 12:00:00 AM Kresto Citrus Deb USA, Inc. 10/7/2015 12:00:00 AM ROUNDUP WEED & GRASS KILLER CONCENTRATE PLUS Monsanto Company 5/17/2016 12:00:00 AM 11/22/2014 12:00:00 AM Acrylic Floor Wax Lundmark Wax Company NOVUS PLASTIC POLISH #2 NOVUS Inc. 8/29/2018 12:00:00 AM BETCO CORPORATION Deep Blue Concentrate 1:20 8/28/2018 12:00:00 AM 3M Neutral Cleaner Concentrate (Product No. 3, 3M Chemical Management Systems) 3M - Commercial Solutions Division 5/22/2018 12:00:00 AM 3M Non-Acid Disinfectant Bathroom Cleaner Concentrate (Product No.15, 3M Chemical Management Systems) 3M New Zealand Ltd 11/21/2017 12:00:00 AM 3M Bathroom Disinfectant Cleaner Concentrate (Product No. 4, 3M Chemical Management Systems) 3M - Commercial Solutions Division 1/19/2018 12:00:00 AM Continental Joe Industrial Cleaner CONTINENTAL RESEARCH CORP 5/21/2014 12:00:00 AM SPARCLING Spartan Chemical Company, Inc. 9/17/2019 12:00:00 AM ENDBAC II AEROSOL Diversey, Inc. 5/25/2011 12:00:00 AM BANANAS FOSTER BASE Fruitcrown Products Corporation 10/29/2019 12:00:00 AM GEM GLO CHERRY MAHOGANY A/C ST Gemini Coatings 2/20/2020 12:00:00 AM FLAVOR PRODUCERS Natural Cherry Flavor WONF 2/21/2020 12:00:00 AM Banana Boat Kids Tear-Free Sunscreen Spray SPF 50+ Edgewell Personal Care Canada, ULC 1/30/2020 12:00:00 AM RALLY HONEYSUCKLE Drummond American, A Lawson Products Company 1/27/2012 12:00:00 AM RHOMAR INDUSTRIES INC RHOMA-SOL 9/13/2017 12:00:00 AM 3M QUAT DISINFECTANT CLEANER Ready-to-Use (Product No. 5, Twist 'n Fill System) 3M - Building & Commercial Services Division 6/2/2010 12:00:00 AM QPR Lafarge North America Inc. 4/20/2005 12:00:00 AM P.O.G. Spotter Gel Diversey, Inc. 5/21/2014 12:00:00 AM Drummond Pentox Calcium Lime and Rust Remover Drummond A Lawson Brand 7/26/2018 12:00:00 AM PEARLUX PEARLIZED HAND CLEANER, HAIR & BODY SHAMPOO Spartan Chemical Company, Inc. 12/16/2016 12:00:00 AM Pine Sealant W/Teflon Loctite Corporation 1/1/1994 12:00:00 AM Odor-Sorb NORTHLAND CHEMICAL CORPORATION 8/1/2010 12:00:00 AM MOBIL DELVAC 1300 SUPER 15W40 Imperial Oil Products Division 5/4/2012 12:00:00 AM UNIVERZOL NON-DETERGENT MOTOR OIL SERIES Lubrication Technologies, Inc. 6/10/2002 12:00:00 AM 3M NEUTRAL CLEANER READY-TO-USE (Product No. 3, Twist 'n Fill System) 3M - Building & Commercial Services Division 5/4/2011 12:00:00 AM NORTHLAND CHEMICAL CORPORATION Natures Way 5/22/2015 12:00:00 AM GASOLINE 9/4/2018 12:00:00 AM Flint Hills Resources Corpus Christi, LLC Shower Power Northland Chemical Supply 10/23/2014 12:00:00 AM Northland Chemical Supply 11/11/2014 12:00:00 AM Molecules Dry LUBRIPLATE Lubricants Co. LUBRIPLATE FGL-1 12/20/2012 12:00:00 AM ORIGINAL KRUD KUTTER SUPREME CHEMICALS OF GEORGIA, INC. 6/8/2011 12:00:00 AM RANDO HD Equilon Enterprises, LLC 7/15/1999 12:00:00 AM HYDROFLUOROSILICIC ACID DPC INDUSTRIES INC 5/1/2015 12:00:00 AM NORTHLAND CHEMICAL CORPORATION LIGHT FORCE 5/1/2012 12:00:00 AM 19 OZ GLEME GLASS CLEANER LT 12PK 3/10/2017 12:00:00 AM Claire Manufacturing Co. Big D Industries Inc. 10/18/2018 12:00:00 AM Big D D'Vour Foremost 529-ES Winter Slix DELTA FOREMOST CHEMICAL CORPORATION 3/18/2015 12:00:00 AM Foremost 615-ES Super Transpo Wash DELTA FOREMOST CHEMICAL CORPORATION 6/12/2013 12:00:00 AM Foremost 1111-ES Salt Free DELTA FOREMOST CHEMICAL CORPORATION 11/10/2014 12:00:00 AM Foremost 1801 Citri-Soy DELTA FOREMOST CHEMICAL CORPORATION 10/13/2014 12:00:00 AM Foremost 1817 Citri-Kote NA1993 DELTA FOREMOST CHEMICAL CORPORATION 10/10/2014 12:00:00 AM EXTRACTION SC - USE SOLUTION Johnson Wax Professional 12/17/2002 12:00:00 AM DROP DEAD II AEROSOL CHEMSEARCH DIV. OF NCH CORP. 8/15/2013 12:00:00 AM Drop Dead Aerosol (15 OZ) CHEMSEARCH DIV. OF NCH CORP. 2/21/2002 12:00:00 AM Dawn Professional Manual Pot and Pan Detergent - Made From Concentrate Procter & Gamble Professional 5/14/2018 12:00:00 AM FUEL OIL NO. 2 (LOW SULFUR) Koch Refining Company 6/15/1998 12:00:00 AM

