

Material Safety Data Sheet

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Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name 60W A19 CFL bulbs

Recommended Use Lights, Fluorescent.

Supplier Address

Technical Consumer Products, Inc.
325 Campus Drive
Aurora
OH
44202
US
Phone:330-995-6111
Contact:Jim Matta
Email:jmatta@tcpi.com
Contact Phone330-414-7857

2. HAZARDS IDENTIFICATION

Emergency Overview

This product is an article. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals.

Appearance White to off-white

Physical State Solid.

Odor Odorless

Potential Health Effects

Principle Routes of Exposure Eye contact. Skin contact.

Acute Toxicity

Eyes

In case of rupture: Irritating to eyes

Skin

In case of rupture: Irritating to skin. May be harmful in contact with skin.

Inhalation

In case of rupture: May be harmful if inhaled

Ingestion

In case of rupture: Harmful if swallowed.

Chronic Effects

Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system.

Aggravated Medical Conditions

None known

Environmental Hazard

See Section 12 for additional Ecological Information. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.	94551-97-0	15-40
Yttrium	7440-65-5	10-30
Barium oxide	1304-28-5	10-30
Silicon	7440-21-3	1 - 5

Nickel	7440-02-0	1 - 5
Copper	7440-50-8	1 - 5
Aluminum	7429-90-5	1 - 5
Mercury	7439-97-6	< 0.1

4. FIRST AID MEASURES

General Advice	In case of rupture.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Notes to Physician	Treat symptomatically.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Flash Point	Not determined.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous Combustion Products	Hazardous metal fumes and oxides.
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<u>NFPA</u>	Health Hazards 1 Flammability 0 Stability 0 Physical and Chemical Hazards -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin, eyes or clothing.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Use personal protective equipment as required.

7. HANDLING AND STORAGE

Handling	In case of rupture. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.
Storage	Keep/store only in original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold. 94551-97-0	TWA: 2 mg/m ³ Sn except Tin hydride TWA: 0.05 mg/m ³ Pb TWA: 0.5 mg/m ³ Sb	TWA: 2 mg/m ³ Sn except oxides TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb Action Level: 30 µg/m ³ Pb Poison, See 29 CFR 1910.1025 (vacated) TWA: 2 mg/m ³ Sn except oxides (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 100 mg/m ³ Sn IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Pb TWA: 2 mg/m ³ except Tin oxides Sn TWA: 0.5 mg/m ³ Sb TWA: 0.050 mg/m ³ Pb
Yttrium 7440-65-5	TWA: 1 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 500 mg/m ³ TWA: 1 mg/m ³
Barium oxide 1304-28-5	TWA: 0.5 mg/m ³ Ba	TWA: 0.5 mg/m ³ Ba (vacated) TWA: 0.5 mg/m ³ Ba	TWA: 0.5 mg/m ³ except Barium sulfate Ba
Silicon 7440-21-3		TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Nickel 7440-02-0	TWA: 1.5 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.015 mg/m ³
Copper 7440-50-8	TWA: 0.2 mg/m ³ fume	TWA: 0.1 mg/m ³ fume TWA: 1 mg/m ³ dust and mist (vacated) TWA: 0.1 mg/m ³ Cu dust, fume, mist	IDLH: 100 mg/m ³ dust, fume and mist TWA: 1 mg/m ³ dust and mist TWA: 0.1 mg/m ³ fume
Aluminum 7429-90-5	TWA: 1 mg/m ³ respirable fraction	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Mercury 7439-97-6	TWA: 0.025 mg/m ³ S*	(vacated) TWA: 0.05 mg/m ³ vapor (vacated) STEL: 0.03 mg/m ³ (vacated) S* (vacated) Ceiling: 0.1 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 0.1 mg/m ³ TWA: 0.05 mg/m ³ vapor

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines	Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).
Engineering Measures	Showers Eyewash stations Ventilation systems
Personal Protective Equipment	
Eye/Face Protection	Tight sealing safety goggles
Skin and Body Protection	Protective gloves
Respiratory Protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off-white.	Odor	Odorless.
Odor Threshold	No information available	Physical State	Solid
pH	No information available	Autoignition Temperature	No information available
Flash Point	No information available	Boiling point / boiling range	No information available
Decomposition Temperature	No information available	Flammability Limits in Air	No information available
Melting Point/Range	No information available	Solubility	No information available.
Explosion Limits	No information available	Vapor Pressure	No data available
Water Solubility	Insoluble		
Evaporation Rate	No information available		
Vapor Density	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	None known.
Conditions to Avoid	None known.
Hazardous Decomposition Products	Metal oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Chronic Toxicity

Chronic Toxicity Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.	A3	Group 2A	Reasonably Anticipated	X
Nickel		Group 1 Group 2B	Reasonably Anticipated	X
Mercury		Group 3		

