



Safety Data Sheet

Defender NM

Compiled according to GB/T 16483, GB/T 17519
Issue date: 6/17/2024 Revision date: 4/23/2025 Version: 11.0

SECTION 1 Chemical product and company identification

Chemical Chinese name	:	
Chemical English name	:	Defender NM
Product code	:	41-0290
Name of company	:	Engineered Custom Coatings, LLC
Address	:	U.S.A. Pewaukee, WI 1002 Hickory Street
Zip code	:	53072
Fax	:	(262) 691-3892
Tel.	:	(262) 691-1930
Emergency number	:	24 Hour Emergency Assistance: InfoTrac 1-800-535-5053 (US & Canada) 1-352-323-3500 (International)
Recommended use of the chemical	:	No additional information available
Restricted use of the chemical	:	No additional information available

SECTION 2 Hazards identification

Emergency overview




Highly flammable liquid and vapour.

GHS hazard classification

Physical hazards	:	Flammable liquids, Category 2
Health hazards	:	Skin corrosion/irritation, Category 2
	:	Serious eye damage/eye irritation, Category 2
	:	Germ cell mutagenicity, Category 1B
	:	Carcinogenicity, Category 1B
	:	Specific target organ toxicity - Single exposure, Category 3, Narcosis
	:	Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
	:	Aspiration hazard, Category 1

Other hazards not mentioned above are Not applicable or No data is available.

Label elements

Hazard pictograms (GHS CN)	:	  
Signal word (GHS CN)	:	Danger.
Hazard statements (GHS CN)	:	H225 - Highly flammable liquid and vapour H304 - May be fatal if swallowed and enters airways H315 - Causes skin irritation H319 - Causes serious eye irritation

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H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H340 - May cause genetic defects

H350 - May cause cancer.

Precautionary statements (GHS CN)

Prevention measures

- : P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Incident response

- : P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- 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.
- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P312 - Call a POISON CENTER or doctor if you feel unwell.
- P321 - Specific treatment (see supplemental first aid instruction on this label).
- P331 - Do NOT induce vomiting.
- P332+P313 - If skin irritation occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P370+P378 - In case of fire: Use media other than water to extinguish.

Safe storage

- : P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 - Store in a well-ventilated place. Keep cool.
- P405 - Store locked up.

Disposal

- : P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Physical and chemical hazards

Highly flammable liquid and vapour

Health hazards

May be fatal if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

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May cause respiratory irritation

May cause drowsiness or dizziness

May cause genetic defects

May cause cancer

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after eye contact : Eye irritation

Symptoms/effects after ingestion : Risk of lung oedema

Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation, May cause drowsiness or dizziness, May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation, Irritation

Environmental hazards

No additional information available

Other hazards

No additional information available

SECTION 3 Composition/information on ingredients

Product form : Mixture.

Ingredient(s)	Concentration or concentration ranges (w/w %)	CAS No.
Silicone resin	1 - 20	Trade secret
Solvent solution	80 - 99	Trade secret

SECTION 4 First-aid measures

Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person.
If you feel unwell, seek medical advice (show the label where possible).
Call a physician immediately

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
Call a poison center or a doctor if you feel unwell

First-aid measures after skin contact : Rinse skin with water/shower.
Take off immediately all contaminated clothing.
Wash with plenty of water/....
Wash contaminated clothing before reuse.
If skin irritation occurs:
Get medical advice/attention.
Specific treatment first aid instruction on this label.

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- First-aid measures after eye contact : If skin irritation occurs: Get medical advice/attention.
: Rinse immediately with plenty of water.
Obtain medical attention if pain, blinking or redness persists.
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth.
Do NOT induce vomiting.
Immediately call a POISON CENTER/doctor.
Do not induce vomiting.
Call a physician immediately

Most important symptoms/effects

- Symptoms/effects : May cause drowsiness or dizziness.
- Symptoms/effects after eye contact : Eye irritation
- Symptoms/effects after ingestion : Risk of lung oedema
- Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation
May cause drowsiness or dizziness.
May cause respiratory irritation.
- Symptoms/effects after skin contact : Causes skin irritation.
Irritation

Advices for first aid responders

No additional information available

Notes for the doctor

- Other medical advice or treatment : Treat symptomatically

SECTION 5 Fire-fighting measures

Extinguishing media

- Suitable extinguishing media : Water spray
Dry powder
Foam
Carbon dioxide
Sand
- Unsuitable extinguishing media : Water
Do not use a heavy water stream

Specific hazards

- Fire hazard : Highly flammable liquid and vapour.
- Hazardous decomposition products in case of fire : Toxic fumes may be released
- Explosion hazard : May form flammable/explosive vapour-air mixture

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Advice for firefighters and protective measures

- Firefighting instructions : Use water spray or fog for cooling exposed containers
Exercise caution when fighting any chemical fire
Prevent fire fighting water from entering the environment
Do not enter fire area without proper protective equipment, including respiratory protection
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection
Do not attempt to take action without suitable protective equipment
Self-contained breathing apparatus
Complete protective clothing

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources
Use special care to avoid static electric charges
No open flames. No smoking
Stop leak if safe to do so.
Notify authorities if product enters sewers or public waters
Absorb spillage to prevent material damage.
- Personal Precautions, Protective Equipment and Emergency Procedures : No additional information available

For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment
- Emergency procedures : Evacuate unnecessary personnel
No open flames, no sparks, and no smoking
Only qualified personnel equipped with suitable protective equipment may intervene
Avoid breathing dust/fume/gas/mist/vapours/spray

For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment
Equip cleanup crew with proper protection
Avoid breathing dust/fume/gas/mist/vapours/spray
For further information refer to section 8: "Exposure controls/personal protection"
- Emergency procedures : Ventilate area
Evacuate unnecessary personnel
Stop leak if safe to do so.

