# CHIPQUIK®

# **Leaded Solder Wire and Spheres**

# Safety Data Sheet (SDS)

www.chipquik.com

To comply with European CLP Regulation 1272/2008, US 29CFR 1910.1200 OSHA's Hazard Communication Standard, and Australian NOHSC: 1008 [2004] and ADG Code 7.4

# 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Chip Quik Leaded Solder Wire and Spheres Series: SMDSW, SMD, SMD2SW, SMD3SW

SYNONYMS: Solder Spool, Solder Sticks, Solder Coil, Chip Quik Alloy, Removal Alloy, Rework Solder, Solder Spheres

SMD1, SMD4.5, SMD8, SMD16, SMD32, SMD32S, SMD2000, SMDSW.020 1OZ, SMDSW.031 1OZ, SMDSW.020 2OZ, **PART NUMBERS:** 

SMDSW.031 2OZ, SMDSW.020 4OZ, SMDSW.031 4OZ, SMD2165, SMD2165-25000, SMD2180, SMD2180-25000, SMD2190, SMD2190-25000, SMD2200, SMD2200-25000, SMD2205, SMD2205-25000, SMD2215, SMD2215-25000, SMDSW.020 1LB, SMDSW.031 1LB, SMD2SW.020 1LB, SMD2SW.031 1LB, SMD3SW.020 1LB, SMD3SW.031 1LB, SMDSW.020 8OZ, SMDSW.031 8OZ, SMD2SW.020 8OZ, SMD2SW.031 8OZ, SMD3SW.020 8OZ, SMD3SW.031 8OZ, SMDSW.020 .4OZ, SMDSW.031 .7OZ, SMD2SW.020 .4OZ, SMD2SW.031 .7OZ, SMD3SW.020 .4OZ, SMD3SW.031 .7OZ, SMDSW.015 100g, SMD2SW.015 100g, SMD3SW.015 100g, SMD2SW.020 10Z, SMD2SW.020 20Z, SMD2SW.020 40Z, SMD2SW.031 1OZ, SMD2SW.031 2OZ, SMD2SW.031 4OZ, SMD3SW.020 1OZ, SMD3SW.020 2OZ, SMD3SW.020 4OZ, SMD3SW.031 1OZ, SMD3SW.031 2OZ, SMD3SW.031 4OZ, SMD2185, SMD2185-25000, SMD2140, SMD2140-25000, SMD2150, SMD2150-25000, SMD2170, SMD2170-25000, SMD2195, SMD2195-25000, RASW.015 100g, RASW.020 1OZ, RASW.020 2OZ, RASW.020 4OZ, RASW.020 8OZ, RASW.020 1LB, RASW.031 1OZ, RASW.031 2OZ, RASW.031 4OZ,

RASW.031 8OZ, RASW.031 1LB, RASW.020 .4OZ, RASW.031 .7OZ

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2018/9/25 **REVISION DATE: REVISION NUMBER:** 3.4

REVISED BY: Chip Quik Product Safety

PRODUCT USE: Soldering components for bonding semiconductor chips and packages to circuit boards. Removal of semiconductor chips and

packages from circuit boards. This product is for industrial use only.

# 2. HAZARD IDENTIFICATION

Classified in accordance with European CLP Regulation 1272/2008

Acute Tox. 4\* Skin Irritant 2 Eye Irritant 2A Aquatic Acute 1 **Aquatic Chronic** Chronic toxicity 2 Reproductive toxicity 2 Carcinogenic 2

**CHEMICAL NAME:** NA **CHEMICAL FAMILY:** Mixture **CHEMICAL FORMULA:** Proprietary

**ROUTES OF ENTRY:** Inhalation, Ingestion, Skin/Eye Contact

**TARGET ORGANS:** Blood, Kidneys, Skin, Respiratory System, Nasal, Septum, Liver, Eyes

GHS/CLP:



GHS/CLP LABEL ELEMENTS:

**LEAD WARNING** 

Hazard statement(s)

H302 Harmful if swallowed. H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation. H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P102 Keep out of reach of children.
P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P233 Keep container tightly closed.

P260 Do not breathe dust/fume/gas/mist/vapor/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash hands thoroughly after handling.

P270 Do not eat, drink, or smoke when using this product.

P271 Use 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.
P284 In case of inadequate ventilation wear respiratory protection.

P301/P330/P331/P310 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER/Doctor.

P303/P361/P352/P333/P313 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with soap & water. Get medical advice/attention if

skin irritation or rash occurs or if you feel unwell.

P304/P340/312 IF INHALED: Remove victim to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if

you feel unwell.

