Safety Data Sheet
acc. to OSHA HCS

Date of issue: 12/04/2025 *Reviewed on 12/04/2025*

* 1 Identification

- ***Product identifier***
  - ***Trade name:*** Thermoloc™
    - ***Synonyms:*** TL450 - Applied
- ***Other means of identification***
  - ***Part number:*** TL450 - 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***


GHS07

Skin irritation 2	H315 Causes skin 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***


GHS07

    - ***Signal word*** Warning
    - ***Hazard-determining components of labeling:***
      1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione
      Diacrylate
      benzoyl peroxyde
      Miramer M500
    - ***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 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).
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- ***Other hazards***
  - ***Results of PBT and vPvB assessment***
    - ***PBT:*** Not applicable.

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- ***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: 42594-17-2	Diacrylate Sensitization - skin 1, H317	10 – 30%
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	10 – 30%
	Melamine Acrylate Skin irritation 2, H315; Eye irritation 2A, H319	3 – 7%
CAS: 1332-58-7	Kaolin	3 – 7%
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	0.5 – 1.5%
	Miramer M500 Eye irritation 2A, H319; Sensitization - skin 1, H317	0.1 – 1%
CAS: 613-48-9	N,N-Diethyl-P-Toluidine Acute toxicity - oral 3, H301; Acute toxicity - dermal 3, H311; Acute toxicity - inhalation 3, H331; Specific target organ toxicity (repeated exposure) 2, H373; Eye irritation 2A, H319; Flammable liquids 4, H227	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.
- ***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***
Ensure adequate ventilation
Wear protective clothing.
- ***Environmental precautions:*** Do not allow to enter sewers/ surface or ground water.

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- ***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 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.
- ***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
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

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- ***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:***	Dark blue
- ***Odor:***	Characteristic
- ***Odor threshold:***	Not determined.
- ***Melting point/Melting range:***	Undetermined.
- ***Boiling point/Boiling range:***	Undetermined.
- ***Flammability:***	Not determined.
- ***Explosion limits:***	
- ***Lower:***	≥ 1.2 Vol %
- ***Upper:***	≤ 7 Vol %
- ***Flash point:***	≥ 4 °C (≥ 39.2 °F)
- ***Auto igniting:***	425 °C (797 °F)
- ***Decomposition temperature:***	Not determined.
- ***pH-value:***	Not applicable.
- ***Viscosity:***	
- ***Kinematic:***	Not applicable.
- ***Dynamic:***	Not applicable.
- ***Solubility in / Miscibility with***	
- ***Water:***	Soluble.
- ***Partition coefficient (n-octanol/water):***	Not determined.
- ***Vapor pressure at 20 °C (68 °F):***	n.a. hPa
- ***Vapor pressure:***	
- ***Density:***	Not determined.
- ***Relative density***	Not determined.
- ***Vapor density***	Not applicable.
- ***Particle characteristics***	Not determined.
- ***Other information***	
- ***Appearance:***	
- ***Form:***	Solid
- ***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.
- ***Solvent content:***	
- ***Water:***	1.2 %
- ***VOC content:***	0.00 %
- ***Solids content:***	51.0 %
- ***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

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Hydrocarbons

* 11 Toxicological information

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

- *LD/LC50 values that are relevant for classification:*		
ATE (Acute Toxicity Estimate)		
Oral	LD50	3,404 mg/kg
Dermal	LD50	166,667 mg/kg
Inhalative	LC50/4 h	0.0363 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)
CAS: 613-48-9 N,N-Diethyl-P-Toluidine		
Oral	LD50	100 mg/kg (ATE)
Dermal	LD50	300 mg/kg (ATE)
Inhalative	LC50/4 h	3 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: 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.

- *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.

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- ***Recommended cleansing agent:*** Water, if necessary with cleansing agents.

* 14 Transport information

- ***UN-Number***
  - ***DOT, IMDG, IATA*** UN3077
- ***UN proper shipping name***
  - ***DOT*** Environmentally hazardous substance, solid, n.o.s. (Tricyclodecane dimethanol Diacrylate, benzoyl peroxyde)
  - ***IMDG*** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tricyclodecane dimethanol Diacrylate, benzoyl peroxyde), MARINE POLLUTANT
  - ***IATA*** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tricyclodecane dimethanol Diacrylate, benzoyl peroxyde)
- ***Transport hazard class(es)***
  - ***DOT, IMDG, IATA***

  - ***Class*** 9 Miscellaneous dangerous substances and articles
  - ***Label*** 9
- ***Packing group***
  - ***DOT, IMDG, IATA*** III
- ***Environmental hazards:*** Product contains environmentally hazardous substances: benzoyl peroxyde
  - ***Marine pollutant:*** Yes (DOT)
    Symbol (fish and tree)
  - ***Special marking (IATA):*** 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: No limit
      On cargo aircraft only: No limit
    - ***Remarks:*** Special marking with the symbol (fish and tree).
  - ***IMDG***
    - ***Limited quantities (LQ)*** 5 kg
    - ***Excepted quantities (EQ)*** Code: E1
      Maximum net quantity per inner packaging: 30 g
      Maximum net quantity per outer packaging: 1000 g
- ***Special precautions for user*** Warning: Miscellaneous dangerous substances and articles
  - ***Hazard identification number (Kemler code):*** 90
  - ***EMS Number:*** F-A,S-F
  - ***Stowage Category*** A
  - ***Stowage Code*** SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
- ***UN "Model Regulation":*** UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICYCLODECANE DIMETHANOL DIACRYLATE, BENZOYL PEROXYDE), 9, III

* 15 Regulatory information

- ***Safety, health and environmental regulations/legislation specific for the substance or mixture***
  No further relevant information available.
  - ***Sara***
    - ***Section 355 (extremely hazardous substances):***

None of the ingredients is listed.

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- ***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
Diacrylate	ACTIVE
1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione	ACTIVE
Kaolin	ACTIVE
Dicalcium phosphate	ACTIVE
Acrylic Resin	ACTIVE
Binding agent	ACTIVE
benzoyl peroxyde	ACTIVE
Deionized water	ACTIVE
Graphite	ACTIVE
2-propenoic acid, homopolymer	ACTIVE
2-carboxyethyl acrylate	ACTIVE
N,N-Diethyl-P-Toluidine	ACTIVE
n-butyl-4,4-di(tert-butylperoxy)-valerate (not more than 52%, and inert solid not less than 48%)	ACTIVE
calcium carbonate	ACTIVE
Blue Pigment	ACTIVE
Silicon dioxide, Untreated fumed	ACTIVE
acrylic acid	ACTIVE
Catalyst	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: 79-10-7	acrylic acid	A4

- ***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
- ***Classification System:***
- ***HMIS-ratings (scale 0 - 4)***

Health = 4
Fire = 2
Reactivity = 0

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

Health = 4
Fire = 2
Reactivity = 0

- ***Date of previous version*** 06/09/2020
- ***Version number of previous version:*** 1
- ***Date of preparation*** 12/04/2025
- ***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
Flammable liquids 4: Flammable liquids – Category 4
Organic peroxides - Type B: Organic peroxides – Type B
Acute toxicity - oral 3: Acute toxicity – Category 3
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
Sensitization - skin 1: Skin sensitisation – Category 1
Sensitization - skin 1A: Skin sensitisation – Category 1A
Specific target organ toxicity (repeated exposure) 2: Specific target organ toxicity (repeated exposure) – Category 2

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

- ***Disclaimer***

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