Environmental precautions

- Avoid release to the environment
Prevent entry to sewers and public waters
Notify authorities if liquid enters sewers or public waters

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Notify authorities if product enters sewers or public waters

Methods and material for containment and cleaning up

- Methods for cleaning : No additional information available
- For containment : Absorb spilled material with sand or earth
Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams
Stop leak without risks if possible

Prevention measures for secondary accidents

- Prevention Measures for Secondary Accidents : No additional information available
- Other information : Dispose of materials or solid residues at an authorized site

SECTION 7 Handling and storage

Handling

- Precautions for safe handling : Eliminate all ignition sources if safe to do so.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Avoid breathing dust/fume/gas/mist/vapours/spray
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work
Provide good ventilation in process area to prevent formation of vapour
No open flames. No smoking
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground/bond container and receiving equipment.
Take precautionary measures against static discharge.
Flammable vapours may accumulate in the container
Use explosion-proof equipment
Wear personal protective equipment
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Take all necessary technical measures to avoid or minimize the release of the product on the workplace
Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers
Provide local exhaust or general room ventilation
Floors, walls and other surfaces in the hazard area must be cleaned regularly
Avoid contact with skin and eyes
- Hygiene measures : Wash thoroughly after handling
Separate working clothes from town clothes. Launder separately
Wash contaminated clothing before reuse.
Do not eat, drink or smoke when using this product.
Always wash hands after handling the product
- Local and general ventilation : No additional information available
- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable

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Storage

Storage conditions	: Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from : Keep in fireproof place Store in a well-ventilated place. Keep cool. Store locked up.
Technical measures	: Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed Use explosion-proof electrical, ventilating, and lighting equipment
Material used in packaging/containers	: No additional information available
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Packaging materials	: Store always product in container of same material as original container

SECTION 8 Exposure controls / Personal protection equipment

Occupational exposure limits

No additional information available

Biological limit values

No additional information available

Monitoring methods

No additional information available

Appropriate engineering controls

Ensure good ventilation of the work station

Personal protective equipment

Personal protective equipment	: Avoid all unnecessary exposure
Environmental exposure controls	: Avoid release to the environment.
Other information	: Do not eat, drink or smoke during use
Hand protection	: Wear protective gloves/protective clothing/eye protection/face protection protective gloves
Eye protection	: Chemical goggles or safety glasses Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s)



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SECTION 9 Physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Colour	: Colourless
Odour	: characteristic
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 98 °C
Flash point	: 50 °F
Auto-ignition temperature	: No data available, not typically tested
Decomposition temperature	: No data available, not typically tested.
Flammability	: Highly flammable liquid and vapour.
Vapour pressure	: No data available, not typically tested
Vapour pressure at 50°C	: No data available, not typically tested
Relative vapour density at 20°C	: No data available
Density	: 7.5 lb/gal
Solubility	: No data available, not typically tested.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: < 20 mm ² /s
Lower explosion limit	: No data available, not typically tested
Upper explosion limit	: No data available, not typically tested
Radioactive	: No
Particle size	: Not tested, not a powder
Particle size distribution	: Not tested, not a powder
Particle specific surface area	: Not tested, not a powder

SECTION 10 Stability and reactivity

Chemical stability	: Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture
Reactivity	: Highly flammable liquid and vapour.
Possibility of hazardous reactions	: Not established
Conditions to avoid	: Direct sunlight. Extremely high or low temperatures. Open flame. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition
Incompatible materials	: Strong acids Strong bases

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Hazardous decomposition products : fume
Carbon monoxide
Carbon dioxide
May release flammable gases

Other properties : No additional information available

SECTION 11 Toxicological information

Acute toxicity

Acute toxicity (oral) : No data available
Acute toxicity (dermal) : No data available
Acute toxicity (inhalation) : No data available

Skin corrosion/irritation

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/eye irritation

Serious eye damage/eye irritation : Causes serious eye irritation.

Respiratory or skin sensitisation

Respiratory or skin sensitisation : No data available

Germ cell mutagenicity

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity

Carcinogenicity : May cause cancer.

Reproductive toxicity

Reproductive toxicity : No data available

STOT - single exposure

STOT - single exposure : May cause drowsiness or dizziness. May cause respiratory irritation.

STOT - repeated exposure

STOT - repeated exposure : No data available

Aspiration hazard

Aspiration hazard : May be fatal if swallowed and enters airways.

