Safety Data Sheet
acc. to OSHA HCS

Date of issue: 07/23/2026 *Reviewed on 07/23/2026*

1 Identification

- ***Product identifier***
  - ***Trade name:*** ND Microspheres® TA Series
    - ***Synonyms:*** TA850 Microspheres - Applied
- ***Other means of identification***
  - ***Part number:*** TA850 - applied
- ***Application of the substance / the mixture*** Thread Locking
- ***Details of the supplier of the safety data sheet***
  - ***Manufacturer/Supplier:***
    ND Industries, a subsidiary of H.B. Fuller Company
    1000 North Crooks Road
    Clawson, MI 48017
    USA
    Telephone: +1-248-288-0000
    Email: nd-info@hbfuller.com
    Websites: www.ndindustries.com | www.vibra-tite.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***


GHS06 Skull and crossbones

Acute toxicity - inhalation 1 H330 Fatal if inhaled.


GHS07

Skin irritation 2	H315 Causes skin irritation.
Eye irritation 2A	H319 Causes serious eye irritation.
Sensitization - skin 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***


GHS06 GHS07

    - ***Signal word*** Danger
    - ***Hazard-determining components of labeling:***
      1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione
      (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate
      2-[[3-hydroxy-2,2-bis[[(1-oxoallyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate
      benzoyl peroxyde
      Miramer M500
    - ***Hazard statements***
      H330 Fatal if inhaled.
      H315 Causes skin irritation.
      H319 Causes serious eye irritation.
      H317 May cause an allergic skin reaction.
    - ***Precautionary statements***

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.

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P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves.
P280	Wear eye protection / face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P302+P352	If on skin: Wash with plenty of water.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P320	Specific treatment is urgent (see on this label).
P321	Specific treatment (see on this label).
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.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- ***Other hazards***
  - ***Results of PBT and vPvB assessment***
    - ***PBT:*** Not applicable
    - ***vPvB:*** Not applicable
- ***Classification according to (d)(1)(ii) of § 1910.1200***
  The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.
- ***Hazards not otherwise classified***
  There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

* 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 irritation 2, H315	10 – 30%
CAS: 24448-20-2	(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate Skin irritation 2, H315; Eye irritation 2A, H319; Sensitization - skin 1B, H317	7 – 13%
CAS: 3006-93-7	1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione Acute toxicity - inhalation 1, H330; Acute toxicity - oral 4, H302; Sensitization - skin 1A, H317	7 – 13%
	Melamine Acrylate Skin irritation 2, H315; Eye irritation 2A, H319	3 – 7%
CAS: 1332-58-7	Kaolin	3 – 7%
CAS: 8002-74-2	Paraffin wax Combustible Dust	1 – 5%
CAS: 60506-81-2	2-[[3-hydroxy-2,2-bis[[(1-oxoallyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate Eye irritation 2A, H319; Sensitization - skin 1, H317	1 – 5%
CAS: 25133-98-6	Acrylic Resin Combustible Dust	1 – 5%
CAS: 63148-65-2	Binding agent Combustible Dust	1 – 5%
CAS: 94-36-0	benzoyl peroxyde Organic peroxides - Type B, H241; Eye irritation 2A, H319; Sensitization - skin 1, H317	1 – 5%
	Miramer M500 Eye irritation 2A, H319; Sensitization - skin 1, H317	0.1 – 1%

* 4 First-aid measures

- ***Description of first aid measures***
  - ***General information:***
    Immediately remove any clothing soiled by the product.
    Remove breathing apparatus only after contaminated clothing have been completely removed.
    In case of irregular breathing or respiratory arrest provide artificial respiration.
  - ***After inhalation:***
    Supply fresh air or oxygen; call for 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.

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- ***After eye contact:*** Rinse opened eye for several minutes under running water. Then consult a doctor.
- ***After swallowing:*** If symptoms persist consult 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, 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:***
    Mouth respiratory protective device.
    Wear self-contained respiratory protective device.
    Wear fully protective suit.

6 Accidental release measures

- ***Personal precautions, protective equipment and emergency procedures***
  Remove persons from danger area.
  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:***
  Dispose contaminated material as waste according to section 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

- ***Precautions for safe handling***
  Thorough dedusting.
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
  Prevent formation of dust.
  No special precautions are necessary if used correctly.
  - ***Information about protection against explosions and fires:***
    Keep ignition sources away - Do not smoke.
    Prevent impact and friction.
    Keep respiratory protective device available.
- ***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.
      Protect from heat and direct sunlight.
- ***Specific end use(s)*** No further relevant information available.

