

MATERIAL SAFETY DATA SHEET



4700 W. 160TH Street P.O. Box 35906 Cleveland, Ohio 44135 Emergency Tel No. (303) 623-5716 Collect

(Continued on next page)

OATEY SILVER LEAD-FREE SOLDER

		OMILIA DEL	R LEAD-FREE S			1100
		-1100	Date	of Issue	04	./05/06
* test Revis	ion Date0	5/06/00 ========		=======	======	=====
========	==========	IDENTITY	OF MATERIAL			
Section 1	. OATEY SILVER LEAD-F	REE SOLDER				
TRADE NAME	. 23000, 23001, 23002					
FORMULA	See Below					
SYNONYMS	. Lead-Free Wire Solo	ler		=======	=======	======
=========		HAZARDOUS	INGREDIENTS			
SECTION 2		HAZARDOUS	INGREDIE			
		ş	CAS NU	MBER	SEC 313	
INGREDIENTS		>90%	7440-	31-5	No	
Tin (*Non-Hazard	ous)	<5%	7440-	50-8	Yes	
Copper (*Non-Haz	ardous/	<5%	7440-		No Yes	
Bismuth (*Non-Ha Silver (*Non-Haz	zardous)	<5%	7440-	22-4 ========	=======	=====
-=========	= = = = =	==========		10.1200		
SECTION 3	KNOW	N HAZARDS U	NDER 29 CIR 19			
		s NO	HAZARDS		YES	<u>NO</u>
HAZARDS	<u>YE</u> ;	<u>NO</u>	Skin Hazard		×	
Combustible Liqui	d T	x	Eye Hazard		×	v
Flammable Materia	. I.	x	Toxic Agent			x x
Pyrophoric Materi Explosive Materia	.a.ı .1	×	Highly Toxic Age	nt		×
Unstable Material		×	Sensitizer		x	
Water Reactive Ma		x	Kidney Toxin	in	7.	×
Oxidizer		x	Reproductive To: Blood Toxin	7.7.17		x
Organic Peroxide		x	Nervous System '	oxin		x
Corrosive Materia	il	×	Lung Toxin	011111	×	
Compressed Gas		х	Liver Toxin		x	
Irritant	X coora	×	Lung Hazard		x	
Carcinogen NTP/IA						
	may be hazardous dur	ing fluxing operati	ons due to fumes from	lux if overheate	đ	
*All ingredients or misused.	may be nazarasas au	5				
Or misused.	=========	========		=======		
		D Tr.C	ULATION			
TION 4		KIN	<u> </u>			
CTION 4			0 222 2 2 2 2 2	CTFI.	Haza	ard Action Level
CHEMICAL	TLV (TWA)	PEL		STEL N/A	Haza N/A	ard Action Level
	2.0 mg/cu m	PEL 2.0	mg/cu m	N/A		ard Action Level
CHEMICAL	2.0 mg/cu m 0.2 mg/cu m (Fum	PEL 2.0 0.1	mg/cu m mg/cu m (Fume)		N/A	ard Action Level
CHEMICAL Tin (Inorganic) Copper	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus	PEL 2.0 ce) 0.1 t) 1.0	mg/cu m	N/A N/A	N/A N/A N/A N/A	ard Action Level
CHEMICAL Tin (Inorganic) Copper Bismuth	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish	PEL 2.0 (e) 0.1 (t) 1.0 (ed N/A	mg/cu m mg/cu m (Fume)	N/A N/A N/A	N/A N/A N/A	ard Action Level
CHEMICAL Tin (Inorganic) Copper Bismuth Silver	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m	PEL 2.0 (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	mg/cu m mg/cu m (Fume) mg/cu m (Dust)	N/A N/A N/A N/A N/A	N/A N/A N/A N/A	ard Action Level
CHEMICAL Tin (Inorganic) Copper Bismuth Silver	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish	PEL 2.0 10 0.1 1.0 11 0.0 12 0.0 13 0.0	mg/cu m mg/cu m (Fume) mg/cu m (Dust)	N/A N/A N/A N/A N/A	N/A N/A N/A N/A	ard Action Level
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CHEMICAL Tin (Inorganic) Copper Bismuth Silver ====================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ====================================	PEL 2.0 (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	mg/cu m mg/cu m (Fume) mg/cu m (Dust)	N/A N/A N/A N/A N/A	N/A N/A N/A N/A	ard Action Level
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ====================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ====================================	PEL 2.0 (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	mg/cu m mg/cu m (Fume) mg/cu m (Dust)	N/A N/A N/A N/A N/A	N/A N/A N/A N/A	ard Action Level
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ====================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ====================================	PEL 2.0 (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	mg/cu m mg/cu m (Fume) mg/cu m (Dust) . mg/cu m ====================================	n/A n/A n/A n/A n/A ====================================	N/A N/A N/A N/A N/A	=========
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ====================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ====================================	PEL 2.0 (a.1 t.) 1.0 (b.d N/A (a.0)) REGULATE	mg/cu m mg/cu m (Fume) mg/cu m (Dust) . mg/cu m . mg/cu m	n/A n/A n/A n/A n/A ====================================	N/A N/A N/A N/A N/A	=========
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EPA HAZARD WASTE	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME N/A N/A ER N/A STE ID NUMBER N/A CLASS N/A	PEL 2.0 (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (e) (d) (e) (e) (e) (e) (e) (e) (e) (e) (e) (e	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT:	n/A n/A n/A n/A n/A ====================================	N/A N/A N/A N/A N/A	=========
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EPA HAZARD WASTE SECTION 6	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ===================================	PEL 2.0 (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	mg/cu m mg/cu m (Fume) mg/cu m (Dust) . mg/cu m D IDENTIFICAT	N/A N/A N/A N/A N/A N/A ON	N/A N/A N/A N/A N/A	========
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EPA HAZARD WASTE SECTION 6	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 (c) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	mg/cu m mg/cu m (Fume) mg/cu m (Dust) L mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES	N/A N/A N/A N/A N/A N/A ON	N/A N/A N/A N/A N/A ========	======================================
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WA! EFA HAZARD WASTE SECTION 6 ENTRY ROUTE	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME N/A ING NAME N/A STE ID NUMBER N/A CLASS N/A INHALE YES INGE Additionally, Overex	PEL 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin	N/A N/A N/A N/A N/A N/A ON	N/A N/A N/A N/A N/A N/A ================	======================================
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EFA HAZARD WASTE SECTION 6 ENTRY ROUTE	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME N/A ING NAME N/A STE ID NUMBER N/A CLASS N/A INHALE - YES INGE Additionally, Overes Overexposure to cop	PEL 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpos	N/A N/A N/A N/A N/A N/A N/A TON e", black spots, ure to fumes may	N/A N/A N/A N/A N/A N/A ===============	======================================
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EPA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	mg/cu m mg/cu m (Fume) mg/cu m (Dust) L mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES	N/A N/A N/A N/A N/A N/A N/A TON e", black spots, ure to fumes may	N/A N/A N/A N/A N/A N/A ===============	======================================
