

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/11/2019

Reviewed on 09/11/2019

1 Identification**- Product identifier**

- **Trade name:** ND Microspheres® Epoxy Series
- **Synonyms:** Eco-Loc® (593SA) - Applied
- **Part number:** 593SA - Applied
- **Application of the substance / the mixture** Thread Locking

- Details of the supplier of the safety data sheet**- Manufacturer/Supplier:**

ND Industries, Inc
1000 North Crooks Road
Clawson, MI 48017
USA
Telephone: +1-248-288-0000
Email: info@ndindustries.com
Website: www.ndindustries.com

- Information department: Product Safety Department**- Emergency telephone number:**

United States: 1-800-424-9300
International: +1-703-527-3887

2 Hazard(s) identification**- Classification of the substance or mixture**

Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

- Label elements

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms

GHS07

- Signal word Warning**- Hazard-determining components of labeling:**

Aminophenol
Epoxy resin
Polyethyleneimine

- Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

- Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash face, hands and any exposed skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P302+P352 If on skin: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see on this label).
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:**- NFPA ratings (scale 0 - 4)**

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- HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = *1
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- Other hazards**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

CAS: 25036-13-9	Polyoxymethylene melamine urea Skin Irrit. 2, H315	30 – 39%
CAS: 28064-14-4	Epoxy resin Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	30 – 39%
CAS: 90-72-2	Aminophenol Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312	10 – 19%
	Polyethyleneimine Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317	5 – 9%

4 First-aid measures

- Description of first aid measures**- After inhalation:**

Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- Information for doctor:

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

- Extinguishing media

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:** Water

- **Special hazards arising from the substance or mixture** No further relevant information available.

- Advice for firefighters**- Protective equipment:**

Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Wear protective clothing.

- Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

- Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Dispose of the collected material according to regulations.

- Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage

- Handling:

- Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
No special precautions are necessary if used correctly.

- Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities

- Storage:

- **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Information about storage in one common storage facility:** Not required.

- Further information about storage conditions:

Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- Control parameters

- Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment:

- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- Breathing equipment:

Not required.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

- Form:

Solid

- Color:

According to product specification

- Odor:

Odorless

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- Odor threshold:	Not determined.
- pH-value:	Not applicable.
- Change in condition	
- Melting point/Melting range:	Undetermined.
- Boiling point/Boiling range:	≥ 100 °C (≥ 212 °F)
- Flash point:	≥ 94 °C (≥ 201.2 °F)
- Flammability (solid, gaseous):	Not determined.
- Ignition temperature:	≥ 200 °C (≥ 392 °F)
- Decomposition temperature:	Not determined.
- Auto igniting:	Product is not selfigniting.
- Danger of explosion:	Product does not present an explosion hazard.
- Explosion limits:	
- Lower:	Not determined.
- Upper:	Not determined.
- Vapor pressure at 20 °C (68 °F):	n.a. hPa
- Density:	Not determined.
- Relative density	Not determined.
- Vapor density	Not applicable.
- Evaporation rate	Not applicable.
- Solubility in / Miscibility with	
- Water:	Insoluble.
- Partition coefficient (n-octanol/water):	Not determined.
- Viscosity:	
- Dynamic:	Not applicable.
- Kinematic:	Not applicable.
- Solvent content:	
- VOC content:	0.00 %
- Solids content:	100.0 %
- Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 - Aldehyde
 - Hydrocarbons

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	5,286 mg/kg (rat)
Dermal	LD50	11,429 mg/kg (rat)

CAS: 90-72-2 Aminophenol

Oral	LD50	1,200 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)

Polyethyleneimine

Oral	LD50	1,500 mg/kg (rat)
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- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Toxic for fish
- **Additional ecological information:**
 - **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- UN-Number - DOT, IMDG, IATA	not regulated
- UN proper shipping name - DOT, IMDG, IATA	not regulated
- Transport hazard class(es) - DOT, ADN, IMDG, IATA - Class	not regulated
- Packing group - DOT, IMDG, IATA	not regulated
- Environmental hazards:	Not applicable.
- Special precautions for user	Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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- UN "Model Regulation":	not regulated
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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

- Section 355 (extremely hazardous substances):

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

- TSCA (Toxic Substances Control Act):

Polyoxymethylene melamine urea	ACTIVE
Epoxy resin	ACTIVE
Aminophenol	ACTIVE
Polyethyleneimine	*
Silicon dioxide, amorphous	ACTIVE

- Hazardous Air Pollutants

None of the ingredients is listed.

- Proposition 65

- Chemicals known to cause cancer:

Polyethyleneimine

- Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- Carcinogenic categories

- EPA (Environmental Protection Agency)

None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

- NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: ND Industries, Inc. - Safety, Health and Environmental Affaires

- Contact: Safety, Health and Environmental Affaires

- Date of preparation / last revision 09/11/2019 / -

- Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1C: Skin corrosion/irritation – Category 1C
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- Disclaimer

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