



Material Safety Data Sheet (MSDS-NON)

PRODUCT IDENTIFICATION	
Product Name	NONA
Trade Names and Synonyms	2,2',2''-4,4',4''-6,6',6''- Nonanitroterphenyl (C ₁₈ H ₅ N ₉ O ₁₈)
Manufacturer/Distributor	Organic Technology, Inc.; Molecular Dynamics, Various
Transportation Emergency	800-255-3924 (24 hrs -- CHEM • TEL)

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES

The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING

All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, **DO NOT USE IT** before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

HAZARDOUS COMPONENTS			
Material or Component	CAS No.	TLV	PEL
Nonanitroterphenyl	N/A	NE	NE
Water	N/A	NE	NE
Methanol	0067-56-1	325 mg/m ³ (STEL)	260 mg/m ³
N/A = Not assigned NE = Not established			

PHYSICAL DATA	
Boiling Point	N/A
Vapor Pressure	N/A
Vapor Density	>1
Solubility in Water	Negligible
Specific Gravity	>1
Melting Point	396°C (745°F)
Evaporation Rate	N/A
Appearance and Odor	Light yellow to tan colored powder. No distinct odor.

HAZARDOUS REACTIVITY	
Instability	Detonates with friction, impact, heat, electrostatic energy. Will detonate when subjected to sufficiently high energy levels.
Incompatibility	Incompatible with strong oxidizers, strong bases, and reducing agents. Avoid contamination with glass, sand, or metal fragments.
Hazardous decomposition	Detonation produces hazardous overpressures and fragments (if confined). Gases produced may contain carbon dioxide, carbon monoxide and nitrogen oxides.
Polymerization	Polymerization will not occur

FIRE AND EXPLOSION DATA	
Flashpoint	Unknown
Extinguishing media	None
Special fire fighting procedures	ALL EXPLOSIVES: DO NOT FIGHT EXPLOSIVES FIRES. Try to keep fire from reaching explosives. Isolate area. Guard against intruders. Division 1.1 Explosives: Evacuate the area for 5000 feet (1 mile). Consult <i>the 2000 Emergency Response Guidebook, Guide 112</i> for further details.
Unusual fire and explosion hazards	May detonate with impact or on heating

HEALTH HAZARDS	
General	<p>NONA is a Division 1.1 explosive, and detonation may cause severe physical injury, including death. All explosives are dangerous and must be handled carefully and used following approved safety procedures under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, and ordinances.</p> <p>Inhalation of explosive powders may cause nervous system irregularities including headaches and dizziness.</p>
Effects of Overexposure	<p>Acute overexposure — no adverse effect except in allergic workers</p> <p>Chronic overexposure — May cause irritation to skin and eyes</p>
Inhalation	May cause irritation of breathing tract, especially in sensitive persons
Skin Contact	May cause local reddening of skin with possible irritation
Skin Absorption	It is unknown if NONA can be absorbed through the skin; therefore, effects of skin absorption (if possible) are unknown.
Eye Contact	May cause irritation
Ingestion	Small quantities may cause stomach upset and/or difficulties in digestion. Ingestion of large amounts can cause death.
Toxicity	Unknown
Carcinogenicity	None of the components of NONA are listed as a carcinogen by NTP, IARC, or OSHA.

FIRST AID	
Inhalation	Not a likely route of exposure. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably by mouth-to-mouth. If breathing is difficult, give oxygen. Seek prompt medical attention.
Eye and skin contact	Not a likely route of exposure. Flush eyes with water for at least 15 minutes. Wash skin with soap and water.
Ingestion	Not a likely route of exposure. Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Do not give anything by mouth to an unconscious person. Seek prompt medical attention.
Injury from detonation	Seek prompt medical attention.

SPILL OR LEAK PROCEDURES	
Spill/leak response	Use appropriate personal protective equipment. Isolate area and remove sources of friction, impact, heat, low level electrical current, electrostatic or RF energy. Only competent, experienced persons should be involved in cleanup procedures. Sweep up with non-sparking tools and remove. All waste containers should be grounded.
Waste disposal	Dispose of in compliance with federal regulations under the authority of the <i>Resource Conservation and Recovery Act</i> (40 CFR Parts 260-271).

SPECIAL PROTECTION INFORMATION	
Ventilation	Use only with adequate ventilation. Fume or dust hoods should be used if heavy dust is being generated. Large amounts of powder may require collection chambers. All electrical equipment must meet NEC Class I, Division I specifications.
Respiratory	NIOSH approved particle masks for dust and mist.
Eye	Safety glasses or goggles.
Gloves	Impervious rubber gloves.
Other	Cotton overalls, undergarments and socks. Conductive soled shoes.

SPECIAL PRECAUTIONS

- ◆ Keep away from friction, impact, and heat. Do not consume food, drink, or tobacco in areas where they may become contaminated with these materials.
- ◆ NONA is a high temperature stable explosive and care should be taken to prevent mechanical shock or friction. Keep all flame and spark producing tools away. Keep containers closed when not in use. During use, all containers should be grounded.
- ◆ Toxicity of NONA is unknown, but many handlers of explosives suffer from skin rashes and irritations when not protected.
- ◆ Proper ventilation should be provided.
- ◆ Daily showers and changes of clothing should be required of all workers handling large amounts of NONA.
- ◆ All electrically energized equipment must meet the requirements of NEC Class I, Division I or be approved intrinsically safe.
- ◆ Housekeeping must be a high priority. Dust should not be allowed to accumulate on walls, ledges, and/or fixtures. Clean up all spills immediately. Keep NONA out of cracks and crevices.
- ◆ DO NOT store NONA with detonators or initiating explosives.
- ◆ DO NOT store NONA with oxidizers or flammable liquids.
- ◆ NONA (in any quantity) should be stored only in an approved magazine in accordance with the requirements of the Bureau of Alcohol, Tobacco, and Firearms and appropriate local legal entities.

STORAGE CONDITIONS

Store in accordance with the requirements of *Subpart K, ATF: Explosives Law and Regulations (27 CFR 55.201-55.219)*.

SHIPPING INFORMATION

Proper shipping name	Substances, explosive, n.o.s. (NONA, wetted)	
Hazard class	1.1D	
UN Number	UN0475	
DOT Label & Placard	DOT Label	EXPLOSIVE 1.1D
	DOT Placard	EXPLOSIVES 1.1

The information contained in this Material Safety Data Sheet is based upon available data and believed to be correct; however, as such has been obtained from various sources, including the manufacturer and independent laboratories, it is given without warranty or representation that it is complete, accurate, and can be relied upon. *OWEN COMPLIANCE SERVICES, INC.* has not attempted to conceal in any manner the deleterious aspects of the product listed herein, but makes no warranty as to such. Further, *OWEN COMPLIANCE SERVICES, INC.* cannot anticipate nor control the many situations in which the product or this information may be used; there is no guarantee that the health and safety precautions suggested will be proper under all conditions. It is the sole responsibility of each user of the product to determine and comply with the requirements of all applicable laws and regulations regarding its use. This information is given solely for the purposes of safety to persons and property. Any other use of this information is expressly prohibited.

For further information contact:

David W. Boston, President
OWEN COMPLIANCE SERVICES, INC.
12001 County Road 1000
P.O. Box 765
Godley, TX 76044
Telephone number: 817-551-0660
FAX number: 817-396-4584

MSDS prepared by:

David W. Boston
Original publication date: 03/19/96
Review date: 2/22/06
12/03/03