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ====================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10) 0.1 1.0 100 100 100 100 100 100 100 100	mg/cu m mg/cu m (Fume) mg/cu m (Dust) D IDENTIFICAT: S OF EXPOSURE YES EYE - YES can cause, "bismuth line a. Long term overexpose ry irritation, fever, coposure to fumes may can	N/A N/A N/A N/A N/A N/A N/A ON e", black spots, ure to fumes may hills, muscular paragraphic sea flu-like contacts.	N/A N/A N/A N/A N/A N/A N/A Toul breath, cause lung d pain, vomiting	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ====================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10) 0.1 1.0 100 100 100 100 100 100 100 100	mg/cu m mg/cu m (Fume) mg/cu m (Dust) D IDENTIFICAT: S OF EXPOSURE YES EYE - YES can cause, "bismuth line a. Long term overexpose ry irritation, fever, coposure to fumes may can	N/A N/A N/A N/A N/A N/A N/A ON e", black spots, ure to fumes may hills, muscular paragraphic sea flu-like contacts.	N/A N/A N/A N/A N/A N/A N/A Toul breath, cause lung d pain, vomiting	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EFA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10) 0.1 1.0 100 100 100 100 100 100 100 100	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpos	N/A N/A N/A N/A N/A N/A N/A ON e", black spots, ure to fumes may hills, muscular paragraphic sea flu-like contacts.	N/A N/A N/A N/A N/A N/A N/A Toul breath, cause lung d pain, vomiting	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ===================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10 10 10 11 1.0 10 10 10 10 10 10 10 10 10 10 10 10 10	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpos ry irritation, fever, co posure to fumes may cau ting, diarrhea, gastroi	N/A N/A N/A N/A N/A N/A N/A N/A see===================================	N/A N/A N/A N/A N/A N/A Toul breath, cause lung doain, vomiting addition called	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMB! EPA HAZARDOUS WA! EPA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION TARGET ORGANS	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10) 11) 1.0 10 10 11) 1.0 10 11 1.0 10 11 11 11 11 11 11 11 11 11 11 11 11	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT: S OF EXPOSURE YES EYE - YES can cause, "bismuth line a. Long term overexpose ry irritation, fever, co posure to fumes may cau ting, diarrhea, gastroi	N/A N/A N/A N/A N/A N/A N/A N/A ECON e", black spots, ure to fumes may hills, muscular parts a flu-like contestinitis, into the second seco	N/A N/A N/A N/A N/A N/A N/A The second of t	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMB! EPA HAZARDOUS WA! EPA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION. TARGET ORGANS	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 1e) 0.1 1.0 1ed N/A 0.0: REGULATE ST - YES SKIN - posure to bismuth oper can cause anemi produce respirato in mouth. Overex itation. pain, nausea, vomi	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT: S OF EXPOSURE YES EYE - YES can cause, "bismuth lim a. Long term overexpos ry irritation, fever, c posure to fumes may cau ting, diarrhea, gastroi	N/A	foul breath, cause lung doain, vomiting dition calle	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver ===================================	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpose ry irritation, fever, co posure to fumes may cau ting, diarrhea, gastroi	N/A	foul breath, cause lung doain, vomiting addition called ernal cuts or	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions. COLLECT ion persists.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMB! EPA HAZARDOUS WA! EPA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION. TARGET ORGANS SECTION 7 SKIN If	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10 0.1 1.0 10 0.0 11 0.0 12 11 1.0 13 10 0.0 14 11 1.0 15 11 1.0 16 11 1.0 16 11 1.0 17 11 1.0 18 11 1.0 18 11 1.0 18 11 1.0 18 11 1.0 18 11 11 11 11 11 11 11 11 11 11 11 11 1	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT: S OF EXPOSURE YES EYE - YES can cause, "bismuth lim a. Long term overexpos ry irritation, fever, c posure to fumes may cau ting, diarrhea, gastroi AID PROCEDURE h soap and water eves	n/A	N/A N/A N/A N/A N/A N/A N/A N/A The state of the state o	and salivation. amage. g, dizziness, sweating d Metal Fume Fever. obstructions. COLLECT ion persists.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMBI EPA HAZARDOUS WAS EFA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION. TARGET ORGANS SECTION 7 SKIN SKIN SKIN 15	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	EFFECT ST - YES SKIN - reposure to bismuth oper can cause anemi / produce respirato e in mouth. Overex itation. itation. pain, nausea, vomi	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpos ry irritation, fever, o posure to fumes may cau ting, diarrhea, gastroi AID PROCEDURE h soap and water. Seel air and irrigate eyes o	n/A n/A n/A n/A n/A n/A n/A n/A	N/A N/A N/A N/A N/A N/A N/A N/A foul breath, cause lung d pain, vomiting dition calle ernal cuts or 3-5716 C on if irritat minutes. If	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions. COLLECT ion persists.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMB! EPA HAZARDOUS WAS EPA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION TARGET ORGANS SECTION 7 SKIN If EYES If	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpos ry irritation, fever, co posure to fumes may cau ting, diarrhea, gastroi AID PROCEDURE h soap and water. Seel air and irrigate eyes to is struck with wire, cult, give oxygen. If	n/A n/A n/A n/A n/A n/A n/A n/A	foul breath, cause lung doain, vomiting addition calle ernal cuts or a series of the construction of the c	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions. COLLECT ion persists. irritation and salivation.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMB! EPA HAZARDOUS WAS EPA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION TARGET ORGANS SECTION 7 SKIN If EYES If	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth lin a. Long term overexpos ry irritation, fever, co posure to fumes may cau ting, diarrhea, gastroi AID PROCEDURE h soap and water. Seel air and irrigate eyes to is struck with wire, cult, give oxygen. If	n/A n/A n/A n/A n/A n/A n/A n/A	foul breath, cause lung doain, vomiting addition calle ernal cuts or a series of the construction of the c	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions. COLLECT ion persists. irritation and salivation.
CHEMICAL Tin (Inorganic) Copper Bismuth Silver SECTION 5 DOT PROPER SHIPP: DOT HAZARD CLASS SHIPPING ID NUMB! EPA HAZARDOUS WA! EFA HAZARD WASTE SECTION 6 ENTRY ROUTE GENERAL INHALATION SKIN EYE INGESTION. TARGET ORGANS SECTION 7 SKIN If EYES INGESTION SKIN If EYES INHALATION KE	2.0 mg/cu m 0.2 mg/cu m (Fum 1.0 mg/cu m (Dus No TLV establish 0.01 mg/cu m ING NAME	PEL 2.0 10 10 11 1.0 10 10 10 10 10 10 10 10 10 10 10 10 10	mg/cu m mg/cu m (Fume) mg/cu m (Dust) mg/cu m D IDENTIFICAT S OF EXPOSURE YES EYE - YES can cause, "bismuth line a. Long term overexpose ry irritation, fever, co posure to fumes may cau ting, diarrhea, gastroi AID PROCEDURE h soap and water. Seel air and irrigate eyes a is struck with wire, cult, give oxygen. If on control center or photer or physician immed	n/A n/A n/A n/A n/A n/A n/A n/A	foul breath, cause lung doain, vomiting addition calle ernal cuts or a series of the construction of the c	and salivation. amage. g, dizziness, sweating. d Metal Fume Fever. obstructions. COLLECT ion persists. irritation and salivation.

