

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 10/29/2015

Reviewed on 10/29/2015

**1 Identification**

**- Product identifier**

- **Trade name:** ND Microspheres® Epoxy Series

- **Synonyms:** 593 Blue Microspheres - Applied

- **Part number:** 593SB - applied

**- 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 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:**

Epoxy resin

**- Hazard statements**

H317 May cause an allergic skin reaction.

**- Precautionary statements**

- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P280 Wear protective gloves.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P321 Specific treatment (see on this label).
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**- Classification system:**

**- NFPA ratings (scale 0 - 4)**



**- HMIS-ratings (scale 0 - 4)**



**- Other hazards**

**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

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- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

**- Chemical characterization: Mixtures**

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

**- Dangerous components:**

25036-13-9	Polyoxymethylene melamine urea		30-40%
28064-14-4	Epoxy resin	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2B, H320	30-40%
1761-71-3	4,4'-methylenebis(cyclohexylamine)	Acute Tox. 3, H301; Skin Corr. 1B, H314; Eye Dam. 1, H318	10-20%
	Binding agent	Eye Irrit. 2B, H320; Combustible Dust	5-10%

### 4 First-aid measures

**- Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

**- 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. Then consult a doctor.

- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a 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:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

**- Methods and material for containment and cleaning up:**

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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.

### 7 Handling and storage

**- Handling:**

- **Precautions for safe handling** Thorough dedusting.

- **Information about protection against explosions and fires:** No special measures required.

**- 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.

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

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## 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.

- **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.

- **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:** Blue
- **Odor:** Odorless
- **Odour 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 °F)

- **Flammability (solid, gaseous):** Not determined.

- **Ignition temperature:**

- **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:** Not applicable.

- **Density at 20 °C (68 °F):** 1.1 g/cm<sup>3</sup> (9.18 lbs/gal)
- **Relative density** Not determined.

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- <b>Vapour density</b>	Not applicable.
- <b>Evaporation rate</b>	Not applicable.
- <b>Solubility in / Miscibility with</b>	
- <b>Water:</b>	Insoluble.
- <b>Partition coefficient (n-octanol/water):</b>	Not determined.
- <b>Viscosity:</b>	
- <b>Dynamic:</b>	Not applicable.
- <b>Kinematic:</b>	Not applicable.
- <b>Solvent content:</b>	
- <b>Organic solvents:</b>	0.0 %
- <b>Solids content:</b>	100.0 %
- <b>Other information</b>	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:** No dangerous decomposition products known.

## 11 Toxicological information

### - Information on toxicological effects

#### - Acute toxicity:

#### - LD/LC50 values that are relevant for classification:

1761-71-3 4,4'-methylenebis(cyclohexylamine)

Oral LD50 100 mg/kg (ATE)

#### - Primary irritant effect:

- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.

#### - Sensitization:

 Sensitization possible through skin contact.

#### - Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

#### - 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.
- **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.
    - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    - Danger to drinking water if even small quantities leak into the ground.

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**- 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, ADN, IMDG, IATA** not regulated**- UN proper shipping name**- **DOT, ADN, IMDG, IATA** not regulated**- Transport hazard class(es)**- **DOT, ADN, IMDG, IATA**  
- **Class** not regulated**- Packing group**- **DOT, IMDG, IATA** not regulated**- Environmental hazards:**- **Marine pollutant:** No**- Special precautions for user**

Not applicable.

**- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**- UN "Model Regulation":**

not regulated

**\*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

Epoxy resin

4,4'-methylenebis(cyclohexylamine)

**- Proposition 65****- Chemicals known to cause cancer:**

None of the ingredients is listed.

**- 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.

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- <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
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None of the ingredients is listed.
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- <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.
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<b>16 Other information</b>
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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** 10/29/2015 / 2

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 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)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Acute Tox. 3: Acute toxicity, Hazard Category 3  
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
 Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B  
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
 Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B

- \* **Data compared to the previous version altered.**

- **Disclaimer**

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