P305/P351/338/ P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing. Immediately call POISON CENTER/Doctor.

P308/P313 IF EXPOSED OR CONCERNED: Get medical advice/attention.

P342/P311 IF EXPERIENCING RESPIRATORY SYMPTOMS: Call POISON CENTER/Doctor.

P362 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

P402/P404 Store in a dry place. Store in a closed container.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

# POTENTIAL HEALTH EFFECTS (CHRONIC and OVEREXPOSURE)

Tin: Dust or fumes may cause irritation of the skin mucous membranes and may result in a benign Pneumoconiosis (Stannosis).

Silver: May cause discoloration of eyes and skin (Argyia).

Bismuth: May cause foul breath, a blue-black line on the gums, and Stomatitis.

Antimony: May cause gastrointestinal upset, sleeplessness, irritability, and muscular pain.

Indium: May cause weight loss, pulmonary edema, blood damage and degenerative changes in liver and kidneys.

# **CHRONIC / ACUTE HEALTH HAZARDS**

**Lead:** Women of child-bearing age should avoid exposure to lead and its inorganic compounds due to post-natal effects. Lead can cause potential injury to a developing fetus and possible effects on reproduction. Exposure to high levels of airborne or ingested lead may produce symptoms of anemia, weakness, constipation, nausea, and abdominal pain. Prolonged exposure may result in kidney and/or nervous system involvement.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Diseases of the blood-forming organs, kidneys, nervous and possibly reproductive systems. Occupational Asthma.

# **SECTION 2 NOTES:**

Chip Quik Inc. does not recommend, manufacture, market, or endorse any of its products for human consumption.

Chronic Toxicity-Proposition 65, State of California: **WARNING!** This product can expose you to Lead, which is known to the State of California to cause Cancer, Birth Defects, or other Reproductive Harm. For more information, go to www.P65Warnings.ca.gov. Federal and State Laws prohibit the use of lead solder in making joints in any private or public potable (drinking) water supply system. Breathing fumes may cause respiratory system irritation or damage. After handling solder, wash hands with soap and water before eating or smoking.

# 3. COMPOSITION / INFORMATION ON INGREDIENTS

Classified in accordance with European CLP Regulation 1272/2008

Hazardous Ingredients (1)	C.A.S. Number	Weight Percent	OSHA PEL	ACGIH TLV TWA	LD 50 Ingested	LD 50 Inhaled
			mg/m <sup>3</sup>	mg/m <sup>3</sup>	g/Kg	g/m <sup>3</sup>
Modified Rosins (Rosin) (2)	8050-09-7	<45	NE	NE	NE	NE
Pine Oil Derivatives (Terpineol)	8000-41-7	<5	NE	NE	NE	NE
Mixed Carboxylic Acids (Maleic Acid) <sup>(2)</sup>	110-16-7	<4	NE	NE	NE	NE
*+Lead	7439-92-1	Product contains	0.05	0.05	NE	NE
Tin	7440-31-5	one or more of	2.00	2.00	NE	NE
Silver	7440-22-4	these metallic	0.01	0.10	NE	NE

Bismuth	7440-69-9	elements in	NE	NE	NE	NE
Antimony	7440-36-0	varying	0.50	0.50	7.0 Rat	NE
Indium	7440-74-6	percentages	NE	0.10	NE	NE
Copper	7440-50-8		1.00	1.00	NE	NE

Non-Hazardous Ingredients	C.A.S. Number	Weight Percent	OSHA PEL	ACGIH TLV TWA	LD 50 Ingested	LD 50 Inhaled
			mg/m <sup>3</sup>	mg/m <sup>3</sup>	g/Kg	g/m <sup>3</sup>
Surfactants	NA	<4	NE	NE	NE	NE
Rheological Modifier	NA	<5	NE	NE	NE	NE

# **SECTION 3 NOTES:**

- \* denotes a chemical that is also listed in 29CFR 1910.1200(D) #4 as a known or suspected cancer hazard.
- + denotes a chemical regulated as toxic by the Environmental Protection Agency (EPA) as outlined in 40CFR Part 372 (section 313).

Percentages of individual components are not listed as this information is considered a trade secret.

- (1) Per 29 CFR 1910 the mixture has not been tested as a whole. All hazardous components, which comprise 1% of the mixture (0.1% carcinogenic), are listed. Percentages of individual components are not listed as this information is considered a trade secret.
- (2) The identity of the specific chemical(s) is being withheld as a trade secret per 29 CFR 1910.1200. The hazardous properties of these ingredients are disclosed in this SDS.