* 8 Exposure controls/personal protection

- ***Control parameters***
  - ***Components with limit values that require monitoring at the workplace:***
    At this time, the other constituents have no known exposure limits.

CAS: 1332-58-7 Kaolin	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	Long-term value: 2* mg/m³ E; respirable particulate matter, A4

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CAS: 8002-74-2 Paraffin wax	
REL	Long-term value: 2 mg/m³
TLV	Long-term value: 2 mg/m³
CAS: 94-36-0 benzoyl peroxyde	
PEL	Long-term value: 5 mg/m³
REL	Long-term value: 5 mg/m³
TLV	Long-term value: 5 mg/m³ A4

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

- ***Exposure controls***
  - ***Appropriate engineering controls*** No further data; see section 7.
  - ***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.
      Store protective clothing separately.
      Avoid contact with the skin.
      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:*** Required use of safety glasses
- ***Body protection:*** Protective work clothing

*
9 Physical and chemical properties

- ***Information on basic physical and chemical properties***
  - ***General Information***

Physical state	Solid
Color:	According to product specification
Odor:	Odorless
Odor threshold:	Not determined
Melting point/Melting range:	Undetermined
Boiling point/Boiling range:	≥ 170 °C (≥ 338 °F)
Flammability:	Not determined
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Flash point:	94 °C (201.2 °F)
Decomposition temperature:	Not determined
pH-value:	Not applicable
Viscosity:	
Kinematic:	Not applicable
Dynamic:	Not applicable
Solubility in / Miscibility with	
Water:	Insoluble.
Partition coefficient (n-octanol/water):	Not determined
Vapor pressure:	Not applicable

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- ***Vapor pressure:***	
- ***Density:***	Not determined
- ***Relative density***	Not determined
- ***Vapor density***	Not applicable
- ***Particle characteristics***	Not determined

- ***Other information***	
- ***Appearance:***	
- ***Form:***	Solid material
- ***Important information on protection of health and environment, and on safety.***	
- ***Ignition temperature:***	Product is not selfigniting.
- ***Danger of explosion:***	Product does not present an explosion hazard. Risk of explosion by shock, friction, fire or other sources of ignition.
- ***Solvent content:***	
- ***Water:***	1.2 %
- ***VOC content:***	0.00 %
- ***Solids content:***	53.0 %
- ***Change in condition***	
- ***Evaporation rate***	Not applicable.

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	4,039 mg/kg
Inhalative	LC50/4 h	0.0404 mg/l

CAS: 3006-93-7 1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione		
Oral	LD50	500 mg/kg (ATE)
Inhalative	LC50/4 h	0.005 mg/l (ATE)

  - ***Primary irritant effect:***
    - ***on the skin:*** Irritant to skin and mucous membranes.
    - ***on the eye:*** No 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
  Very toxic
  - ***Interactive effects*** No interactive effects between components are known.

- ***Carcinogenic categories***

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

CAS: 94-36-0	benzoyl peroxyde	3
CAS: 13463-67-7	titanium dioxide	2B
CAS: 9003-01-4	2-propenoic acid, homopolymer	3
CAS: 7631-86-9	Silicon dioxide, Untreated fumed	3
CAS: 79-10-7	acrylic acid	3

- ***NTP (National Toxicology Program)***

None of the ingredients is listed.

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

None of the ingredients is listed.

- ***Alternative sources for toxicological information*** No non-standard sources for toxicological information where used.

12 Ecological information

- ***Toxicity***
  - ***Aquatic toxicity:*** No further relevant information available.
- ***Persistence and degradability*** No further relevant information available.
- ***Bioaccumulative potential*** No further relevant information available.
- ***Mobility in soil*** No further relevant information available.
- ***Results of PBT and vPvB assessment***
  - ***PBT:*** Not applicable
  - ***vPvB:*** Not applicable
- ***Other adverse effects***
  - ***Additional ecological information:***
    - ***General notes:***

Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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*** UN2811
- ***UN proper shipping name***
  - ***DOT*** Toxic solids, organic, n.o.s. (1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione)
  - ***IMDG*** TOXIC SOLID, ORGANIC, N.O.S. (1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione), MARINE POLLUTANT
  - ***IATA*** TOXIC SOLID, ORGANIC, N.O.S. (1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione)
- ***Transport hazard class(es)***
  - ***DOT***

