SAFETY DATA SHEET

Issue Date 12-Feb-2015 **Revision Date** 30-Aug-2016 **Version** 3

1. IDENTIFICATION

Product identifier

Product Name Bostex 862

Other means of identification

Product Code BOSTEX 862
UN/ID no. UN3082
Synonyms Aqueous masterbatch dispersion

Recommended use of the chemical and restrictions on use

Recommended Use Latex Additive.
Uses advised against None known

Details of the supplier of the safety data sheet

Supplier Address
Akron Dispersions, Inc.
3291 Sawmill Road
P.O. Box 4195
Akron, OH 44321

Emergency telephone number

Company Phone Number 330-666-0045
Emergency Telephone Chemtrec 1-800-424-9300 (Within USA and Canada), (+1) 703-741-5970 (Outside USA and Canada)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1

Label elements

Emergency Overview

Warning

Hazard statements
Harmful if swallowed
May cause an allergic skin reaction

Appearance Aqueous solution	**Physical state** Liquid	**Odor** Ammoniacal

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
Specific treatment (see .? on this label)
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
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Causes mild skin irritation Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

Unknown acute toxicity 22.72585% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Synonyms Aqueous masterbatch dispersion.

Chemical Name	CAS No.	Weight-%	Trade Secret
Zinc oxide	1314-13-2	5 - 15	*
Zinc diethyldithiocarbamate	14324-55-1	1 - 10	*
Ammonium hydroxide	1336-21-6	0 - 0.03	*
Formaldehyde	50-00-0	0 - 0.003	*
Quinoline	91-22-5	0 - 0.003	*
Naphthalene	91-20-3	0 - 0.001	*
Cadmium and compounds (as Cd)	7440-43-9	0 - 0.00055	*
Lead	7439-92-1	0 - 0.0001	*

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

Non-hazardous ingredients are proprietary and comprise the balance of the formulation.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If breathing is difficult seek medical attention.

Ingestion If on skin: Wash with plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms May cause irritation to skin, eyes, and respiratory tract. Do not drink alcoholic beverages immediately before or after handling-may cause violent nausea and vomiting. May cause skin sensitization or allergic eczema.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical
The product causes irritation of eyes, skin and mucous membranes.

Hazardous combustion products Oxides of carbon, nitrogen, sulfur and sodium. Carbon sulfide. Hydrogen sulfide.

Explosion data
Sensitivity to Mechanical Impact No data available.
Sensitivity to Static Discharge No data available.

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

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Sweep, vacuum or shovel into appropriate container.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection recommended in Section 8.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a cool, dry area. Protect from freezing.

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents. Magnesium. Hydrocarbons. Zinc Oxide has been reported to cause a violent explosion when mixed in a chlorinated rubber batch.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Zinc oxide 1314-13-2	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 (vacated) TWA: 5 mg/m^3 fume (vacated) TWA: 10 mg/m^3 total dust (vacated) TWA: 5 mg/m^3 respirable fraction (vacated) STEL: 10 mg/m^3 fume	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
Formaldehyde 50-00-0	Ceiling: 0.3 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm unless specified in 1910.1048 (vacated) STEL: 10 ppm 30 min unless specified in 1910.1048 (vacated) Ceiling: 5 ppm unless specified in 1910.1048 STEL: 2 ppm see 29 CFR 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m^3 (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m^3 (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m^3	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m^3 STEL: 15 ppm STEL: 75 mg/m^3
Cadmium and compounds (as Cd) 7440-43-9	TWA: 0.01 mg/m^3 TWA: 0.002 mg/m^3 respirable fraction TWA: 0.01 mg/m^3 Cd TWA: 0.002 mg/m^3 Cd respirable fraction	TWA: 0.1 mg/m^3 fume applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect TWA: 0.2 mg/m^3 dust applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect TWA: 5 µg/m^3 (vacated) STEL: 0.3 ppm fume Ceiling: 0.3 mg/m^3 fume applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect Ceiling: 0.6 mg/m^3 dust applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect	IDLH: 9 mg/m^3 dust IDLH: 9 mg/m^3 Cd dust and fume
Lead 7439-92-1	TWA: 0.05 mg/m^3 TWA: 0.05 mg/m^3 Pb	TWA: 50 µg/m^3 TWA: 50 µg/m^3 Pb	IDLH: 100 mg/m^3 IDLH: 100 mg/m^3 Pb TWA: 0.050 mg/m^3 TWA: 0.050 mg/m^3 Pb