# 4. FIRST-AID MEASURES

Signs and symptoms of exposure: Inhalation-Nose and throat irritation, headache, dizziness, difficulty breathing, coughing. Ingestion-nausea, vomiting, cramps. Skin-redness, burning, rash, dryness. Eye-redness, burning, tearing, blurred vision.

# Emergency first aid procedures:

EYES: Flush with plenty of water, contact a physician. If contact lenses can be removed easily, flush eyes without contact lenses.

SKIN: Wash affected area with plenty of warm, soapy water. If irritation persists, seek medical attention.

**INGESTION:** Call a physician or Poison Control Center immediately. Do not induce vomiting. Drink large amounts of water. Never give anything by mouth to an unconscious person

INHALATION: Remove to fresh air. Support respiration if required. If not breathing, seek immediate medical attention.

**OTHER: Lead:** Excessive overexposure may result in an acute or chronic illness. If symptoms are present, the individual should be immediately removed from exposure and a physician consulted.

# 5. FIREFIGHTING MEASURES

**EXTINGUISHING MEDIA:** Dry chemical, foam

SPECIAL FIRE FIGHTING PROCEDURES: Do not use water. Use NIOSH-approved self-contained Breathing Apparatus and full protective clothing if

involved in a fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: May release Toxic metal and oxide fumes. High concentrations of dust may present explosion hazard.

Water trapped below molten metal may explode thus spattering molten metal.

HAZARDOUS DECOMPOSITION PRODUCTS: Lead oxide fumes and/or Lead particulate may be evolved.

# SECTION 5 NOTES:

Molten solder alloys consisting of Antimony, Bismuth, Copper, Indium, Lead, Silver, and/or Tin do not produce significant quantities of fumes below 900° F.

# 6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONS AND EQUIPMENT: Material is extremely thick and will not flow out.

**ACCIDENTAL RELEASE MEASURES:** If material spills or leaks use a spatula to collect and place it in a plastic or glass jar. Remove traces of residue using cloth rags or paper towels moistened with Isopropyl Alcohol. Exposure to spilled material may be irritating. Follow on-site personal protective equipment recommendations.

**ENVIRONMENTAL PRECAUTIONS:** Avoid release to the environment. Collect spillage.

# **SECTION 6 NOTES:**

See Sections 2, 4, and 7 for additional information.

# 7. HANDLING AND STORAGE

**HANDLING/STORAGE:** Keep containers tightly closed when not in use. Use care to avoid spills. Avoid inhalation of fumes or dust. Avoid contact with eyes, skin, and clothing. Store in a closed corrosive resistant container, with corrosive resistant liner, in cool dry place. Wear appropriate personal protective equipment when working with or handling. Always wash hands thoroughly after handling this product. Dispose of following Federal, State/Provincial, and Local regulations.

OTHER PRECAUTIONS: Empty containers may retain product residues in vapor, liquid, and/or solid form. All labeled hazard precautions should be observed

WORK HYGIENIC PRACTICES: Cosmetics/Food/Drink/Tobacco should not be consumed or used in work areas. Always wash hands after handling material and before applying or using cosmetics/food/drink/tobacco.

#### **SECTION 7 NOTES:**

For industrial use only. Keep out of reach of children. Not for internal consumption.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

# Occupational Exposure Limit Values:

Rosin flux fumes (as total resin acids)

MEL: 0.05 mg/m<sup>3</sup> 8h TWA. MEL: 0.15 mg/m<sup>3</sup> 15 min.

Extraction is necessary to remove fumes evolved during reflow.

Also see section 3.

ENGINEERING CONTROLS: Use only with production equipment designed for use with solder wire.

VENTILATION: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLVs.

**RESPIRATORY PROTECTION:** A (US: NIOSH; EU: EN 140:1998, EN 14387:2004 A)-approved air-purifying respirator with fume/organic chemical cartridge should be worn when airborne concentrations may be exceeded. General and local exhaust ventilation is the preferred means of protection.

EYE PROTECTION: Use with appropriate eye protection: Goggles or face shield (EU: EN 166-S 3 9).

SKIN PROTECTION: Protective gloves should be worn when the possibility of skin contact exists (EU: EN 374-1:2003).

PROTECTIVE CLOTHING OR EQUIPMENT: Work clothes should be worn and laundered in accordance with current Lead (Pb) standards (US: OSHA).

**WORK HYGIENIC PRACTICES:** Cosmetics/Food/Drink/Tobacco should not be consumed or used in areas where solder products may be used. Always wash hands after handling soldering products and before applying or using cosmetics/food/drink/tobacco.