OATEY SILVER LEAD-FREE SOLDER

PHYSICAL AND CHEMICAL PROPERTIES SECTION 8 SPECIAL - NONE FLAMMABILITY - 0 STABILITY - 0 NFPA HAZARD SIGNAL..... HEALTH - 0 BOILING POINT..... N/A MELTING POINT..... 420 - 460 Degrees F VAPOR PRESSURE...... N/A VAPOR DENSITY (AIR = 1)... N/A VOLATILE COMPONENTS..... N/A SOLUBILITY IN WATER..... Insoluble PH..... N/A SPECIFIC GRAVITY..... 9 - 11 EVAPORATION RATE..... N/A APPEARANCE..... Silver-Gray Wire Metal WILL DISSOLVE IN..... N/A MATERIAL IS..... Solid FIRE AND EXPLOSION HAZARD DATA SECTION 9 UEL = N/AFLAMMABILITY..... LEL = N/AFLASHPOINT AND METHOD USED..... N/A CONDITIONS TO AVOID: Do not heat over 480 Degrees F. HAZARDOUS DECOMPOSITION STABILITY..... Stable PRODUCTS: If overheated, oxides of tin, bismuth, copper and silver. HAZARDOUS POLYMERIZATION...... Will not occur. CONDITIONS TO AVOID: None INCOMPATIBILITY/MAT. TO AVOID..... None SPECIAL FIRE FIGHTING PROCEDURE... None SPILL AND DISPOSAL INFORMATION SECTION 10 SPILL OR LEAK PROCEDURES... Place material in a closed container. WASTE DISPOSAL..... According to local, state and federal regulations. SAFE USAGE DATA SECTION 11 PROTECTIVE EQUIPMENT TYPES... EYES: Safety glasses with side shields. RESPIRATORY: NIOSH-approved respirator for toxic dust/fumes. GLOVES: Rubber OTHER: None VENTILATION...... GENERAL MECHANICAL: Necessary if soldering in non-ventilated area. LOCAL EXHAUST: Open doors and windows to remove fumes. PRECAUTIONS..... HANDLING AND STORAGE: Practice good personal hygiene and housekeeping. MANUFACTURER OR SUPPLIER DATA SECTION 12 FIRM NAME & MAILING ADDRESS... OATEY CO., 4700 West 160th Street, P.O. Box 35906, Cleveland, Ohio 44135 OATEY PHONE NUMBER..... (216) 267-7100

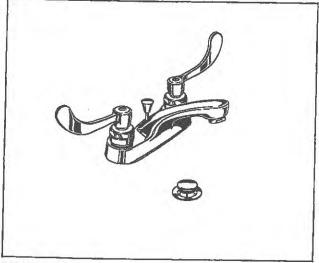
EMERGENCY PHONE NUMBER:..... (303) 623-5716 COLLECT

SECTION 13

DISCLAIMER

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Catey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

American Standard



5501.170 Shown.

MONTERREY.

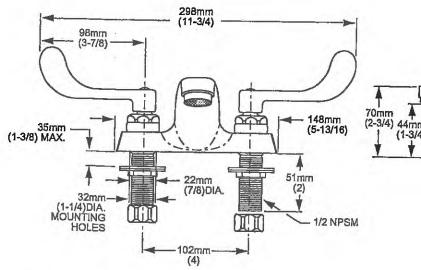
TWO-HANDLE CENTERSET

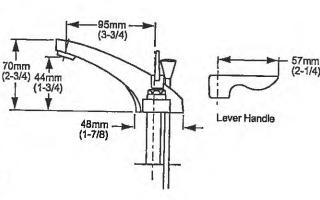
LAVATORY FAUCET

WITH CONVENTIONAL SPOUT

MODEL NUMBER:*

- 5500.170 Centerset Lavatory
 Wrist Blade handles. Less drain and pop-up hole.
- 5501.170 Centerset Lavatory Wrist Blade handles. Pop-up drain.
- 5502.170 Centerset Lavatory
 Wrist Blade handles. Grid strainer drain.
- 5500.140 Centerset Lavatory Lever handles. Less drain and pop-up hole.
- 5501.140 Centerset Lavatory Lever handles. Pop-up drain.
- 5502.140 Centerset Lavatory Lever handles. Grid strainer drain.





GENERAL DESCRIPTION:

Durable cast brass construction throughout. 1/2" male threaded inlet shanks with brass shank nuts and coupling nuts. 1/4 turn ceramic disc valve cartridges that are reversible for use on both hot and cold sides. Choice of Wrist Blade or Lever handles with blue & red color indexes. All brass drain bodies with 1 1/4" (32mm) tailpieces (on applicable models). 2.2 gpm/8.3L/min. maximum flow rate. Optional aerators available. Vandal Resistant models are available and include Vandal Resistant handles and spray.

PRODUCT FEATURES:

Solid Brass Construction: Durable - Excellent in high use applications. Ideal for prolonged contact with water.

Ceramic Disc Valve Cartridges: Assures a lifetime of drip-free performance.

Low Lead: Meets NSF Standard 61/Section 9 & Prop 65 lead requirements.

Choice of Handle Configurations: ADA approved Lever or Wrist Blade Handles.

SUGGESTED SPECIFICATION:



Wall Mount Water Coolers Barrier-Free Access (Adult & Child) ANSI/NSF61 Compliant Models EZ4, EZ8, EZS4, EZS8, EZSD and EZD

GENERAL

Self-contained, wall hung electric refrigerated water cooler. Chilling capacity of 50°F drinking water, based upon 80°F inlet water and 90°F ambient.

Models EZS4 and EZS8 have self-closing Easy-Touch Controls on front and both right and left sides.

Models EZ4 and EZ8 each have self-closing Easy-Touch Controls on the front only.

Model EZSD is non-refrigerated. Same as EZS8 without cooling system. (Requires outlet for power cord.)

All models have a hooded stream projector with Easy-Touch Controls that require less than 3 pounds of force to activate. Patented* valve with built-in flow regulator provide constant stream from 20 to 105 psi, water pressure. Bubbler orifice fully protected to meet all sanitary codes.

Non-pressurized stainless steel cooling tank is standard. Non-pressurized water tank is located after bubbler valve, so that tank is subject to line pressure only when Easy-Touch Control is

ADA COMPLIANT

These Water Coolers comply with the requirements of A.D.A. (Americans with Disabilities Act) when properly installed. Also meets the guidelines for children's environments providing the floor to orifice height is 30° or less and proper clear floor space is provided for parallel approach. (Based on Architectural and Transportation Barriers Compliance Board final ruling.) Check Local and State Codes.

NO LEAD DESIGN

These Water Coolers are certified to be lead-free as defined by the Safe Drinking Water Act. Elkay Water Coolers are manufactured with a waterway system utilizing copper components and completely lead-free materials. These waterways have no lead because all lead metarials such as leaded brees have been lead because all lead materials, such as leaded brass, have been removed. All joints are brazed using silver solder only. No lead solder is permitted. A strainer with an easily cleanable screen is provided to allow trapping and convenient removal of waterborne particulate of 140 microns and larger prior to their entry into the water cooler.

These water coolers are certified to ANSI/NSF61.

CAPACITIES CHART

Model	Model Base		50°F Orink Temperat	ing Water ure °F		Full	Glass†	Ship.	
Number	Rate	70°F	70°F 80°F		Rated Watts	Amps	Option	WŁ Lbs.	
EZS4	4.0	5.0	4.4	4.0	325	3.7	Yes	56	
EZS8	8.0	9.6	8.8	8.0	325	3.7	Yes	56	
EZ4	4.0	5.0	4.4	4.0	325	3.7	Yes	56	
EZ8	8.0	9.6	8.8	8.0	325	3.7	Yes	56	
EZSD	-	-	-	-	-	-	Yes	18	
EZD	-	-		-	_	-	Yes	18	

*Based on 80°F inlet water temperature. †Glass filler available at extra cost. Requires factory preparation to receive glass filler.

Rated watts shown are based on operational (run) time, in accordance with A.R.I. Standard 1010 conditions. Specific applications will determine the actual watts consumed per hour. Watts consumed will be based on number of people served per hour (usage), ambient temperatures, and inlet water temperature.