  - ***Class*** 6.1 Toxic substances
  - ***Label*** 6.1
  - ***IMDG***

  - ***Class*** 6.1 Toxic substances
  - ***Label*** 6.1
  - ***IATA***

  - ***Class*** 6.1 Toxic substances
  - ***Label*** 6.1

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- ***Packing group***	
- ***DOT, IMDG, IATA***	I
- ***Environmental hazards:***	Product contains environmentally hazardous substances: benzoyl peroxyde
- ***Marine pollutant:***	No Yes (DOT) Symbol (fish and tree)
- ***Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code***	Not applicable
- ***Transport/Additional information:***	
- ***DOT***	
- ***Quantity limitations***	On passenger aircraft/rail: 5 kg On cargo aircraft only: 50 kg
- ***Remarks:***	Special marking with the symbol (fish and tree).
- ***IMDG***	
- ***Limited quantities (LQ)***	0
- ***Excepted quantities (EQ)***	Code: E5 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 300 g
- ***Special precautions for user***	Warning: Toxic substances
- ***Hazard identification number (Kemler code):***	66
- ***EMS Number:***	F-A,S-A
- ***Stowage Category***	B
- ***UN "Model Regulation":***	UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (1,1'-(1,3-PHENYLENE)BIS-1H-PYRROLE-2,5-DIONE), 6.1, I, ENVIRONMENTALLY HAZARDOUS

* 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):***

CAS: 94-36-0	benzoyl peroxyde
CAS: 79-10-7	acrylic acid

- ***TSCA (Toxic Substances Control Act):***

Polyoxymethylene melamine urea	ACTIVE
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate	ACTIVE
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione	ACTIVE
Kaolin	ACTIVE
Paraffin wax	ACTIVE
Dicalcium phosphate	ACTIVE
2-[[3-hydroxy-2,2-bis[[(1-oxoallyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate	ACTIVE
Acrylic Resin	ACTIVE
Binding agent	ACTIVE
benzoyl peroxyde	ACTIVE
Deionized water	ACTIVE
titanium dioxide	ACTIVE
2-propenoic acid, homopolymer	ACTIVE
2-carboxyethyl acrylate	ACTIVE
n-butyl-4,4-di(tert-butylperoxy)-valerate (not more than 52%, and inert solid not less than 48%)	ACTIVE
Calcium carbonate	ACTIVE
Silicon dioxide, Untreated fumed	ACTIVE
acrylic acid	ACTIVE
Pigment	ACTIVE
Catalyst	ACTIVE

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Silicon dioxide, amorphous	ACTIVE
Colorant	ACTIVE
Alumina Trihydrate	ACTIVE

- ***Hazardous Air Pollutants***

CAS: 79-10-7	acrylic acid

- ***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)***

CAS: 1332-58-7	Kaolin	A4
CAS: 94-36-0	benzoyl peroxyde	A4
CAS: 13463-67-7	titanium dioxide	A4
CAS: 79-10-7	acrylic acid	A4

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

CAS: 13463-67-7	titanium dioxide

- ***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:*** H.B. Fuller Company | ND Industries Health and Environmental Affaires
- ***Contact:*** Safety, Health and Environmental Affaires
- ***Classification System:***
- ***HMIS-ratings (scale 0 - 4)***

Health = 4
Fire = 1
Reactivity = 0

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

Health = 4
Fire = 1
Reactivity = 0

- ***Date of previous version*** 03/20/2026
- ***Version number of previous version:*** 13
- ***Date of preparation*** 07/23/2026
- ***Abbreviations and acronyms:***

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
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
Organic peroxides - Type B: Organic peroxides – Type B
Acute toxicity - oral 4: Acute toxicity – Category 4
Acute toxicity - inhalation 1: Acute toxicity – Category 1
Skin irritation 2: Skin corrosion/irritation – Category 2
Eye irritation 2A: Serious eye damage/eye irritation – Category 2A

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Sensitization - skin 1: Skin sensitisation – Category 1
Sensitization - skin 1A: Skin sensitisation – Category 1A
Sensitization - skin 1B: Skin sensitisation – Category 1B

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

- ***Disclaimer***

IMPORTANT: Information, specifications, procedures and recommendations provided (“information”) are based on our experience and we believe this to be accurate. No representation, guarantee or warranty is made as to the accuracy or completeness of the information, or that use of the product will avoid losses or damages or give desired results. It is user’s sole responsibility to test and determine the suitability of any product for the intended use. Tests should be repeated if materials or conditions change in any way. The user is advised to review the specific context of the intended use to determine whether the user’s intended use violates any law or infringes upon any patent(s). No employee, distributor or agent has any right to change these facts and offer a guarantee of performance.