

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

COMPANY NAME:	AMERICAN INDUSTRIES, INC.	PRODUCT NAME:	MANDRON
ADDRESS LINE 1:	4300 Kahn Drive, Box 1405	PRODUCT CODE:	2268
ADDRESS LINE 2:	Lumberton, NC 28359-1405 USA	PRODUCT USE:	All-Natural Citrus Solvent
TELEPHONE NUMBERS:	800-753-5153 (or) 910-738-7224	SDS FILE ID:	2268.11
EMERGENCY PHONE:	CHEMTREC 1-800-424-9300	SDS DATE:	2025-08-28

Replaces Version dated: 2023-09-28 and all prior versions

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification:

Health	Skin Corrosion/Irritation	Category 2
	Serious Eye Damage/Eye Irritation	Category 2A
	Skin Sensitivity	Category 1
	Aspiration hazard	Category 1
	Flammable Liquids	Category 3
	Hazardous to the aquatic environment – Chronic Hazard	Category 1

Label elements



Signal word

Danger

Hazard statements:

H226 - Flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
P264 - Wash skin thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 - Do NOT induce vomiting. P332+P313 - If skin irritation occurs: Get medical advice or attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Take off immediately all contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use carbon dioxide (CO₂), D-powder, foam to extinguish.
P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

P501 - Dispose of an approved waste disposal plant to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

Hazards associated with know or reasonably anticipated uses

No additional information available.

Hazards not otherwise classified

No additional information available.

Unknown acute toxicity

No additional information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>CAS number</u>	<u>%</u>	<u>GHS US Classification</u>
D-limonene	5989-27-5	90 - 100	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
4-Nonylphenol branched, ethoxylated	127087-87-0	1-10	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

SECTION 4: FIRST AID MEASURES

General	Call a physician immediately.
Inhalation	Remove person to fresh air and keep comfortable for breathing.
Skin contact	Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	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.
Ingestion	Do not induce vomiting. Call a physician immediately.
Symptoms/effects after inhalation	None under normal conditions.
Symptoms/effects after skin contact	Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	Eye irritation
Symptoms/effects after ingestion	Risk of lung edema.
Other medical advice or treatment	Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, dry powder, foam, carbon dioxide.
Unsuitable extinguishing media	Do not use a heavy water stream.
Specific hazards arising from the chemical	
Fire hazard	Flammable liquid and vapor.
Explosion hazard	No direct explosion hazard.
Hazardous decomposition products in case of fire	Toxic fumes may be released.
Firefighting instructions	Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

General measures	Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
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For non-emergency personnel	
Protective equipment	Wear recommended personal protective equipment.
Emergency procedures	Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.
For emergency responders	
Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions	Avoid release to the environment.
Methods and materials for containment and cleaning up	
For containment	Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	Dispose of materials or solid residues at an authorized site.
For further information refer to Section 13	

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures	Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling.
Additional hazards when processed	Not expected to present a significant hazard under anticipated conditions of normal use.
Conditions for safe storage, including incompatibilities	
Technical measures	Ground/bond container and receiving equipment.
Storage conditions	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Packaging materials	Store always product in container of same material as original container.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters	No additional information available.
Engineering controls	No relevant information available.
Environmental exposure controls	Avoid release to the environment.
Personal Protective Equipment	Wear recommended personal protective equipment
Hand	Protective gloves. Chemical resistance.
Eyes	Safety glasses. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and Body	Wear suitable protective clothing.
Respiratory	In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color	Colorless to light yellow colorless
Form	Liquid

Odor	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Citrus Odor
Odor threshold	No data available
Flash point	>113°F (45°C)
Flammability (solid, gaseous)	Not applicable
Decomposition temperature	No data available
Boiling point	314 °F 157 °C)
Melting point	Not applicable
Freezing point	No data available
Auto-ignition temperature	473 °F (245 °C)
Explosion limits	No data available
Vapor pressure	No data available
Relative vapor density at 68°F (20°C)	No data available
Relative density	No data available
Density	0.862
Solubility	Water: Solubility in water of component(s) of the mixture : d-Limonene: < 0.01 g/100ml (20 °C, Test data, OECD 105: Water Solubility) 4-Nonylphenol branched, ethoxylated: soluble, Literature
Partition coefficient n-octanol/water (Log Pow)	No data available
pH	No data available
Viscosity, kinematic	No data available
Particle characteristics	
d-Limonene	No data available
Surfactant N-40	No data available
Data relevant with regard to physical hazard classes (supplemental)	No additional information available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Flammable liquid and vapor.
Chemical stability	Stable under normal conditions.
Conditions to avoid	Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
Possibility of hazardous reactions	No dangerous reactions known under normal conditions of use.
Incompatible materials	No additional information available.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity (oral)	Not classified	
Acute toxicity (dermal)	Not classified	
Acute toxicity (inhalation)	Not classified	
d-Limonene (5989-27-5)	LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
	LD50 dermal rabbit	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Read-across, Dermal, 7 day(s))
4-Nonylphenol branched, ethoxylated (127087-87-0)	LD50 oral rat	1890 mg/kg body weight (Rat, Male / female, Experimental value, Oral)
	LD50 oral	657 mg/kg body weight (Rabbit, Male / female, Experimental value, Oral)
	ATE US oral	657 mg/kg body weight