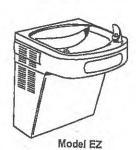
COOLING SYSTEM

Motor Compressor: Hermetically sealed, reciprocating type, 115V, 60 Hz single phase. Sealed-in lifetime oil supply. Equipped with electric cord and three prong molded rubber plug (domestic

Condenser: Fan cooled, copper tube with aluminum fins. Fan motor is permanently lubricated.

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice.





Cooling Unit: Combination tube-tank type. Self cleansing. Tube portion is continuous coil of copper tubing. Tank is stainless steel. Fully insulated with EPS foam which meets Underwriters Laboratories Inc. requirements for self-extinguishing material.

Refrigerant Control: Refrigerant HFC-134a is controlled by accurately calibrated capillary tube for positively trouble-free

Temperature Control: Enclosed adjustable thermostat is factory pre-set. Requires no adjustment other than for altitude requirements. Easily accessible.

CONSTRUCTION

Frame: Galvanized structural steel chassis supports refrigeration system and fastens to wall. Provides increased structural integrity and rigidity to cooler.

Stainless Steel Basin: One piece polished to a uniform Elkay bright luster finish. Basin has integral drain grid, embossed bubbler pad. No exposed fasteners.

Exclusive Flexi-Guard® Safety Bubbler*: Innovative design utilizes an infused anti-microbial pliable polyester elastomer to prevent accidental mouth injuries. Flexes on impact, then returns to original position. Strong, Abrasion-resistant. Anti-sweat. Keyed in location to prevent rotation.

Upper Shroud: Contoured shock-absorbing, provides additional protection against accidental injury. No exposed fasteners.

Lower Shroud: One piece easy to remove and replace. Allows access to internal components from three sides.

Cablnet: Cabinet design allows for flush to wall mounting. No recess space is required.

Color Selection: Unless otherwise specified cabinet is two-tone gray on upper shroud with textured gray lower shroud. Stainless Steel lower shroud available at extra cost.

5 YEAR LIMITED WARRANTY on the refrigeration system of the unit. Electrical components and water system are warranted for 12 months from date of installation. Sample Certificate available on request.

Elkay Pressure-Type Water Coolers are designed to operate on 20 psi to 105 psi supply line pressure. If inlet pressure is above 105 psi, a pressure regulator must be installed in the supply line. Any damage caused by reason of connecting this product to supply line pressures lower than 20 psi or higher than 105 psi is not covered by the warranty,

STANDARDS



Elkay Electric Air Cooled Water Coolers are listed by Underwriters Laboratories Inc. and comply with both Canadian and U.S. requirements.



Rated in accordance with A.R.I. Standard 1010 and meets all known federal and state plumbing

* Patent #4,481,971

This specification describes an Elikay product with design, quality and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not



Wall Mount Water Coolers Barrier-Free Access (Adult & Child) ANSI/NSF61 Compliant Models EZ4, EZ8, EZS4, EZSD and EZD

GENERAL

Self-contained, wall hung electric refrigerated water cooler. Chilling capacity of 50°F drinking water, based upon 80°F inlet water and 90°F ambient.

Models EZS4 and EZS8 have self-closing Easy-Touch Controls on front and both right and left sides.

Models EZ4 and EZ8 each have self-closing Easy-Touch Controls on the front only.

Model EZSD is non-refrigerated. Same as EZS8 without cooling system. (Requires outlet for power cord.)

All models have a hooded stream projector with Easy-Touch Controls that require less than 3 pounds of force to activate. Patented* valve with built-in flow regulator provide constant stream from 20 to 105 psi, water pressure. Bubbler orifice fully protected to meet all sanitary codes.

Non-pressurized stainless steel cooling tank is standard. Non-pressurized water tank is located after bubbler valve, so that tank is subject to line pressure only when Easy-Touch Control is pressed.

ADA COMPLIANT

These Water Coolers comply with the requirements of A.D.A. (Americans with Disabilities Act) when properly installed. Also meets the guidelines for children's environments providing the floor to orifice height is 30° or less and proper clear floor space is provided for parallel approach. (Based on Architectural and Transportation Barriers Compliance Board final ruling.) Check Local and State Codes.

NO LEAD DESIGN

These Water Coolers are certified to be lead-free as defined by the Safe Drinking Water Act. Elkay Water Coolers are manufactured with a waterway system utilizing copper components and completely lead-free materials. These waterways have no lead because all lead materials, such as leaded brass, have been removed. All joints are brazed using silver solder only. No lead solder is permitted. A strainer with an easily cleanable screen is provided to allow trapping and convenient removal of waterborne particulate of 140 microns and larger prior to their entry into the water cooler.

These water coolers are certified to ANSI/NSF61.

CAPACITIES CHART

l			**GPH of	50°F Drink	ing Water		20	Glass† Filler Option	Ship. Wt. Lhs.
ı	Model	Base	Room	Temperati	ure °F	Rated	Full Load		
L	Number	Rate	70°F	80°F	90°F	Watts	Amps		
	EZS4	4.0	5.0	4.4	4.0	325	3.7	Yes	56
	EZS8	8.0	9.6	8.8	8.0	325	3.7	Yes	56
	EZ4	4.0	5.0	4.4	4.0	325	3.7	Yes	56
Ō	EZ8	8.0	9.6	8.8	8.0	325	3.7	Yes	56
	EZSD	-	-	-	44.1		n=1	Yes	18
	EZD	-	-		1	-0	~	Yes	18

**Based on 80°F inlet water temperature. †Glass filler available at extra cost. Requires factory preparation to receive glass filler.

Rated watts shown are based on operational (run) time, in accordance with A.R.I. Standard 1010 conditions. Specific applications will determine the actual watts consumed per hour. Watts consumed will be based on number of people served per hour (usage), ambient temperatures, and inlet water temperature.

COOLING SYSTEM

Motor Compressor: Hermetically sealed, reciprocating type, 115V, 60 Hz single phase. Sealed-in lifetime oil supply. Equipped with electric cord and three prong molded rubber plug (domestic models).

Condenser: Fan cooled, copper tube with aluminum fins. Fan motor is permanently lubricated.

In keeping with our policy of continuing product improvement, Elkey reserves the right to change product specifications without notice.





Cooling Unit: Combination tube-tank type. Self cleansing, Tube portion is continuous coll of copper tubing. Tank is stainless steel. Fully insulated with EPS foam which meets Underwriters Laboratories Inc. requirements for self-extinguishing material.

Refrigerant Control: Refrigerant HFC-134a is controlled by accurately calibrated capillary tube for positively trouble-free operation.

Temperature Control: Enclosed adjustable thermostat is factory pre-set. Requires no adjustment other than for altitude requirements. Easily accessible.

CONSTRUCTION

Frame: Galvanized structural steel chassis supports refrigeration system and fastens to wall. Provides increased structural integrity and rigidity to cooler.

Stainless Steel Basin: One piece polished to a uniform Elkay bright luster finish. Basin has integral drain grid, embossed bubbler pad. No exposed fasteners.

Exclusive Flexi-Guard® Safety Bubbler*: Innovative design utilizes an Infused anti-microbial pliable polyester elastomer to prevent accidental mouth injuries. Flexes on impact, then returns to original position. Strong. Abrasion-resistant. Anti-sweat. Keyed in location to prevent rotation.

Upper Shroud: Contoured shock-absorbing, provides additional protection against accidental injury. No exposed fasteners.

Lower Shroud: One piece easy to remove and replace. Allows access to internal components from three sides.

Cabinet: Cabinet design allows for flush to wall mounting. No recess space is required.

Color Selection: Unless otherwise specified cabinet is two-tone gray on upper shroud with textured gray lower shroud. Stainless Steel lower shroud available at extra cost.