**OTHER:** Maintain eye wash stations in work areas. Avoid the use of contact lenses in high fume areas. Clean protective equipment regularly. Clean up spills immediately.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Silver Grey Solid
ODOR: Odorless

Odorless **ODOR THRESHOLD:** ΝE pH as SUPPLIED: NA **MELTING POINT:** Varies FREEZING POINT: Varies **INITIAL BOILING POINT:** Varies **BOILING RANGE:** NA FLASH POINT: NA **EVAPORATION RATE:** NA FLAMMABILITY (solid): NE **UPPER/LOWER FLAMMABILITY:** NE **UPPER/LOWER EXPLOSIVE LIMITS:** NE VAPOR PRESSURE (mmHg): NA VAPOR DENSITY (AIR = 1): NA **RELATIVE DENSITY:** NF SOLUBILITY IN WATER: Insoluble PARTITION COEFFICIENT (n-octanol/water): NE **AUTOIGNITION TEMPERATURE:** NE **DECOMPOSITION TEMPERATURE:** ΝE

# SECTION 9 NOTES:

VISCOSITY:

Other physical and chemical properties depend on alloy composition.

# 10. STABILITY AND REACTIVITY

STABILITY: Stable CONDITIONS TO AVOID (STABILITY): NE

INCOMPATIBILITY (MATERIAL TO AVOID): Oxidizing materials, acids, hydrogen peroxide, bases

NA

HAZARDOUS DECOMPOSITION/BY-PRODUCTS: Harmful organic fumes and toxic oxide fumes may form at elevated temperatures. Lead oxide

fumes and/or Lead particulate may be evolved.

POSSIBILITY OF HAZARDOUS REACTIONS: NE

# 11. TOXICOLOGICAL INFORMATION

# INHALATION:

This product does not present a risk at ambient temperatures. The flux fumes evolved during soldering will irritate the nose, throat and lungs. Repeated or prolonged exposure to flux fumes may cause an allergic affect which may lead to occupational asthma.

#### SKIN

Contact with flux fumes and flux residues may cause irritation and sensitization.

#### EYES:

Flux fumes may cause irritation.

Health Hazards (acute and chronic): Contact with dust and fumes may cause skin, eye and respiratory irritation. Ingestion and/or inhalation of material or fumes may result in flu like symptoms, insomnia, muscle weakness, nausea and abdominal pain. Gross inhalation or ingestion may be toxic and can result in death. Symptoms of toxicity may take hours or days to manifest. Chronic exposures, inhalation and ingestion, may result in kidney, red blood cell, reproductive and nervous system effects. Health effects may be cumulative over many exposures. Studies show that health risks vary by individual. Minimize exposure as a precaution. See OSHA 29CFR 1910.1025(subpart Z) for more information.

# **ACUTE TOXICITY:**

Product/Ingredient Name	Result	Species	Dose	Exposure
Rosin	LD50 Oral	Rat	7600 mg/kg	-
Terpineol	LD50 Oral	Rat	2000 mg/kg	-
•	LD50 Inhalation	Rat	4.76 mg/l	4 hours
	LD50 Dermal	Rat	2000 mg/kg	-
Maleic acid	LD50 Oral  LD50 Inhalation LD 50 Dermal	Rat Rat Rabbit	708 mg/kg 720 mg/m³ 1560 mg//kg	Remarks: Behavioral: Convulsions or effect on seizure threshold. Behavioral: Muscle weakness. Gastrointestinal: Ulceration or bleeding from stomach. 1 hour Remarks: Behavioral: Tremor
Antimony	LD50 Ingested	Rat	7000 mg/kg	-
Silver	LD50 Oral	Mouse	100 mg/kg	-

SKIN CORRISION/IRRITATION: NE

SERIOUS EYE DAMAGE/IRRITATION: Not available

RESPIRATORY OR SKIN SENSITIZATION: NE

GERM CELL MUTAGENICITY: Not available

CARCINOGENICITY:

OSHA: NA ACGIH: Lead (Pb)-A3 NTP: NA IARC: Lead (PB)-Group 2B

REPRODUCTIVE TOXICITY: Not available

STOT-SINGLE EXPOSURE:

Product/Ingredient Name	Category	Route of exposure	Target organs
Maleic acid	Category 3	Not applicable	Respiratory tract irritation

STOT-REPEATED EXPOSURE: Not available ASPIRATION HAZARD: Not available

# **SECTION 11 NOTES:**

This product has not been tested as a whole to determine its hazards. Synergistic or additive effects of the above chemicals are unknown, as are the effects of exposure to these chemicals in addition to others present in the work place. See Section 2 for additional health hazards.