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9003-04-2/18/2020

1300-72: 2/14/2020

68476-3 2/12/2020

57-13-6 4/9/2020

497-19-8 3/16/2020

8052-41 3/12/2020

Floor Ca 3/12/2020

3M Creme Cleanser Ready-To-Use

Drummond Crack Back Asphalt Crack Repair/Sealing Compound

Conquer

CHLORINE (LIQUEFIED GAS UNDER PRESSURE)

MOBIL RARUS 427

Comet Deodorizing Cleanser with Chlorinol

Coil-Brite

Thawrox Treated Salt Liquid Additive

PULSAR DRY CHLORINATOR GRANULAR

Foremost 1817 Citri-Kote

CENLUBE SUB-ZERO RO-AW

3M BATHROOM DISINFECTANT CLEANER Ready-to-Use (Product No. 4, Twist 'n Fill System and Product No. 4P, 3M Portable Dispensing System)

Brilliance Car and Truck Wash

Alive Liquid Bacteria

Ajax Cleanser with Bleach

Nitrogen balance - Acetylene 0.1ppm - 0.4%, Ethylene 0.1ppm - 3.2%

Oxygen, compressed

Nat Banana Flavor WONF

3M - Commercial Solutions Division	5/22/2018 12:00:00 AM	2/11/2020
Drummond, A Lawson Brand	7/25/2018 12:00:00 AM	2/11/2020
Ultra-Chem Inc.	5/22/2015 12:00:00 AM	2/11/2020
Occidental Chemical Corporation	11/4/2019 12:00:00 AM	7782-50 2/10/2020
MOBIL OIL CORPORATION	3/29/1994 12:00:00 AM	64742-5-2/7/2020
Procter & Gamble Professional	5/14/2018 12:00:00 AM	2/7/2020
Ultra-Chem Inc.	5/22/2015 12:00:00 AM	2/6/2020
North American Salt Co.	4/1/2014 12:00:00 AM	2/6/2020
Olin Corporation	8/1/1994 12:00:00 AM	2/6/2020
DELTA FOREMOST CHEMICAL CORPORATION	10/10/2014 12:00:00 AM	2/6/2020
CENEX, Inc.	12/1/1996 12:00:00 AM	2/6/2020
3M - Building & Commercial Services Division	5/17/2013 12:00:00 AM	2/5/2020
NORTHLAND CHEMICAL CORPORATION	5/20/2015 12:00:00 AM	2/5/2020
NORTHLAND CHEMICAL CORPORATION	5/1/2012 12:00:00 AM	2/5/2020
Colgate-Palmolive Company	8/2/2007 12:00:00 AM	2/5/2020
Praxair, Inc.	1/7/2020 12:00:00 AM	7727-37-2/5/2020
Praxair, Inc.	10/21/2016 12:00:00 AM	7782-44 2/5/2020
Givaudan Flavors Corporation	12/9/2019 12:00:00 AM	2/4/2020

APPENDIX C Industrial sources of non-ionizing radiation*

Sources	Uses	Comments
Broadcast	AM Radio	535-1605 kHz.
	FM Radio	88-108 MHZ
	VHF TV	54-72, 76-88, 174-216 MHZ
	UHF TV	470-890 MHZ
Communications	Fixed systems; troposphere scatter; satellite communication;	0.8-15 GHz; generally well
	microwave point-to-point (relay); high-frequency radio.	controlled
	Mobile systems; CB radios; walkie-talkies	27-800 MHZ; may produce
		high field strengths near
		antennae
Induction heaters	Deep hardening; forging; welding; soft soldering; brazing; annealing;	250-500 kHz and ELF; may
	tempering metals and semiconductors; heat and draw optical fibers;	produce high E and/or H fields
	epitaxial growth; plasma torching	
Electronic Equipment	Switching regulator in copying machines, microcomputers, etc.	Usually shielded.
Electronic security systems	Intrusion alarms; theft detection; speed sensors; distance monitor;	Usually microwave
	motion detection	frequencies
Microwave heaters	Drying wood, paper, film, inks; thawing, cooking, baking, dehydrating,	915 and 2450 MHZ
(including microwave	pasteurizing, and sterilizing foodstuffs; curing plastics; solvent	
ovens)	desorption	
Radar	Acquisition and tracking; air and auto traffic control; marine uses;	1-15 GHZ; usually PW
	surveillance	
Welding	Production of pipe, tube, and beam; spot welding	RF-stabilized; 0.4-100 MHZ
		with harmonics

^{*} Not all sources shown in this table are in the electromagnetic frequencies covered by ERTK.

APPENDIX D

Stress evaluation—heat

Heat stress may occur year-round in areas with heat-producing equipment such as in foundries, kitchens, or laundries. In Minnesota, high temperatures and humidity are common during the summer with daily temperatures routinely varying up to 30 degrees. This variation does not always allow people to become acclimatized and stay acclimatized, thereby increasing the risk of heat stress.

Heat stress results from a combination of internal heat production from doing work and external heat exposure from the environment. Both aspects need to be addressed properly to control heat stress.

Two commonly used instruments to obtain heat stress measurements are the heat stress monitor and a sling psychrometer. The heat stress monitor measures several temperatures simultaneously and accounts for radiant heat and air movement. The sling psychrometer is a much cheaper and simpler device but does not take into account radiant heat, and air movement must be determined separately.

The measurements obtained from either of these instruments are converted to one value, the wet bulb globe temperature (WBGT), for determining compliance with Minnesota Rules. WBGT is an index of heat stress indicating relative comfort. In considers temperature, humidity, and air movement. The calculated value can be then compared to those found in Minnesota Rules 5205.0110, subpart 2a. (see this Appendix).

Minnesota Rules 5205.0110, subpart 2a, is the Minnesota standard for heat exposure. The standard is based on wet bulb globe temperature (WBGT) and level of work activity. Typically, one will determine the WBGT by using a heat stress monitor, or by using a sling psychrometer to obtain the effective temperature, then converting the effective temperature to WBGT. If the heat stress limit is approached or exceeded, Employee Right to Know requirements specified in Minnesota Rules 5206.0700, subparts 1 and 3, "Training Program for Harmful Physical Agents," and Minnesota Rules 5206.110, "Labeling harmful Physical Agents; Label Content," also apply.

APPENDIX E

Sources of information

This program manual was prepared using information provided by the following sources:

Minnesota Rules and Statutes 5206.0100 – 5206.2000 182.

Federal Regulations 29 CFR 1910.1200 29 CFR 1910.95 – 1910.97 29 CFR 1910.1030

American Industrial Hygiene Association

American Conference of Governmental Industrial Hygienists (ACGIH)

National Institute for Occupational Safety and Health (NIOSH)

National Toxicology Program (NTP)

Minnesota Department of Health – Environmental Health Division

Centers for Disease Control and Prevention

Occupational Safety and Health Administration (OSHA)

GLOSSARY

acidosis – a condition of decreased alkalinity of the blood.

ACGIH – American Conference of Governmental Industrial Hygienists, Inc.

action level – the exposure level that triggers some but not all requirements in certain OSHA standards.

acute toxicity – the adverse effects resulting from a single dose of or exposure to a substance.

alkali – any compound having highly basic properties.

anesthesia – loss of sensation or feeling.

asphyxia – lack of oxygen thus interference with oxygenation of the blood.

asphyxiant – a vapor or gas that can cause unconsciousness or death by suffocation.

boiling point, BP – the temperature at which the vapor pressure of a liquid is equal to the surrounding atmospheric pressure.

BZ – breathing zone

carcinogen – a chemical that has been demonstrated to cause cancer in humans.

CAS number (chemical abstract service number) – an assigned number used to identify a material; the numbers have no chemical significance.

ceiling value, CV – the concentration that should not be exceeded during any part of the working exposure.

CFM (cubic feet per minute) – the volume of airflow.

chemical pneumonitis – inflammation of the lungs due to chemical irritation.

CNS – central nervous system.

CO (carbon monoxide) – a colorless, odorless, highly poisonous gas, formed by the incomplete combustion of carbon or carbonaceous material, including gasoline. A chemical asphyxiant, it reduces the blood's ability to carry oxygen.

CO2 (carbon dioxide) – a colorless, odorless, incombustible gas formed during respiration, combustion, and organic decomposition and used in food refrigeration, carbonated beverages, inert atmospheres, fire extinguishers, and aerosols. High concentrations can create hazardous oxygen-deficient environments that can cause asphyxiation.

combustible – OSHA defines combustible liquid as any liquid having a flash point at or above 100F (38C), but below 200F (93.3).

conjunctivitis – inflammation of the conjunctiva, the delicate membrane that lines the eyelids. **corrosive** – a chemical that causes visible destruction of or irreversible alterations in living tissue.

cutaneous – about the skin.

dermal – used on or applied to the skin.

dermatitis – inflammation of the skin.

dyspnea – a sense of difficulty in breathing; shortness of breath.

edema – an abnormal accumulation of clear, watery fluid in the tissues.

evaporation rate – the rate at which a particular material will vaporize from the liquid or solid state to the gas state.

f/cc – fibers per cubic centimeter of air.

flammable – describes any solid, liquid, or gas that will ignite easily and burn rapidly. Has a flash point below 100F (38C).

flash point – the lowest temperature at which a flammable liquid gives off sufficient vapors to form an ignitable mixture.

FPM (feet per minute) – velocity of airflow.

grounding – a safety practice to conduct an electrical charge to the ground.

hazardous material – a substance or mixture of substances having properties capable of producing adverse health or safety effects.

hematuria – the presence of blood in the urine.

HEPA (high-efficiency particulate air purifying) – most efficient mechanical filter commonly available.

IARC – International Agency for Research on Cancer.

IDLH – immediately dangerous to life and health.

jaundice – yellowish discoloration of tissues.

LC 50 – the lethal concentration of a material in air that based on laboratory tests is expected to kill 50 percent of a group of test animals.

LD 50 – the lowest published lethal dose that will kill 50 percent of a group of test animals.

LEL (lower explosive limit) – refers to the lowest concentration of gas or vapor that will burn or explode if an ignition source is present.

LFM or Ifm (linear feet per minute) – velocity of airflow.

mg/m3 – milligrams of material per cubic meter of air.

MSDS – material safety data sheet

mutagen – a chemical or physical agent that induces genetic mutations.

narcosis – stupor or unconsciousness produced by a narcotic drug or chemical.

NFPA – National Fire Protection Association

NIOSH – National Institute for Occupational Safety and Health

NTP - National Toxicology Program

odor threshold – the lowest concentration of a material's vapor in air that can be detected by smell.

particulate – small, separate pieces of an airborne material.

peak – maximum instantaneous allowable exposure for hazardous substances.

PEL (permissible exposure limit) – an exposure limit established by OSHA.

pH – the value that represents the acidity or alkalinity of an aqueous solution [pH 7 = neutral;

pH 0 = strong acid; pH 14 = strong alkaline.]

ppb (parts per billion) – parts of material per billion parts of air.

ppm (parts per million) – parts of material per million parts of air.

psychotropic – acting on the mind.

pulmonary edema – fluid in the lungs.

pyrophoric – a material that will ignite spontaneously in air below 130F (54C).

Reactivity – a description of the tendency of a substance to undergo chemical reaction either by itself or with other materials with the release of energy.

Reproduction health hazard – any agent that harms the adult male or female reproductive system of the developing fetus or child.

SDS – Safety Data Sheet

Sensitization – an immune-response reaction state in which further exposure elicits an immune or allergic response.

silicosis – a condition of massive fibrosis of the lungs causing shortness of breath.

Skin–notation is used to indicate possible exposure to a chemical by absorption through the skin.

specific gravity -

STEL – short-term exposure limit.

subcutaneous – beneath the skin.

target organ effects – chemically caused effects upon specifically listed organs and systems.

teratogen – an agent or substance that causes physical defects in developing embryos.

TLV (threshold limit value) – a term established by ACGIH to express the airborne concentration of a material to which nearly all workers can be exposed day after day without adverse effects.

TWA (time-weighted average) – the expression for average exposure which accounts for fluctuating levels during a given time period.

UEL (upper explosive limit) – the highest concentration of a material in air that will produce an explosion.

unstable – tending toward decomposition or other unwanted chemical change during normal handling or storage.

vapor density – the weight of a vapor or gas compared to an equal volume of air.

vapor pressure –

vertigo – a feeling of revolving in space; dizziness, giddiness.

viscosity – measurement of the flow properties of a material.

water reactive – a chemical that releases a hazardous gas, often violently, upon contact with water.