5 YEAR LIMITED WARRANTY on the refrigeration system of the unit. Electrical components and water system are warranted for 12 months from date of Installation. Sample Certificate available on request.

Elkay Pressure-Type Water Coolers are designed to operate on 20 psi to 105 psi supply line pressure. If inlet pressure is above 105 psi, a pressure regulator must be installed in the supply line. Any damage caused by reason of connecting this product to supply line pressures lower than 20 psi or higher than 105 psi is not covered by the warranty.

STANDARDS



Elkay Electric Air Cooled Water Coolers are listed by Underwriters Laboratories Inc. and comply withboth Canadian and U.S. requirements.

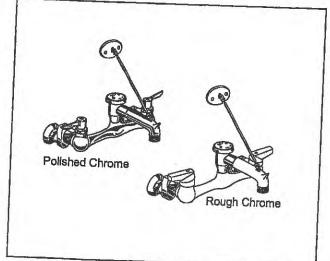


Rated in accordance with A.R.I. Standard 1010 and meets all known federal and state plumbing codes.

* Patent #4,481,971

This specification describes an Elizay product with design, quality and functional benefits to the user, When making a comparison of other producers' offerings, be certain these features are not overlooked.

American Standard

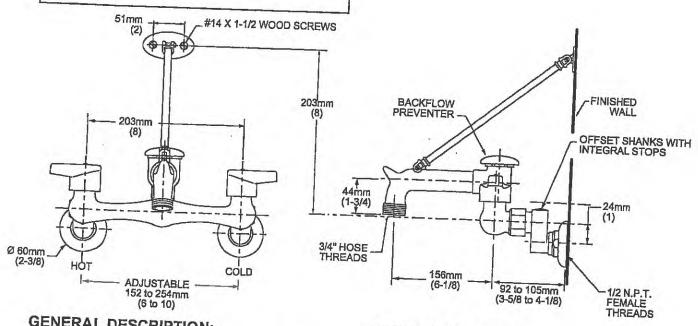


COMMERCIAL

EXPOSED YOKE WALL MOUNT UTILITY FAUCET WITH TOP BRACE

MODEL NUMBER:

8344.112 Exposed Yoke Wall-Mount Utility Faucet Top brace. Vacuum breaker. Stops in shanks. Metal lever handles, 6" threaded spout. 1/2" NPT female inlets.



GENERAL DESCRIPTION:

Cast brass body. Metal lever handles with hot and cold indicators. 1/4 turn ceramic disc valve cartridges that are reversible for use on both "hot" and "cold" sides. Vacuum breaker prevents back flow. Offset shanks with integral stops. Spout, top braced to wall, with bucket hook and threaded hose end. 1/2" female inlets adjustable from 6" to

PRODUCT FEATURES:

Cast Brass Construction: Durable - Excellent in high use applications,

Ceramic Disc Valve Cartridges: Assure a lifetime of dripfree performance.

Vacuum Breaker: Prevents back flow.

Offset Shanks with Integral Stops: Permits easy and convenient access. Adjustable rough in from 6 to 10 inches.

Top Brace: Provides additional support.

Choice of Finishes: Available in Polished or Rough

SUGGESTED SPECIFICATION

Exposed yoke wall-mount utility faucet shall feature a cast brass body and spout with bucket hook, top brace, and metal lever handles. Shall feature vacuum breaker and stops in shanks. Shall also feature 1/4 turn washerless ceramic disc valve



WIDESPREAD

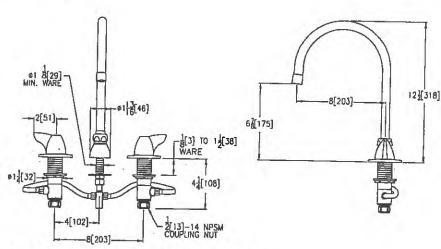
Z-831C3

TAG____



Engineering Specifications: Zurn AquaSpec® Z-831C3

Polished chrome-plated widespread with adjustable centers from 6" [152mm] to 20" [508mm], 8" [203mm] centerline rigid or swing gooseneck spout and quarter turn ceramic disc cartridges. Unit is furnished with a 2.0 GPM [7.6 L] variable orifice aerator (complying with ANSI A112.18.1 Standard for flow), 2" [51mm] vandal-resistant color-coded brass dome lever handles, mounting hardware and 1/2" [13mm] NPSM coupling nuts for standard lavatory risers. Widespread accommodates installations up to 1-1/2" [38mm] thick.





Note: All dimensions are for reference only. Do not use for pre-plumbing

OPTIONAL ACCESSORIES

Suffix	Description
CWO	Cold Water Only
FC	2.0 GPM[7.6L] Laminar Flow Control in Base of Spout
G	1-1/4" [32mm] Grid Strainer Drain
GH	1-1/4" [32mm] Offset Handicap Grid Drain
HS	Hose and Spray
ICT	Interconnecting Copper Supply Tubes for 8" [203mm] In-line Centers
P	1-1/4" [32mm] Pop-up Drain
PT	1-1/4" [32mm] Cast Brass P-Trap with a 7-1/2" [191mm] Long 17-Gauge Wall Bend
TW	Third Waterway
140	Restricted (140°) Swing Spout
2F 3F	2.0 GPM [7.6 L] Vandal-Resistant Female Aerator
	0.5 GPM [1.9 L] Vandal-Resistant Female Aerator
4F	2.0 GPM [7.6 L] Vandal-Resistant Female Laminar Flow
5F	2.0 GPM [7.6 L] Female Spray Outlet

ZURN INDUSTRIES, INC. ♦ COMMERCIAL BRASS OPERATION ♦ 2855 GIRTS ROAD ♦ JAMESTOWN NY 14701
Phone: 1-716-665-1132 ♦ Fax: 1-716-665-1135 ♦ World Wide Web: www.zum.com
In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drivs ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292



GENERAL

LK2439 Dual handle concealed mount mixing faucet. Wing handles. Tubular brass contemporary style swing spout with restricted swing (45° each side of center) with restricted flow aerator. Finished in flawless chrome plate. Removable cartridges. A 150° turn of the handle controls water from drip-free off to full on. All operating parts are replaceable from above deck. Requires 1/2° I.P. connections on 8° centers. Requires 3 faucet holes. Ship. Wt. 4-1/2 lbs.

LK2439BH Same as LK2439 except with 4" blade handles. Ship. Wt. 5 lbs.

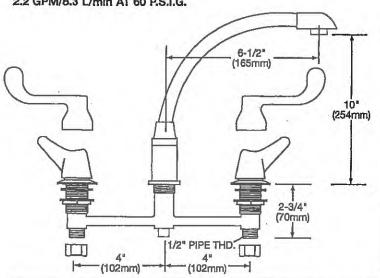


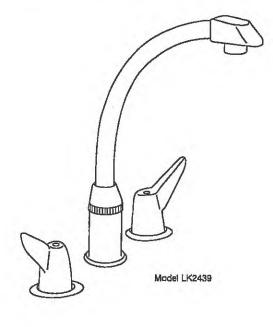
These faucets are ADA compliant.



These faucets are classified by Underwriters Laboratories Inc. to ANSI/NSF61 for residential use.

MAXIMUM FLOW RATE 2.5 GPM/9.5 L/min AT 80 P.S.I.G. 2.2 GPM/8.3 L/min AT 60 P.S.I.G.





CARTRIDGE

Maintenance-free, drip-free washerless cartridge that is completely self-contained and easily removable.

