SAFETY DATA SHEET

Issuing Date No data available

Revision Date 15-Aug-2014

Revision Number 2

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

Product identifier	
Product Name	R40 CFL Light Bulb
Other means of identification	
Synonyms	None
Recommended use of the chemical	and restrictions on use
Recommended Use	Lights, Fluorescent
Uses advised against	No information available
Details of the supplier of the safety	data sheet
Supplier Name Supplier Address	Technical Consumer Products, Inc. 325 Campus Drive Aurora OH 44202 US
Supplier Phone Number	Phone:330-995-6111 Contact Phone330-414-7857
Supplier Email Emergency telephone number	jmatta@tcpi.com

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) This product is an article which is a CFL bulb and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured CFL bulb.

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word

Danger

Hazard Statements

Harmful if swallowed Harmful if inhaled May cause an allergic skin reaction May cause cancer May damage fertility or the unborn child



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance This is a CFL bulb. In case of rupture: the above hazards exist.

Appearance White to off-white Physical State Solid	Odor Odorless
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Precautionary Statements - Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area Contaminated work clothing should not be allowed out of the workplace Keep away from flames and hot surfaces - no smoking Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention Specific treatment (see supplemental first aid instructions on this label)

Skin

IF ON SKIN: Wash with plenty of soap and water If skin irritation or rash occurs: Get medical advice/attention Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

51% of the mixture consists of ingredient(s) of unknown toxicity

Other information

Causes mild skin irritation Very toxic to aquatic life with long lasting effects Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Interactions with Other Chemicals

Irritants. Sensitizers. Epoxies.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
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	3 - 7	*
Zinc	7440-66-6	1 - 5	*
Nickel	7440-02-0	1 - 5	*
Copper	7440-50-8	1 - 5	*
Aluminum	7429-90-5	1 - 5	*

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

4. FIRST AID MEASURES

First aid measures

General Advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. First aid is upon rupture of sealed CFL bulb.

Eye Contact

Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact

Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.

Inhalation

Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately. If not breathing, give artificial respiration. Do not breathe dust.

Ingestion

Do NOT induce vomiting. Rinse mouth. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Self-protection of the first aider

Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects

Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous Combustion Products

Carbon oxides.

Explosion Data Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

No.

Personal Precautions	Avoid contact with eyes. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Evacuate personnel to safe areas.		
Other Information	Refer to protective measures listed in Sections 7 and 8.		
Environmental Precautions			
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.		
Methods and material for containment and cleaning up			
Methods for Containment	Prevent further leakage or spillage if safe to do so.		
Methods for cleaning up	Pick up and transfer to properly labeled containers.		

7. HANDLING AND STORAGE

Precautions for safe handling

Handling	In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe dust. Avoid generation of dust.	
Conditions for safe storage, including any incompatibilities		
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.	
Incompatible Products	None known based on information supplied.	

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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/m³ Sn except Tin hydride TWA: 0.05 mg/m³ Pb TWA: 0.5 mg/m³ 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: 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
Yttrium 7440-65-5	TWA: 1 mg/m ³ TWA: 1 mg/m ³ Y	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/m³ 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
Zinc 7440-66-6	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
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: 1 mg/m ³ Cu dust and mist	TWA: 0.1 mg/m³ fume TWA: 1 mg/m³ dust and mist (vacated) TWA: 0.1 mg/m³ Cu dust, fume, mist	IDLH: 100 mg/m³ dust, fume and mist TWA: 1 mg/m³ dust and mist TWA: 0.1 mg/m³ 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 (vacated) TWA: 5 mg/m ³ Al Aluminum	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

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) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems
Individual protection measures, su	ch as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and Body Protection	Wear protective gloves and protective clothing.
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. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe dust. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Solid		
Appearance	White to off-white	Odor	Odorless
Color	No information available	Odor Threshold	No information available
Property_	Values	Remarks/ Method	
pH	No data available	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	No data available	None known	
Water Solubility	No data available	None known	
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/wate	r No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition Temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	
Explosive properties	No data available		
Oxidizing Properties	No data available		
Other Information			
Softening Point	No data available		
VOC Content (%)	No data available		

No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

<u>Chemical stability</u> Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid Excessive heat.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:.
Inhalation	Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available. May be harmful if swallowed. (based on components).

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nickel	> 9000 mg/kg (Rat)	-	-
7440-02-0			

Information on toxicological effects

Symptoms

Coughing and/ or wheezing. Itching. Rashes. Hives.

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

Sensitization May cause sensitization of susceptible persons. May cause sensitization by skin contact.

Mutagenic Effects

No information available.

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. 94551-97-0	A3	Group 2A	Reasonably Anticipated	X		
Nickel 7440-02-0		Group 1 Group 2B	Reasonably Anticipated	Х		
Group 1 - Carcinogenic to Group 2A - Probably Caro Group 2B - Possibly Caro NTP (National Toxicolog Reasonably Anticipated -	cinogenic to Humans inogenic to Humans gy Program) Reasonably Anticipated to k fety and Health Administra	be a Human Carcinogen				
STOT - single exposure	No informati	on available.				
STOT - repeated exposur	classificatior 1910.1200),	auses damage to organs through prolonged or repeated exposure. Based on assification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 910.1200), this product has been determined to cause systemic target organ toxicity fror pronic or repeated exposure. (STOT RE).				
Chronic Toxicity	toxin. Possik	Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Possible risk of irreversible effects. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse liver effects.				
Target Organ Effects		Respiratory system. Skin. Eyes. Gastrointestinal tract (GI). Reproductive System. Centr Vascular System (CVS). Kidney. Liver. Lungs. Nasal cavities. Digestive System. Heart.				
Aspiration Hazard	No informati	No information available.				