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive Toxicity	Product is or contains a chemical which is a known or suspected reproductive hazard.
Developmental Toxicity	Contains ingredients that have suspected developmental hazards.
Target Organ Effects	Blood. Reproductive System. May damage the unborn child. Eyes. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Nickel	EC50: 0.174 - 0.311 mg/L (96 h static) Pseudokirchneriella subcapitata EC50: 0.18 mg/L (72 h) Pseudokirchneriella subcapitata	LC50: 10.4 mg/L (96 h static) Cyprinus carpio LC50: 1.3 mg/L (96 h semi-static) Cyprinus carpio LC50: > 100 mg/L (96 h) Brachydanio rerio		EC50: 1 mg/L (48 h Static) Daphnia magna EC50: > 100 mg/L (48 h) Daphnia magna
Copper	EC50: 0.031 - 0.054 mg/L (96 h static) Pseudokirchneriella subcapitata EC50: 0.0426 - 0.0535 mg/L (72 h static) Pseudokirchneriella subcapitata	LC50: 1.25 mg/L (96 h static) Lepomis macrochirus LC50: 0.112 mg/L (96 h flow-through) Poecilia reticulata LC50: 0.8 mg/L (96 h static) Cyprinus carpio LC50: 0.3 mg/L (96 h semi-static) Cyprinus carpio LC50: 0.052 mg/L (96 h flow-through) Oncorhynchus mykiss LC50: 0.0068 - 0.0156 mg/L (96 h) Pimephales promelas LC50: 0.2 mg/L (96 h flow-through) Pimephales promelas LC50: < 0.3 mg/L (96 h static) Pimephales promelas		EC50: 0.03 mg/L (48 h Static) Daphnia magna
Mercury		LC50: 0.18 mg/L (96 h static) Cyprinus carpio LC50: 0.9 mg/L (96 h flow-through) Oryzias latipes LC50: 0.16 mg/L (96 h semi-static) Cyprinus carpio LC50: 0.5 mg/L (96 h) Cyprinus carpio		EC50: 5.0 µg/L (96 h) water flea

13. DISPOSAL CONSIDERATIONS

Disposal methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging	Dispose of contents/containers in accordance with local regulations
US EPA Waste Number	D009 D005

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel - 7440-02-0	(hazardous constituent - no waste number)	Included in waste streams: F006, F039		

Mercury - 7439-97-6	U151	Included in waste streams: F039, K071, K106, K175	0.2 mg/L regulatory level	U151
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California Hazardous Waste Codes M003

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California EHW	California Carc	California Hazardous Waste	California Waste - Part 2
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.			Toxic	STLC (for PBTs): 5 mg/L STLC (for PBTs): 250 mg/L STLC (for PBTs): 15 mg/L STLC (for PBTs): 5.0 mg/L TTLC (for PBTs): 500 mg/kg TTLC (for PBTs): 5000 mg/kg TTLC (for PBTs): 1000 mg/kg
Barium oxide			Toxic	STLC (for PBTs): 100 mg/L except Barite TTLC (for PBTs): 10000 mg/kg except Barium sulfate and Barite
Nickel			Toxic powder Ignitable powder	STLC (for PBTs): 20 mg/L TTLC (for PBTs): 2000 mg/kg
Copper			Toxic	STLC (for PBTs): 25 mg/L TTLC (for PBTs): 2500 mg/kg
Aluminum			Ignitable powder	
Mercury	Toxic		Toxic	STLC (for PBTs): 0.2 mg/L TTLC (for P&Bs) (EHW): 2000 mg/kg as Hg TTLC (for PBTs): 20 mg/kg TCLP (for CA Toxicity): 0.2 mg/L

14. TRANSPORT INFORMATION

<u>DOT</u>	NOT REGULATED
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL Not determined

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.	94551-97-0	15-40	0.1
Barium oxide	1304-28-5	10-30	1.0
Nickel	7440-02-0	1 - 5	0.1
Copper	7440-50-8	1 - 5	1.0
Aluminum	7429-90-5	1 - 5	1.0
Mercury	7439-97-6	< 0.1	10

SARA 311/312 Hazard Categories

Acute Health Hazard No
 Chronic Health Hazard Yes
 Fire Hazard No
 Sudden Release of Pressure Hazard No
 Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.		X		
Nickel		X	X	
Copper		X	X	
Mercury		X	X	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPS) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS No.	Weight-%	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.	94551-97-0	15-40				
Nickel	7440-02-0	1 - 5				

Mercury	7439-97-6	< 0.1			
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CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Nickel	100 lb	
Copper	5000 lb	
Mercury	1 lb	

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	CAS No.	California Proposition 65
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.	94551-97-0	Carcinogen Developmental
Nickel	7440-02-0	Carcinogen
Mercury	7439-97-6	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.			X	X	X
Yttrium	X	X	X		
Barium oxide		X	X		X
Zinc	X	X	X		X
Aluminum	X	X	X		X
Nickel	X	X	X	X	X
Silicon	X	X	X		
Copper	X	X	X	X	X

International Regulations

Mexico - Grade

Slight risk, Grade 1

Chemical Name	Carcinogen Status	Exposure Limits
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists primarily of oxides of tin, lead and antimony with some silver and gold.	A3	Mexico: TWA 2 mg/m ³ Mexico: TWA 0.15 mg/m ³ Mexico: TWA 0.5 mg/m ³ Mexico: STEL 4 mg/m ³
Yttrium		Mexico: TWA 1 mg/m ³ Mexico: STEL 3 mg/m ³
Barium oxide		Mexico: TWA 0.5 mg/m ³
Silicon		Mexico: TWA 10 mg/m ³ Mexico: STEL 20 mg/m ³
Nickel		Mexico: TWA 1 mg/m ³
Copper		Mexico: TWA= 1 mg/m ³ Mexico: TWA= 0.2 mg/m ³ Mexico: STEL= 2 mg/m ³
Aluminum		Mexico: TWA= 10 mg/m ³
Mercury		Mexico: TWA 0.05 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2A - Very toxic materials



Chemical Name	NPRI
Nickel	X
Aluminum	X
Mercury	X

Legend

NPRI - National Pollutant Release Inventory

X - Listed

16. OTHER INFORMATION

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date 05-Jun-2014

Revision Note No information available.

General Disclaimer

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

End of Safety Data Sheet