A simple cam-activated movement of the diaphragm controls the flow of water with a feather-lite touch, Full off to full on with a 150° turn. No springs. No wearing action and no moving parts exposed to water.



Elkay warrants its faucet and water dispensers to be free of defects in workmanship and material for a period of one year from the date of purchase. Replacement parts are available from Elkay for a nominal charge. Upon return of a defective part to Elkay during the warranty period with written notice of the claimed defect, Elkay will refund the replacement charge.

WASTE FITTINGS AND ACCESSORIES ARE NOT WARRANTED; OTHER WARRANTY CONDITIONS:

Our warranty does not cover product failure caused by abusive treatment, misuse, or damage due to handling or faulty installations. This warranty is extended only to the original consumer purchaser of the product. This warranty does not cover shipping costs, labor costs, or any other charges for such items as installation or replacement of the sink, diagnosis or replacement of any faucet or component part, or any other expense or loss.

ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED. NO ADDITIONAL WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN. ANY IMPLIED WARRANTY, INCLUDING ONE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

TO OBTAIN SERVICE UNDER WARRANTY

- Write to: Elkay Manufacturing Company Attention: Consumer Service 2222 Camden Court Oak Brook, Illinois 60523
- 2. Include a letter containing the following information:
 - a. Date of purchase and installation
 - b. Description of nature of defect
 - Model number or description of model and/or component part if possible.



GENERAL

Push-button bubbler, self closing, with built-in adjustable volume control which controls flow from 20 p.s.i. to 105 p.s.i.

LK1141A - Flexi-Guard® Bubbler*. Push-button valve bubbler designed so that water never comes in contact with lead-containing materials. Built-in adjustable water volume control. Heavy chrome plated body with a 1/2" (13mm) straight pipe thread connection. Requires single faucet hole. Ship. Wt. 2,3 lbs.

LKVR1141A - Metal Bubbler. Same as LK1141A except with metal mouth guard. Model includes (2) anti-rotation pins for field installation. Four hole bubbler body drilling allows installer to match anti-rotation pins to the anti-rotation sink bubbler hole slot configuration.

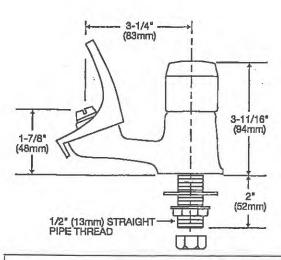
*Exclusive Flexi-Guard mouth guard utilizes a pliable polyester elastomer to prevent mouth Injuries. Guard flexes on impact and then returns to original position. Strong, abrasion resistant, anti-sweat and meets sanitary requirements.

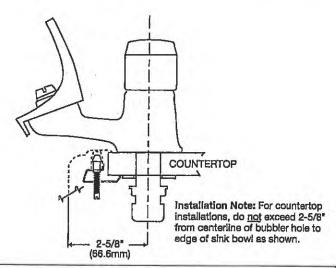
Complies with ANSI A-117.1 and A.D.A. regulations which require less than 5 lbs to operate.





Classified to ANSI/NSF61 by Underwriters Laboratories Inc.





ELKAY FAUCET/WATER DISPENSERS LIMITED WARRANTY

Elkay warrants its faucet and water dispensers to be free of defects in workmanship and material for a period of one year from the date of purchase. Replacement parts are available from Elkay for a nominal charge. Upon return of a defective part to Elkay during the warranty period with written notice of the claimed defect, Elkay will refund the replacement charge.

WASTE FITTINGS AND ACCESSORIES ARE NOT WARRANTED; OTHER WARRANTY CONDITIONS:

Our warranty does not cover product failure caused by abusive treatment, misuse, or damage due to handling or faulty installations. This warranty is extended only to the original consumer purchaser of the product. This warranty does not cover shipping costs, labor costs, or any other charges for such items as installation or replacement of the sink, diagnosis or replacement of any faucet or component part, or any other expense or loss.

ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED. NO ADDITIONAL WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN. ANY IMPLIED WARRANTY, INCLUDING ONE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

- Write to: Elkay Manufacturing Company Attention: Consumer Service 2222 Camden Court Oak Brook, Illinois 60523
- 2. Include a letter containing the following information:
 - a. Date of purchase and installation
 - b. Description of nature of defect
 - Model number or description of model and/or component part if possible.

Swing Spout Faucet with Blade Handles Models LK393A and LK393ABH6



SPECIFICATIONS

LK393A Chrome plated dual mixing faucet, back mount with BH4A 4" (102mm) wrist blade handles. 10-1/4" (260mm) high swing gooseneck spout (8-3/4" [222mm] from wall to spout outlet) with AE19A vandal-resistant antihose aerator. 8" (203mm) center to center adjustable flanged female 1/2" (13mm) inlets with built-in check valves. Ship. Wt. 6 lbs.

LK393ABH6 Same as the LK393A except with BH6A 6" (152mm) wrist blade handles. Ship. Wt. 6 lbs.

OPTIONAL ACCESSORIES

AE13A Aerator, 2.2 GPM, Ship, Wt, 1/4 lb.

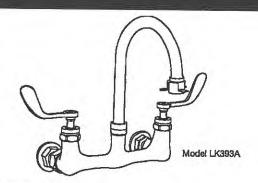
LKMK462 90° Mounting kit for backsplash mounting of wall faucets. Ship, Wt. 1 lb.

MAXIMUM FLOW RATE

2.5 GPM/9.5 L/min at 80 P.S.I.G.

2.2 GPM/8.3 L/min at 60 P.S.I.G.

2.0 GPM/7.6 L/min at 40 P.S.I.G.

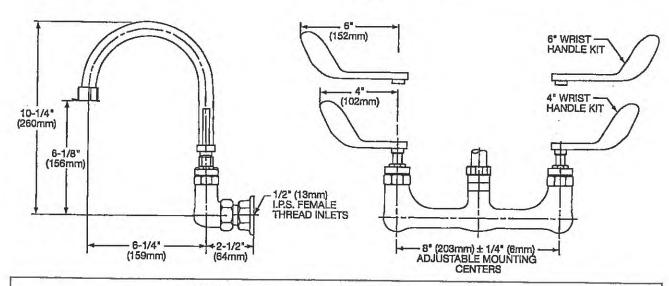




These faucets are ADA compliant.



These faucets are certified to ANSI/NSF61. Section 9 for residential use.



ELKAY FAUCET/WATER DISPENSERS LIMITED WARRANTY

Elkay warrants its faucet and water dispensers to be free of defects in workmanship and material for a period of one year from the date of purchase. Replacement parts are available from Elkay for a nominal charge. Upon return of a defective part to Elkay during the warranty period with written notice of the claimed defect. Elkay will refund the replacement charge.

WASTE FITTINGS AND ACCESSORIES ARE NOT WARRANTED; OTHER WARRANTY CONDITIONS:

Our warranty does not cover product failure caused by abusive treatment, misuse, or damage due to handling or faulty installations. This warranty is extended only to the original consumer purchaser of the product. This war-ranty does not cover shipping costs, labor costs, or any other charges for such items as installation or replacement of the sink, diagnosis or replacement of any faucet or component part, or any other expense or loss.

ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED. NO ADDITIONAL WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN. ANY IMPLIED WARRANTY, INCLUDING ONE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

- 1. Write to: Elkay Attention: Consumer Service 2222 Camden Court
- Oak Brook, Illinois 60523
- 2. Include a letter containing the following information:
 - a. Date of purchase and installation
 - b. Description of nature of defect
 - c. Model number or description of model and/or component part if possible.