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 462.00 mg/kg ATEmix (inhalation-gas) 4,160.00 ppm (4 hr) ATEmix (inhalation-dust/mist) 1.39 mg/l ATEmix (inhalation-vapor) 10.17 ATEmix

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.
Contaminated Packaging	Dispose of contents/containers in accordance with local regulations.
US EPA Waste Number	D005 D009

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		

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 Hazardous Waste
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	Toxic
Barium oxide 1304-28-5	Toxic
Zinc 7440-66-6	Ignitable powder Toxic
Nickel 7440-02-0	Toxic powder Ignitable powder
Copper 7440-50-8	Τοχίς
Aluminum 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION

DOT Proper Shipping Name Hazard Class Marine Pollutant	NOT REGULATED NON REGULATED N/A This product contains a chemical which is listed as a severe marine pollutant according to DOT
<u>TDG</u> Marine Pollutant	Not regulated This product contains a chemical which is listed as a severe marine pollutant according to TDG.
MEX	Not regulated
ICAO	Not regulated
<u>IATA</u> Proper Shipping Name Hazard Class	Not regulated NON REGULATED N/A
IMDG/IMO Hazard Class Marine Pollutant	Not regulated N/A This product contains a chemical which is listed as a severe marine pollutant according to IMDG/IMO Product is a marine pollutant according to the criteria set by IMDG/IMO
RID	Not regulated
ADR_	Not regulated
ADN	Not regulated
International Inventories	15. REGULATORY INFORMATION

International Inventories

TSCA		
DSL		

Complies All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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	94551-97-0	15 - 40	0.1	
Barium oxide - 1304-28-5	1304-28-5	10 - 30	1.0	
Zinc - 7440-66-6	7440-66-6	1 - 5	1.0	
Nickel - 7440-02-0	7440-02-0	1 - 5	0.1	
Copper - 7440-50-8	7440-50-8	1 - 5	1.0	
Aluminum - 7429-90-5	7429-90-5	1 - 5	1.0	
SARA 311/312 Hazard Categories				
Acute Health Hazard	No			
Chronic Health Hazard	No			
Fire Hazard	No			
Sudden release of pressure hazard	No			
Reactive Hazard	No			

CWA (Clean Water Act)

This product 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	nemical Name CWA - Reportable CWA - Quantities		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. 94551-97-0		X		
Zinc 7440-66-6		X	Х	
Nickel 7440-02-0		X	Х	
Copper 7440-50-8		X	Х	

<u>CERCLA</u> 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	RQ
Zinc 7440-66-6	1000 lb		RQ 454 kg final RQ RQ 1000 lb final RQ
Nickel 7440-02-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Copper 7440-50-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

<u>California Proposition 65</u> This product contains the following Proposition 65 chemicals.

Chemical Name	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, (2-ethylhexanoato-O)(1-methoxycyclohexyl) 103332-13-4	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
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			Х	Х	х
Yttrium 7440-65-5	Х	Х	Х		
Barium oxide 1304-28-5	Х		Х	Х	
Silicon 7440-21-3	Х	Х	Х		
Copper 7440-50-8	Х	X	Х	Х	Х
Aluminum 7429-90-5	Х	X	Х	Х	

Nickel 7440-02-0	Х	Х	Х	Х	Х
Zinc 7440-66-6	Х	Х	Х	Х	

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Solders, dross - Oxides formed during the melting and use of solders for the electronics industry. Consists	A3	Mexico: TWA 2 mg/m ³ Mexico: TWA 0.15 mg/m ³
primarily of oxides of tin, lead and antimony with some silver and gold.		Mexico: TWA 0.5 mg/m ³ Mexico: STEL 4 mg/m ³
94551-97-0(15 - 40)		_
Yttrium 7440-65-5(10 - 30)		Mexico: TWA 1 mg/m ³ Mexico: STEL 3 mg/m ³
Barium oxide 1304-28-5(10 - 30)		Mexico: TWA 0.5 mg/m ³
Silicon		Mexico: TWA 10 mg/m ³
7440-21-3(3 - 7)		Mexico: STEL 20 mg/m ³
Nickel 7440-02-0(1 - 5)		Mexico: TWA 1 mg/m ³
Copper 7440-50-8(1 - 5)		Mexico: TWA= 1 mg/m ³ Mexico: TWA= 0.2 mg/m ³ Mexico: STEL= 2 mg/m ³
Aluminum 7429-90-5 (1-5)		Mexico: TWA= 10 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens A3 - Confirmed Animal Carcinogen

Canada

WHMIS Hazard Class Non-controlled

16. OTHER INFORMATION

NFPA HMIS	Health Hazards 1 Health Hazards 1	Flammability 0 Flammability 0	Instability 0 Physical Hazard 0	Physical and Chemical Hazards Personal Protection X
Prepared By Revision Date	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501 15-Aug-2014			
Revision Note	u	ation available		

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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