# 12. ECOLOGICAL INFORMATION

# TOXICITY:

Product/Ingredient Name	Result	Species	Exposure
Lead	Acute EC50 105 ppb Marine water	Algae - Chaetoceros sp	72 hours
		Exponential growth phase	
	Acute EC50 0.489 mg/l Marine	Algae - Ulva pertusa	96 hours
	water		
	Acute EC50 8000 μg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 530 μg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 4400 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.44 ppm Fresh water	Fish - Cyprinus carpio -	96 hours
		Juvenile (Fledgling, Hatchling,	
		Weanling)	
	Chronic NOEC 0.25 mg/l Marine	Algae - Ulva pertusa	96 hours
	water		
	Chronic NOEC 0.03 µg/l Fresh	Fish - Cyprinus carpio	4 weeks
	water		
Rosin	Acute LC50 60.3 mg/l Fresh water	Brachydanio rerio (zebra fish)	96 hours
Terpineol	Acute LC50 62.80 mg/l Fresh	Danio rerio (zebra fish)	96 hours
	water		
	Acute LC50 68 mg/l Marine water	Algae – Pseudokirchneriella	72 hours
		subcapitata (green algae)	
Maleic acid	Acute EC50 316200 µg/l Fresh	Daphnia - Daphnia magna -	48 hours

water	Larvae	
Acute LC50 5000 μg/l Fresh water	Fish - Pimephales promelas	96 hours

PERSISTENCE AND DEGRADIBILITY:
BIOACCUMULATIVE POTENTIAL:

Product/Ingredient Name	LogP <sub>ow</sub>	BCF	Potential
Rosin	1.9 to 7.7	-	High
Terpineol			NE
Maleic acid	-1.3	-	Low

MOBILITY IN SOIL: NE

RESULT OF PBT and vPvB ASSESSMENT: Not applicable

NE

OTHER ADVERSE EFFECTS: NE

#### 13. DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** Scrap and waste should be recycled or stored in a dry, sealed container for later disposal. Disposal must be in accordance with Federal, State/Provincial, and Local Regulations.

OTHER PRECAUTIONS: Avoid skin & eye contact, inhalation & ingestion of fumes and material. Wash contaminated clothing before reuse. Keep away from children.

# 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN Number:
UN Proper Shipping Name:
Packaging Group:
Environmental Hazards:
Not available
Not applicable
None

# TRANSPORT HAZARD CLASSES:

US DOT Hazardous Material Classification:
Water Transportation:
Non-Hazardous
Non-Hazardous
Non-Hazardous
Non-Hazardous
Non-Hazardous
Not regulated
Not regulated
ADG Land Transportation
Not regulated
Not regulated

# 15. REGULATORY INFORMATION

All ingredients used to manufacture this product are listed on the EPA TSCA Inventory. Finished product is not listed on the EPA TSCA Inventory.

U.S. FEDERAL REGULATIONS:
STATE REGULATIONS:
INTERNATIONAL REGULATIONS:
AUSTRALIAN REGULATIONS:
Not regulated
Not regulated
Not regulated

This product contains components known to the state of California to cause cancer or reproductive harm.

# 16. OTHER INFORMATION

LEGEND:

ACGIH American Conference of Governmental Industrial Hygienists

ADG Australian Dangerous Goods Code

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

AICS Australian Inventory of Chemical Substances

BCF Bioconcentration factor
C.A.S. Chemical Abstract Service

**CLP** Classification, Labeling and Packaging

DOT Department of Transportation EC Effective Concentration

EPA Environmental Protection Agency
GHS Global Harmonized System

HMIS
IARC
International Agency for Research on Cancer
IATA
International Air Transport Association
IMDG
International Maritime Dangerous Goods Code

LC Lethal Concentration
LD Lethal Dose
NA Not available
NE Not established

NIOSH National Institute for Occupational Safety & Health

NOEC No observed effective concentration

NOHSC National Occupational Health and Safety Commission (Australia)

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

Octanol water partition coefficient

P<sub>ow</sub> SDS Safety Data Sheet

**STEL** Short-Term Exposure Limit Specific target organ toxicity STOT Threshold Limit Value TLV **TSCA** Toxic Substance Control Act TWA: Time Weighted Average

US DOT: United States Department of Transportation

# PREPARATION INFORMATION:

This update supersedes all previously released documents.

#### DISCLAIMER:

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to Chip Quik at the time of issue. No warranty, guarantee, or representation is made by Chip Quik nor does Chip Quik assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances. The data on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

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