GENERAL

LK2439 Dual handle concealed mount mixing faucet. Wing handles. Tubular brass contemporary style swing spout with restricted swing (45° each side of center) with restricted flow aerator. Finished in flawless chrome plate. Removable cartridges. A 150° turn of the handle controls water from drip-free off to full on. All operating parts are replaceable from above deck. Requires 1/2" I.P. connections on 8" centers. Requires 3 faucet holes. Ship. Wt. 4-1/2 lbs.

LK2439BH Same as LK2439 except with 4" blade handles. Ship. Wt. 5 lbs.

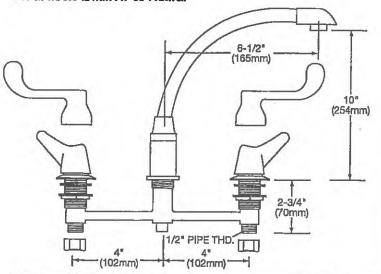


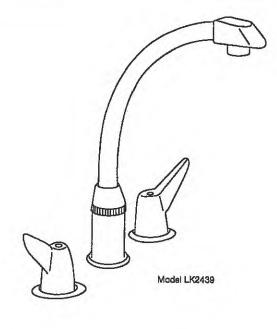
These faucets are ADA compliant.



These faucets are classified by Underwriters Laboratories Inc. to ANSI/NSF61 for residential use.

MAXIMUM FLOW RATE 2.5 GPM/9.5 L/min AT 80 P.S.I.G. 2.2 GPM/8.3 L/min AT 60 P.S.I.G.





CARTRIDGE

Maintenance-free, drip-free washerless cartridge that is completely self-contained and easily removable.

A simple cam-activated movement of the diaphragm controls the flow of water with a feather-lite touch. Full off to full on with a 150° turn. No springs. No wearing action and no moving parts exposed to water.



Elkay warrants its faucet and water dispensers to be free of defects in workmanship and material for a period of one year from the date of purchase. Replacement parts are available from Elkay for a nominal charge. Upon return of a defective part to Elkay during the warranty period with written notice of the claimed defect, Elkay will refund the replacement charge.

WASTE FITTINGS AND ACCESSORIES ARE NOT WARRANTED; OTHER WARRANTY CONDITIONS:

Our warranty does not cover product failure caused by abusive treatment, misuse, or damage due to handling or faulty installations. This warranty is extended only to the original consumer purchaser of the product. This war-ranty does not cover shipping costs, labor costs, or any other charges for such items as installation or replacement of the sink, diagnosis or replacement of any faucet or component part, or any other expense or loss.

ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED. NO ADDITIONAL WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN. ANY IMPLIED WARRANTY, INCLUDING ONE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

- 1. Write to: Elkay Manufacturing Company Attention: Consumer Service 2222 Camden Court
- Oak Brook, Illinois 60523
- 2. Include a letter containing the following information:
 - a. Date of purchase and installation
 - b. Description of nature of defect
 - c. Model number or description of model and/or component part if possible.



GENERAL

Push-button bubbler, self closing, with built-in adjustable volume control which controls flow from 20 p.s.i. to 105 p.s.i.

LK1141A - Flexi-Guard® Bubbler*. Push-button valve bubbler designed so that water never comes in contact with lead-containing materials. Built-in adjustable water volume control, Heavy chrome plated body with a 1/2" (13mm) straight pipe thread connection. Requires single faucet hole. Ship. Wt. 2.3 lbs.

LKVR1141A - Metal Bubbler. Same as LK1141A except with metal mouth guard. Model includes (2) anti-rotation pins for field installation. Four hole bubbler body drilling allows installer to match anti-rotation pins to the anti-rotation sink bubbler hole slot configuration.

*Exclusive Flexi-Guard mouth guard utilizes a pliable polyester elastomer to prevent mouth injuries. Guard flexes on impact and then returns to original position. Strong, abrasion resistant, anti-sweat and meets sanitary requirements.

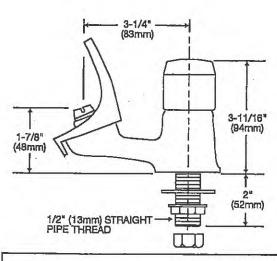
Complies with ANSI A-117.1 and A.D.A. regulations which require less than 5 lbs to operate.

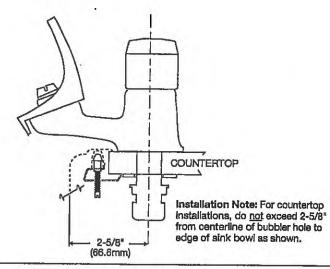


Model LK1141A



Classified to ANSI/NSF61 by Underwriters Laboratories Inc.





ELKAY FAUCET/WATER DISPENSERS LIMITED WARRANTY

Elkay warrants its faucet and water dispensers to be free of defects in workmanship and material for a period of one year from the date of purchase. Replacement parts are available from Elkay for a nominal charge. Upon return of a defective part to Elkay during the warranty period with written notice of the claimed defect, Elkay will refund the replacement charge.

WASTE FITTINGS AND ACCESSORIES ARE NOT WARRANTED; OTHER WARRANTY CONDITIONS:

Our warranty does not cover product failure caused by abusive treatment, misuse, or damage due to handling or faulty installations. This warranty is extended only to the original consumer purchaser of the product. This war-rarry does not cover shipping costs, labor costs, or any other charges for such items as installation or replacement of the sink, diagnosis or replacement of any faucet or component part, or any other expense or loss.

ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED. NO ADDITIONAL WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN. ANY IMPLIED WARRANTY, INCLUDING ONE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts. so the above limitations or exclusions may not apply to you.

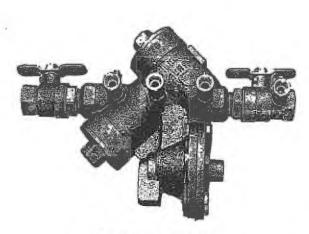
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

- 1. Write to: Elkay Manufacturing Company Attention: Consumer Service 2222 Camden Court Oak Brook, Illinois 60523
- 2. Include a letter containing the following information:
 - a. Date of purchase and installation
- b. Description of nature of defect
- c. Model number or description of model and/or component part if possible.



duced Pressure Principle

3/4" Thru 2"



MODEL 975XL

FEATURES



- Reduced pressure principle backflow preventer consisting of a pressure differential relief valve located between two independently operated spring-loaded center guided check valves, "Y" pattern body
- Complete with two full port resilient seated ball valves for shut-off and four resilient seated ball valve test cocks
- Nickel-plated ball valve handles offer superior corrosion resistance
- Bronze body construction
- ☐ Noryl® replaceable seats and silicone rubber check discs
- □ Entire unit serviceable in line
- ☐ Temperature range 33°F-180°F
- Maximum pressure 175 psi
- ☐ Available with BSP (optional)
- Available with stainless steel ball valve handles (optional)

Size	3/4"	1"	1 1/4"	1 1/2"	21
FCCHR@USC	H/H	H/H	Н	H/H	H/H
ASSE® Listed 1013	H/H	H/H	Н	H/H	H/H
'VA Compliant	H/H	H/H	Н	H/H	H/H
/IO® Listed	H/H	. H/H	н	H/H	H/H
CSA®Certified	H/H	H/H	Н	H/H	H/H
UL® Classified	Н	Н	Н	Н	Н
C-UL®Classified	Н	Н	Н	н	LJ LJ

[&]quot;H" denotes approval in horizontal orientation

Model 975XL/975XLU Approvals/Listings

OPTIONS

*(Some Options May be Combined)

Model 975XLTCU	Same as 975XL except test cocks facing up.