Skin corrosion/irritation	Causes skin irritation.	
d-Limonene (5989-27-5)	pH	4 (5%)
4-Nonylphenol branched, ethoxylated (127087-87-0)	pH	6.3 (1%)
Serious eye damage/irritation	Causes serious eye irritation.	
d-Limonene (5989-27-5)	pH	4 (5%)
4-Nonylphenol branched, ethoxylated (127087-87-0)	pH	6.3 (1%)
Respiratory or skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	Not classified	
Carcinogenicity	Not classified	
Reproductive toxicity	Not classified	
Specific target organ toxicity (single exposure)	Not classified	
Specific target organ toxicity (repeated exposure)	Not classified	
Aspiration hazard	May be fatal if swallowed and enters airways.	
d-Limonene (5989-27-5)	Viscosity, kinematic	No data available
4-Nonylphenol branched, ethoxylated (127087-87-0)	Viscosity, kinematic	No data available
Symptoms/injuries after inhalation	None under normal conditions.	
Symptoms/injuries after skin contact	Irritation. May cause an allergic skin reaction.	
Symptoms/injuries after eye contact	Eye irritation.	
Symptoms/injuries after ingestion	Risk of lung edema.	

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Ecology – general	Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Very toxic to aquatic life with long lasting effects.

d-Limonene (5989-27-5)

LC50 Fish 1	720 µg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Measured concentration)
EC50 Crustacea 1	0.31 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Measured concentration)
ErC50 Algae	0.32 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Measured concentration)

4-Nonylphenol branched, ethoxylated (127087-87-0)

LC50 Fish 1	11.6 mg/l (48 h, Oryzias latipes, Static system, Fresh water, Experimental value)
EC50 Crustacea 1	14 mg/l (48 h, Daphnia magna, Static renewal, Fresh water, Experimental value)
EC50 96h Algae 1	12 mg/l (Selenastrum capricornutum, Static system, Fresh water, Experimental value, Nominal concentration)

Persistence and degradability	Rapidly degradable
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d-Limonene (5989-27-5)

Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

4-Nonylphenol branched, ethoxylated (127087-87-0)	
Persistence and degradability	Not readily biodegradable ³
Bioaccumulative potential	
d-Limonene (5989-27-5)	
BCF Fish 1	865 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.4 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation ($4 \leq \text{Log Kow} \leq 5$).
4-Nonylphenol branched, ethoxylated (127087-87-0)	
BCF Fish 1	7.6 – 12.4 l/kg (6 week(s), Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	5.67 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Low potential for bioaccumulation (molecular mass ≥ 700 g/mol).
Mobility in soil	
d-Limonene (5989-27-5)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc) Ecology – soil	3 – 3.8 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
4-Nonylphenol branched, ethoxylated (127087-87-0)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc) Ecology – soil	2.631 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Other adverse effects	Fluorinated greenhouse gases No

SECTION 13: DISPOSAL CONSIDERATIONS

Regional waste regulation	Disposal must be done according to official regulations.
Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Disposal must be done according to official regulations.
Additional information	Flammable vapors may accumulate in the container. Do not re-use empty containers.

SECTION 14: TRANSPORT INFORMATION

DOT

UN number	NA1993
UN proper shipping name	Combustible liquid, n.o.s. (D-limonene, Nonylphenol, Ethoxylated)
Transport hazard class(es)	3



Packing group	III
Other information	No supplementary information available.

Special precautions for user

UN-No. (DOT)	NA1993
DOT Special Provisions (49 CFR 172.102)	IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	150
DOT Packaging Non Bulk (49 CFR 173.xxx)	203
DOT Packaging Bulk (49 CFR 173.xxx)	241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	220 L
DOT Vessel Stowage Location	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Skin corrosion or Irritation Health hazard - Respiratory or skin sensitization Health hazard - Aspiration hazard
TSCA Inventory Listing	All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

California Prop 65 product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component State or local regulations

4-Nonylphenol branched, ethoxylated (127087-87-0) U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List

International Regulations

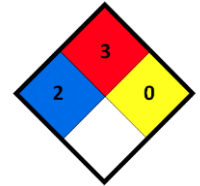
Canada	No additional information available
EU-Regulations	No additional information available
National Regulations	No additional information available

SECTION 16: OTHER INFORMATION

Full text of hazard classes and H-statements

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
NFPA health hazard	2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
NFPA reactivity	0 - Material that in themselves are normally stable, even under fire conditions.



Important Note: *To be the best of our knowledge, the information contained herein is accurate. However there is no assumption of liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Since the conditions of handling, storage and disposal of this product are beyond the control of the manufacturer/supplier, the manufacturer/supplier will not be responsible for loss, injury, or expense arising out of the products improper use. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.*

End of SDS