Appropriate engineering controls

Engineering Controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such 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 In case of inadequate ventilation wear respiratory protection.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Aqueous solution	**Odor**	Ammoniacal
Color	Light beige to yellow	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	9-12	
Melting point/freezing point	0 °C	
Boiling point / boiling range	100 °C	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water solubility	Miscible in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials
Strong acids. Strong bases. Strong oxidizing agents. Magnesium. Hydrocarbons. Zinc Oxide has been reported to cause a violent explosion when mixed in a chlorinated rubber batch.

Hazardous Decomposition Products
Oxides of carbon, nitrogen, sulfur and sodium. Carbon sulfide. Nitrogen sulfide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation No data available.

Eye contact No data available.

Skin contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc oxide 1314-13-2	> 5000 mg/kg (Rat)	-	-
Zinc diethyldithiocarbamate 14324-55-1	= 700 mg/kg (Rat)	-	-
Ammonium hydroxide 1336-21-6	= 350 mg/kg (Rat)	-	-
Formaldehyde 50-00-0	= 100 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h
Quinoline 91-22-5	= 331 mg/kg (Rat)	= 540 µL/kg (Rabbit)	-
Naphthalene 91-20-3	= 490 mg/kg (Rat) = 1110 mg/kg (Rat)	> 20 g/kg (Rabbit) = 1120 mg/kg (Rabbit)	> 340 mg/m^3 (Rat) 1 h
Cadmium and compounds (as Cd) 7440-43-9	= 1140 mg/kg (Rat)	-	= 25 mg/m^3 (Rat) 30 min

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Zinc oxide 1314-13-2	-	-	Reasonably Anticipated	X
Formaldehyde 50-00-0	A2	Group 1	Known	X
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	X
Cadmium and compounds (as Cd) 7440-43-9	A2	Group 1	Known	X
Lead 7439-92-1	A3	Group 2A	Reasonably Anticipated	X

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard 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) 1,185.00
ATEmix (dermal) 37,262.56

12. ECOLOGICAL INFORMATION

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

Ecotoxicity

22.15585 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ammonium hydroxide 1336-21-6	-	8.2: 96 h Pimephales promelas mg/L LC50	0.66: 48 h Daphnia pulex mg/L EC50 0.66: 48 h water flea mg/L EC50
Formaldehyde 50-00-0	-	0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through 100 - 136: 96 h Oncorhynchus mykiss mg/L LC50 static 22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 1510: 96 h Lepomis macrochirus µg/L LC50 static 41: 96 h Brachydanio rerio mg/L LC50 static	11.3 - 18: 48 h Daphnia magna mg/L EC50 Static 2: 48 h Daphnia magna mg/L LC50
Quinoline 91-22-5	84: 72 h Desmodesmus subspicatus mg/L EC50 static 90: 96 h Desmodesmus subspicatus mg/L EC50 static 51: 4 h Pseudokirchneriella subcapitata mg/L EC50	40: 96 h Poecilia reticulata mg/L LC50 static 46: 96 h Pimephales promelas mg/L LC50 static 77.8: 96 h Pimephales promelas mg/L LC50 flow-through	45.9 - 57.3: 48 h Daphnia magna mg/L EC50 Static 28.5: 48 h Daphnia magna mg/L EC50
Naphthalene 91-20-3	0.4: 72 h Skeletonema costatum mg/L EC50	0.91 - 2.82: 96 h Oncorhynchus mykiss mg/L LC50 static 5.74 - 6.44: 96 h Pimephales promelas mg/L LC50 flow-through 1.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.99: 96 h Pimephales promelas mg/L LC50 static 31.0265: 96 h Lepomis macrochirus mg/L LC50 static	1.09 - 3.4: 48 h Daphnia magna mg/L EC50 Static 1.96: 48 h Daphnia magna mg/L EC50 Flow through 2.16: 48 h Daphnia magna mg/L LC50
Cadmium and compounds (as Cd) 7440-43-9	-	0.0004 - 0.003: 96 h Pimephales promelas mg/L LC50 0.002: 96 h Cyprinus carpio mg/L LC50 0.003: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.006: 96 h Oncorhynchus mykiss mg/L LC50 static 0.016: 96 h Oryzias latipes mg/L LC50 0.24: 96 h Cyprinus carpio mg/L LC50 static 21.1: 96 h Lepomis macrochirus mg/L LC50 flow-through 4.26: 96 h Cyprinus carpio mg/L LC50 semi-static	0.0244: 48 h Daphnia magna mg/L EC50 Static
Lead 7439-92-1	-	0.44: 96 h Cyprinus carpio mg/L LC50 semi-static 1.17: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.32: 96 h Oncorhynchus mykiss mg/L LC50 static	600: 48 h water flea µg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical Name	Partition coefficient
Formaldehyde 50-00-0	0.35
Quinoline 91-22-5	1.88 - 2.06
Naphthalene 91-20-3	3.3