Model 975LXL Same as 975XL except less shut-off valves.

Model 975XLS Same as 975XL except supplied with "Y" strainer.

Model 975XLU Same as 975XL except supplied with union connections between shut off valves and the device.

Model 975XLUS Same as 975XLU except supplied with "Y" strainer.

Model 975XLV Same as 975XL except supplied with inlet and outlet union swivel elbows. See page 8

Model 975XLSE Same as 975XL except supplied with street elbows. See page 10.

Model 975XLP Same as 975XL except supplied with purple access covers for reclaimed water.

Model 975XLRV Same as 975XL except test cocks supplied on opposite side than standard.

Model 975XLMS: Same as 975XL except supplied with integral monitor switch. See page 14.

odel 975XLBMS Same as 975XL except supplied with battery-powered integral monitor switch. See page 14.

Model 975XLFDC - Same as 2" size 975XL except supplied with 2 1/2" female swivel inlet hose connection and 2.1/2" male outlet hose connection, for temporary water service from fire hydrant.

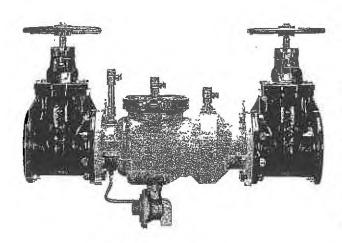
Model 975XLFT Same as 975XL except with integral male 45° flare SAE test fittings and dust covers.



aduced Pressure Principle

reaturing Compound CheckTM

Patent No. 5,913,331



MODEL 375



2 1/2" Thru 8"

FEATURES

Sizes 2 1/2"-8" 3"

Reduced pressure principle backflow preventer consisting of a pressure differential relief valve located between two independently operated spring-loaded center guided check valves

Standard with two non-rising stem resilient wedge gate valves and four resilient seated ball valve test cocks

Nickel-plated ball valve handles offer superior corrosion resistance

Lightweight ductile iron construction with FDA approved fusion epoxy coat inside and out

Dual torsion springs bias the check in the closed position (4"-8")

Modular poppet design: Lead-free engineered plastic (Noryl®) and stainless steel No internal threads in body or cover, eliminating

exposure to corrosion

Single access cover reduces maintenance and down time

 Relief valve located on bottom of valve with test cocks facing up -- Allows for easy installation and

Temperature range 33°F-140°F

Maximum pressure 175 psi

Model 375 Approvals/Listings		J Waxiitidii		
Size	2 1/2"	3"	4*	64
FCCHR@USC			Н	Н
ASSE®Listed 1013	Н	Н	Н	<u> </u>
AWWA Compliant	Н	Н	Н	n u
IAPMO@Listed			Н	n u
CSA®Certified			U	n u
UL® Classified	Н	Н	T U	<u> </u>
FM® Approved	Н	Н	n	n
C-UL®Classified	н	H	n	H
"Li" denotes assessed in haden to			n	1

denotes approval in horizontal orientation

OPTIONS

*(Some Options May be Combined)

Model 375L Same as 375 except less gate valves.

Model 375G Same as 375 except with grooved end gate valves:

Model 375OSY Same as 375 except with resilient wedge OS&Y (Outside Stem and Yoke) gate valves. For fire

protection applications.

Model 375OSYG Same as 375OSY except with grooved end gate valves. 🤐 🦠

Model 375FS Same as 375 except supplied with flanged "Y" Strainer.

Model 375FSC: 4 Same as 375FS except strainer is epoxy coated inside and out with an FDA approved material.

lodel 3750SYFS Same as 375OSY except supplied with flanged "Y" Strainer.

Same as 375OSYFS except strainer is fusion epoxy coated inside and out with an FDA approve

Model 375FG

Same as 375 except with flanged inlet gate connection and grooved outlet gate connection.



A WATTS INDUSTRIES CO.

432-AERSO

PRODUCT SPECIFICATION

430 Hydroguard Master Mixing Valve Models 431, 432, 433, and 434

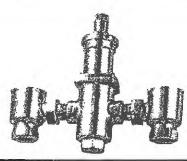
DESCRIPTION

The Series 430 Hydroguard thermostatically blends hot and cold water to deliver blended water at the desired temperature, quickly compensating for temperature variations due to changes in inlet temperature, pressure or flow, and reduces flow upon water supply failure. The valve is available in three finishes: rough bronze, rough chrome, or polished chrome, and is also available in a variety of sizes, to suit virtually any application.

FUNCTION

The Series 430 Hydroguard's advanced thermal actuator senses and adjusts the outlet water temperature to variations in temperature and/or pressure. The delivery temperature is adjustable between 40°-160°F when tested according to ASSE 1017.

The dirt and lime resistant poppet and seat design ensures minimal maintenance, while the union inlets allow a variety of piping schemes. Heavy duty combination strainer checkstops, included with each valve, prevent crossover and allow easy shutdown of the unit for removal or servicing, while self-aligning bronze trim and seats prevent binding. Finally, the valve features a tamper-resistant temperature adjustment control.



SPECIFICATIONS

Operating

Maximum Pressure Differential	100 psi (689 kPa)
Maximum Static Pressure	125 psig (861.25 kPa)
Maximum Hot Water Temperature	200°F (93°C)
Minimum Hot Water Temperature 15°	F (8°C) Above Set-Point
Temperature Adjustment Range40	0°F (4°C) - 160°F (71°C)
Compliance	17, CSA B125 Certified

Note: Low limit cannot be less than the cold water temperature. For best operation, hot water should be at least 15°F (8°C) above desired set point.

APPLICATIONS

- · Shower rooms and group showers
- · Domestic water for small buildings
- · Tempered water for light industrial processes

SIZING

Table 1, Capacity Tables, present the Hydroguard discharge capacity in gpm and lpm for various pressure differentials (the difference between the lowest inlet pressure and the discharge pressure at the Hydroguard).

Figure 1 (refer to next page), Flow Rate in gpm, graphs the capacities at the pressure differentials shown in Table 1, Capacity Tables,

Table 1- Capacity Tables

Flow Capacity In US gom at 50-50 Mixed Ratio

Model	Min. Flow	Min. Flow to		Pressure Drop Across Valves in psi						
	Rate*	ASSE 1017	5	10	20	30	45	60	75	100
431	0.5 gpm	4.0 gpm	7.5	11.0	16.0	20.0	25.0	29.0	33,0	38.5
432	0.5 gpm	7.0 gpm	15.0	20.0	30.0	36.0	45.0	52.0	58.0	67.0
433	0.5 gpm	10 gpm	24	34	51	64	80	93	105	123
434	0.5 gpm	15 gpm	40	55	82	101	125	146	165	190

^{*} Minimum flow when Hydrogrand is installed at at near hot water source with recirculated tempered water with continuously operating recirculating pump.

Flow Capacity in Ipm at 50-50 Mixed Ratio

Model	Min. Flow	Min. Flow to	Pressure Drop Across Valves in kPA							
	Rate*	ASSE 1017	34	69	138	207	310	414	517	689
431	1.89 lpm	15 lgm	28.4	41.6	60.6	76.0	94.6	109.8	125.0	145.7
432	1.89 lpm	2 <u>6 fpm</u>	56.8	76.0	113.5	136,2	170.3	197.0	219.5	253.5
433	1.89 lpm	38 lpm	91	129	193	242	303	352	397	466
434	1.89 lpm	57 Ipm	_151_	208	310	382	473	_553	625	719

^{*} Minimum flow when Hydrogrand Is installed at or near hat water source with recirculated tempered water with continuously operating recirculating pump.