

SAFETY DATA SHEET

Revision Date 23-Jan-2018

Revision Number 3

1. Identification

Product Name 1,3-Dinitrobenzene
Cat No. : AC116970250; AC116971000
Synonyms m-Dinitrobenzene.
Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Fisher Scientific	Acros Organics
One Reagent Lane	One Reagent Lane
Fair Lawn, NJ 07410	Fair Lawn, NJ 07410
Tel: (201) 796-7100	

Emergency Telephone Number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 1
Acute Inhalation Toxicity - Dusts and Mists	Category 2
Specific target organ toxicity - (repeated exposure)	Category 2

Label Elements

Signal Word

Danger

Hazard Statements

Fatal if swallowed
Fatal in contact with skin
Fatal if inhaled
May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear respiratory protection

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician

Skin

Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN: Gently wash with plenty of soap and water
 Remove/Take off immediately all contaminated clothing
 Wash contaminated clothing before reuse

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
m-Dinitrobenzene	99-65-0	98

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes.
Inhalation	Move to fresh air.
Ingestion	Do not induce vomiting.
Most important symptoms and effects	No information available.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media No information available

Flash Point °C
Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

None known

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health
4

Flammability
1

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up No information available.

7. Handling and storage

Handling Ensure adequate ventilation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
m-Dinitrobenzene	TWA: 0.15 ppm Skin	(Vacated) TWA: 1 mg/m ³ Skin TWA: 1 mg/m ³	IDLH: 50 mg/m ³ TWA: 1 mg/m ³	TWA: 0.15 ppm TWA: 1 mg/m ³ STEL: 0.5 ppm STEL: 3 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Yellow
Odor	Odorless
Odor Threshold	No information available
pH	
Melting Point/Range	88 90 °C
Boiling Point/Range	°C
Flash Point	°C
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	1.36
Solubility	Slightly soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C6H4N2O4
Molecular Weight	168.11

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	None under normal use conditions
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation

m-Dinitrobenzene	LD50 = 59500 µg/kg (Rat) LD50 = 59.5 mg/kg (Rat)	LD50 = 1900 mg/kg (Rabbit)	Not listed
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Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
m-Dinitrobenzene	99-65-0	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
m-Dinitrobenzene	EC50: = 0.24 mg/L, 96h (Chlorella pyrenoidosa)	LC50: 1.39 - 2.43 mg/L, 96h static (Oncorhynchus mykiss) LC50: 5.0 - 15.0 mg/L, 96h static (Pimephales promelas) LC50: 1.2 - 2.3 mg/L, 96h static (Lepomis macrochirus)	EC50 = 40.3 mg/L 15 min	EC50: 24 - 31.4 mg/L, 48h Static (Daphnia magna) EC50: = 27.4 mg/L, 48h (Daphnia magna)

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

Component	log Pow
m-Dinitrobenzene	1.49

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and

national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN3443
 Proper Shipping Name DINITROBENZENES, SOLID
 Hazard Class 6.1
 Packing Group II

TDG

UN-No UN3443
 Proper Shipping Name DINITROBENZENES, SOLID
 Hazard Class 6.1
 Packing Group II

IATA

UN-No UN3443
 Proper Shipping Name DINITROBENZENES, SOLID
 Hazard Class 6.1
 Packing Group II

IMDG/IMO

UN-No UN3443
 Proper Shipping Name DINITROBENZENES, SOLID
 Hazard Class 6.1
 Packing Group II

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
m-Dinitrobenzene	X	X	-	202-776-8	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
m-Dinitrobenzene	99-65-0	98	1.0

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
m-Dinitrobenzene	X	-	-	-

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
m-Dinitrobenzene	100 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
m-Dinitrobenzene	99-65-0	Male Reproductive	-	

U.S. State Right-to-Know Regulations Not applicable

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
m-Dinitrobenzene	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Revision Date 23-Jan-2018

Print Date 23-Jan-2018

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS