

Section 1: Product & Company Information

Product Identifier: Formaldehyde Solution 25-50% (0-10% Methanol)

Other Means of Identification

Product Number: 140004

Recommended Use and Restrictions on Use

Recommended Use: Industrial use.
Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: Greenway Products Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.greenwayproductsinc.com

Contact Person: Regulatory Manager

E-mail: regulatory@greenwayproductsinc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Flammable, Liquids - 4

Health Hazard(s)

Acute Toxicity, Oral - 4
Acute Toxicity, Dermal - 3
Acute Toxicity, Inhalation - 2
Corrosion/Irritation, Skin - 1C
(Corrosion) Damage/Irritation, Eye - 1
Sensitization, Skin - 1
Carcinogenicity - 1
Specific Target Organ Toxicity (STOT), Single exposure - 1
Specific Target Organ Toxicity (STOT)-CNS, Single exposure - 3
Specific Target Organ Toxicity (STOT), Repeated exposure - 2

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H227: Combustible liquid.
H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H330: Fatal if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory Irritation.
H350: May cause cancer.
H370: Causes damage to organs.
H373: May cause damage to organs.

Precautionary Statements

General

Not applicable.

Prevention

P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P233: Keep container tightly closed.
 P240: Ground/bond container and receiving equipment.
 P241: Use explosion-proof electrical/ventilating/lighting/equipment.
 P242: Use only non-sparking tools.
 P243: Take precautionary measures against static discharge.
 P260: Do not breathe dust/fume/gas/mist/vapors/spray.
 P264: Wash face, hands and any exposed skin thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P281: Use personal protective equipment as required.

Response

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
 P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P312: IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
 P308 + P313: IF exposed or concerned: Get medical advice/attention.
 P321: Specific treatment (see supplemental first aid instructions on this label).
 P330: Rinse mouth.
 P331: Do NOT induce vomiting.
 P332 + P313: If skin irritation occurs: Get medical advice/attention.
 P362: Take off contaminated clothing and wash before reuse.
 P370 + P378: In case of fire: Use suitable extinguishing media for extinction.

Storage

P403 + P235: Store in a well-ventilated place. Keep cool.
 P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Mixture

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Formaldehyde	-	50-00-0	25 - 50%	No
Methyl Alcohol	Methanol	67-56-1	0 - 10%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure.

Skin Contact

Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye Contact

Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Ingestion

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Symptoms

Causes severe skin and eye burns. Toxic if swallowed. May cause allergic skin reaction. Toxic in contact with skin. Toxic if inhaled.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically.

Section 5: Fire-Fighting Measures

General Fire Hazards

Flammable liquid and vapor.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog

Unsuitable Extinguishing Media

Avoid water in straight hose stream; will scatter and spread fire.

Specific Hazards Arising from the Chemical

Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special Protective Equipment for Fire-Fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Methods and Materials for Containment and Clean-Up

Large Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Small Spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 7: Handling and Storage

Precautions for Safe Handling

Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate

ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

Conditions for Safe Storage, including any Incompatibilities

Storage temperature should be controlled to avoid precipitation or excessive vaporization. See technical bulletin for recommended storage temperatures. Open container cautiously to relieve any potential pressure buildup. Formaldehyde solutions will start to precipitate paraformaldehyde if stored below their recommended storage temperatures. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep storage container tightly closed and sealed until ready for use or place in other enclosed storage (e.g. bulk storage tanks or intermediate bulk containers). Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Formaldehyde	STEL	0.3 ppm	US. ACGIH Threshold Limit Values
	TWA	0.75 ppm	US OSHA Table Z-1
	STEL	2 ppm	US OSHA Table Z-1
Methyl Alcohol	TWA	200 ppm	US. ACGIH Threshold Limit Values
	STEL	250 ppm	US. ACGIH Threshold Limit Values
		328 mg/m ³	
	PEL	200 ppm	US OSHA Table Z-1
262 mg/m ³			

Biological Limit Values

No data available.

Appropriate Engineering Controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid

Color: Colorless

Odor:

Pungent

Odor Threshold:

No data available.

pH:

2.8 - 4.0 @ 25 °C (77 °F)

Melting Point/Freezing Point:

No data available.

Initial Boiling Point and Boiling Range:

100 °C (212 °F)

Flash Point:

68 °C

Evaporation Rate (butyl acetate=1):

No data available.

Flammability (solid, gas):

No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: 70 %(V)

Flammability Limit – Lower: 7 %(V)

Explosive Limit – Upper:	No data available.
Explosive Limit – Lower:	No data available.
Vapor Pressure:	40 mm Hg @ 25 °C (77 °F)
Vapor Density (air =1):	1
Relative Density (water=1):	1.0925 – 1.0960 (20 °C)
Solubility(ies):	
Solubility in water:	Completely Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	420 °C (788 °F)
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Other Information:	
Molecular Weight:	No data available.
Formula:	No data available.

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible Materials

Reactive or incompatible with the following materials: oxidizing materials strong acids, strong alkalis, phenols, and hydrochloric acids.

Hazardous Decomposition Products

Decomposition products may include the following materials:, carbon monoxide, carbon dioxide, oxides of nitrogen.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Adverse symptoms may include the following: stomach pains.

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing, wheezing, and breathing difficulties asthma.

Skin Contact: Adverse symptoms may include the following: pain or irritation, redness, and blistering may occur.

Eye Contact: Adverse symptoms may include the following: pain, watering, redness.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Formaldehyde Solution: LD 50 (Rat): 800 mg/kg

Methyl Alcohol: LD 50: (Rat) 5628 mg/kg

Formaldehyde Solution: ATE 602.1 mg/kg

Dermal

Methyl Alcohol: LD 50 (Rabbit): 15,800 mg/kg

Formaldehyde Solution: ATE 655.1 mg/kg

Inhalation

Formaldehyde: LC 50 (Rat, 2 h): 0.578 mg/l

Methyl Alcohol: LC 50 (Rat, 6 h): 87.5 mg/l

Formaldehyde Solution: ATE 1.552 mg/l

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

Causes severe skin burns and eye damage.

Serious Eye Damage/Eye Irritation

Causes serious eye damage.

Respiratory/Skin Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Group 1, Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Known to be human carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No data available.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

No components toxic to reproduction

Specific Target Organ Toxicity – Single Exposure

Respiratory System, Central nervous system. - Causes damage to organs.

Specific Target Organ Toxicity – Repeated Exposure

Eyes., Central nervous system. - Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard

Not classified.

Other Effects

Even small amounts (30-250 ml methanol) may be fatal. Symptoms are stomach ache, nausea, vomiting, dullness, visual disorder and blindness. May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Formaldehyde: LC 50 (Striped bass), 96 h): 6.7 mg/l Mortality

Formaldehyde: LC 50 (Zebra danio, 6d): 6.9 mg/l Mortality

Methyl Alcohol: LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 4d): 13,000 mg/l

Aquatic Invertebrates

Formaldehyde: EC 50 (Water flea (Daphnia magna), 2d): 5.8 mg/l

Toxicity to Aquatic Plants

Formaldehyde: EC 50 (Algae, 3d): 4.9 mg/l

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

There are no data on the degradability of this product.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

Formaldehyde Log Kow: 0.35 BCF: <1

Methyl Alcohol Log Kow: -0.77

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

Harmful to aquatic organisms.

Section 13: Disposal Considerations

Disposal Instructions

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities

with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

UN Number: UN 2209
UN Proper Shipping Name: Formaldehyde solutions, flammable
Technical Name:
Hazard Class: 8
Subsidiary Hazard Risk: 8
Packing Group: III
DOT Label/Placard Exemptions: Not determined
Special Provisions: 176, B1, IB3, T4, TP1
Packaging Exceptions: 49CFR 173.150
Packaging Non-Bulk: 49CFR 173.203
Packaging Bulk: 49CFR 173.242
Reportable Quantity (RQ): 100lb (45.4kg)
Marine Pollutant: No
Poison Inhalation Hazard: No
Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Emergency Response Guidebook (ERG) #: 132

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Formaldehyde (CAS # 50-00-0)
Methyl Alcohol (CAS # 67-56-1)

Clean Air Act (CAA), Section 112(r)

The following chemical(s) in this material are subject to reporting levels established by CAA:

Formaldehyde (CAS # 50-00-0)

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 302:

Formaldehyde (CAS # 50-00-0)

EPCRA 304 Emergency Response Notification

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 304:

Formaldehyde (CAS # 50-00-0)

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: Yes

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:

Formaldehyde (CAS # 50-00-0)
Methyl Alcohol (CAS # 67-56-1)

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 3

Chronic Health Hazard: *

Flammability: 2

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 3

Fire Hazard: 2

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Sections Revised: 2-12, 14

Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL - Immediately Dangerous to Life and Health

Kg - Kilogram

l - Liter

lb - Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

mg - milligram

ml - milliliter

N/A - Not Applicable

N/D - Not Determined

PEL - Permissible Exposure Limit

REL - Recommended Exposure Limit

STEL - Short-term Exposure Limit

TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists

AIHA - American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS - Chemical Abstracts Service

DOT - US Department of Transportation

EPA - US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - US Occupational Health and Safety Administration

SARA - US EPA Superfund Amendments and Reauthorization Act

TSCA - US EPA Toxic Substances Control Act

UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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