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122
Naphthalene 91-20-3	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145	-	U165
Cadmium and compounds (as Cd) 7440-43-9	-	Included in waste streams: F006, F039, K061, K069, K100	1.0 mg/L regulatory level	-
Lead 7439-92-1	-	Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K069, K086, K100, K176	5.0 mg/L regulatory level	-

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Naphthalene 91-20-3	-	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	-

Chemical Name	California Hazardous Waste Status
Zinc oxide 1314-13-2	Toxic
Zinc diethyldithiocarbamate 14324-55-1	Toxic
Ammonium hydroxide 1336-21-6	Toxic Corrosive
Formaldehyde 50-00-0	Toxic Ignitable
Naphthalene 91-20-3	Toxic
Lead 7439-92-1	Toxic

14. TRANSPORT INFORMATION

DOT

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Zinc diethyldithiocarbamate)
Hazard Class	9
Packing Group	III
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to DOT.

IATA

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Zinc Oxide, Zinc diethyldithiocarbamate)
Hazard Class	9
Packing Group	III

IMDG

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Zinc Oxide, Zinc diethyldithiocarbamate)
Hazard Class	9
Packing Group	III
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. REGULATORY INFORMATION

International Inventories

TSCA Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

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	SARA 313 - Threshold Values %
Zinc oxide - 1314-13-2	1.0
Zinc diethyldithiocarbamate - 14324-55-1	1.0
Ammonium hydroxide - 1336-21-6	1.0
Formaldehyde - 50-00-0	0.1
Quinoline - 91-22-5	1.0
Naphthalene - 91-20-3	0.1
Cadmium and compounds (as Cd) - 7440-43-9	0.1
Lead - 7439-92-1	0.1

SARA 311/312 Hazard Categories

Acute health hazard	Yes
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	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc oxide 1314-13-2	-	X	-	-
Zinc diethyldithiocarbamate 14324-55-1	-	X	-	-
Ammonium hydroxide 1336-21-6	1000 lb	-	-	X
Formaldehyde 50-00-0	100 lb	-	-	X
Quinoline 91-22-5	5000 lb	-	-	X
Naphthalene 91-20-3	100 lb	X	X	X
Cadmium and compounds (as Cd) 7440-43-9	-	X	X	-
Lead 7439-92-1	-	X	X	-

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	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium hydroxide 1336-21-6	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ
Formaldehyde 50-00-0	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ
Quinoline 91-22-5	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Naphthalene 91-20-3	100 lb 1 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ
Cadmium and compounds (as Cd) 7440-43-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ
Lead 7439-92-1	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product contains chemicals known to the state of California to cause birth defects or other reproductive harm

Chemical Name	California Proposition 65
Formaldehyde - 50-00-0	Carcinogen
Quinoline - 91-22-5	Carcinogen
Naphthalene - 91-20-3	Carcinogen
Cadmium and compounds (as Cd) - 7440-43-9	Carcinogen Developmental Male Reproductive
Lead - 7439-92-1	Carcinogen Developmental Female Reproductive Male Reproductive

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Zinc oxide 1314-13-2	X	X	X
Zinc diethyldithiocarbamate 14324-55-1	X	-	X
Ammonium hydroxide 1336-21-6	X	X	X
Formaldehyde 50-00-0	X	X	X
Quinoline 91-22-5	X	X	X
Naphthalene 91-20-3	X	X	X
Cadmium and compounds (as Cd) 7440-43-9	X	X	X
Lead 7439-92-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 1	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 1	**Flammability** 0	**Physical hazards** 0	**Personal protection** B

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Disclaimer

The information provided in this Material 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