Defender NM	
Viscosity, kinematic	< 20 mm ² /s
Density	7.5 lb/gal

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SECTION 12 Ecological information

Ecotoxicity

- Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
- Ecology - water : Toxic to aquatic life with long lasting effects.
- Hazardous to the aquatic environment, short-term (acute) : No data available
- Hazardous to the aquatic environment, long-term (chronic) : No data available
- No additional information available

Persistence and degradability

Defender NM	
Persistence and degradability	May cause long-term adverse effects in the environment. Not established.
Silicone resin (Trade secret)	
Persistence and degradability	Rapidly degradable
Solvent solution (Trade secret)	
Persistence and degradability	Rapidly degradable

Bioaccumulative potential

Defender NM	
Bioaccumulative potential	Not established

Mobility in soil

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Bioaccumulative potential	Not established

Other adverse effects

- Classification procedure (Ozone) : No data available
- Other information : Avoid release to the environment.

SECTION 13 Disposal considerations

- Waste treatment methods** : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Contaminated container and packaging** : No additional information available
- Additional information** : Handle empty containers with care because residual vapours are flammable, Flammable vapours may accumulate in the container, Do not re-use empty containers.

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Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations Dispose of contents/container to in accordance with local/regional/national/international regulations Disposal must be done according to official regulations
Ecological waste information	: Avoid release to the environment. Hazardous waste due to toxicity
Sewage disposal recommendations	: Disposal must be done according to official regulations
Regional waste regulation	: Disposal must be done according to official regulations

SECTION 14 Transport information

In accordance with JT/T 617 / IMDG / IATA

UN number

UN-No. (JT/T 617)	: 1263
UN-No. (IMDG)	: 1263
UN-No. (IATA)	: 1263

Proper shipping name

Proper Shipping Name (JT/T 617)	: PAINT
Proper Shipping Name (IMDG)	: PAINT
Proper Shipping Name (IATA)	: Paint

Transport hazard class(es)

Overland transport (JT/T 617)

Transport hazard class(es) (JT/T 617)	: 3
Labels (JT/T 617)	: 3.



Class (JT/T 617)	: 3.
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Transport by sea

Transport hazard class(es) (IMDG)	: 3
Danger labels (IMDG)	: 3.



Class (IMDG)	: 3.
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Air transport

Transport hazard class(es) (IATA)	: 3
Danger labels (IATA)	: 3.

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Class (IATA) : 3.

Packing group

Packing Group (JT/T 617) : II - Applicable for packaging consisting of substances presenting medium danger.

Packing group (IMDG) : II - substances presenting medium danger

Packing group (IATA) : II - Medium danger

Marine pollutant

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available.

Special transport precautions

Overland transport (JT/T 617)

Classification code (JT/T 617) : F1.

Special provisions (JT/T 617) : 163, 367, 650.

Limited quantities (JT/T 617) : 5L.

Excepted quantities (JT/T 617) : E2.

Packing instructions (JT/T 617) : P001.

Special packing provisions (JT/T 617) : PP1.

Mixed packing provisions (JT/T 617) : MP19.

Portable tank and bulk container instructions (JT/T 617) : T4.

Portable tank and bulk container special provisions (JT/T 617) : TP1, TP8, TP28.

Tank codes (JT/T 617) : L1.5BN.

Vehicle for tank carriage (JT/T 617) : FL.

Transport category (JT/T 617) : 2.

Tunnel restriction code (JT/T 617) : D/E.

Special provisions for carriage - Operation (JT/T 617) : S2, S20.

Hazard identification number (JT/T 617) : 33.

Orange-coloured plate (JT/T 617) :

Transport by sea

Special provisions (IMDG) : 163, 367.

Limited quantities (IMDG) : 5 L.

Excepted quantities (IMDG) : E2.

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Packing instructions (IMDG)	: P001.
Special packing provisions (IMDG)	: PP1.
IBC packing instructions (IMDG)	: IBC02.
Tank instructions (IMDG)	: T4.
Tank special provisions (IMDG)	: TP1, TP8, TP28.
EmS-No. (Fire)	: F-E.
EmS-No. (Spillage)	: S-E.
Stowage category (IMDG)	: B.
Properties and observations (IMDG)	: Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA)	: E2.
PCA Limited quantities (IATA)	: Y341.
PCA limited quantity max net quantity (IATA)	: 1L.
PCA packing instructions (IATA)	: 353.
PCA max net quantity (IATA)	: 5L.
CAO packing instructions (IATA)	: 364.
CAO max net quantity (IATA)	: 60L.
Special provisions (IATA)	: A3, A72, A192.
ERG code (IATA)	: 3L.

SECTION 15 Regulatory information

Dangerous Goods List (GB 12268-2012)	: GB12268-2012.
Regulation on the Safety Management of Hazardous Chemicals	: Catalogue of Hazardous Chemicals (2015).
Rules for dangerous goods transport by railway	: List of dangerous goods by railway (2009).

SECTION 16 Other information

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Other information	: None

Safety Data Sheet (SDS), China

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