



THE HANSON GROUP. LLC
GOOD PEOPLE, GREAT SCIENCE

SAFETY DATA SHEET

(REVISED JANUARY 2024)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier: HARTCURE 10 (DETDA)
Other means of identification: Diethylmethylbenzenediamine
Chemical use and restrictions: For use in formulating and coating
For use only by a professional formulator or coater
Company: The Hanson Group LLC
3044 Adriatic Court
Peachtree Corners, GA 30071
770-495-9554
24 Hour emergency response CHEMTREC 800-424-9300

SECTION 2. HAZARD(S) IDENTIFICATION

Emergency Overview

Classification (1272/2008/CE):

Acute toxicity, Oral, Category 4 (H302)

Acute toxicity, Dermal, Category 4 (H312)

Eye irritation, Category 2 (H319)

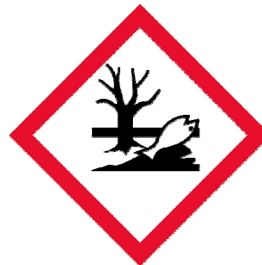
Specific target organ toxicity (repeated exposure), Oral, Category 2 (H373)

Acute hazardous to the aquatic environment, Category 1 (H400)

Chronically hazardous to the aquatic environment, Category 1 (H410)

GHS Label elements

Hazardous pictograms



Signal word: Warning

Hazard statements:

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/ attention if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

Storage:

P402 + P404 Store in a dry place. Store in a closed container.

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal:

P501 Dispose of contents/container in accordance with local regulation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Diethylmethybenzenediamine	>95 %	68479-98-1

SECTION 4. FIRST-AID MEASURES

- **Precautions:** First aid providers should avoid direct contact with this chemical. Wear protective equipment as necessary.
- **Eye contact:** Flush immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.
- **Skin contact: REMOVE FROM SKIN IMMEDIATELY.** Take off all contaminated clothing immediately. Remove adhering matter immediately. Use waterless hand cleaner. Then wash with lots of water and soap.

- **After inhalation:** Remove the victim into fresh air. Symptoms include irritation of the respiratory tract of asthmatic reaction.
- **After ingestion:** Do not induce vomiting without medical advice.
- **Medical Attention:** Consult a physician if any of these events occur.
- **General:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5. FIRE FIGHTING MEASURES

- **Suitable extinguishing media:** Water spray, Alcohol-resistant foam, Dry chemical
- **Unsuitable extinguishing media:** High volume water jet
- **Special hazards arising from the substance or mixture:** Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen and traces of hydrogen cyanide. Do not allow run-off from firefighting to enter drains or water courses.
- **Advice for fire-fighters:** During fire-fighting a respirator with independent air-supply and airtight garment is required. Make provision for product and fire-fighting water to be retained. Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters.
- **Special protective equipment:** Wear protective clothing. In case of respirable dust and/or fumes, use self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

- Use personal protective equipment.
- Use respirator when performing operations involving potential exposure to vapor of the product.

Environmental precautions:

- Prevent product from entering drains.
- Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up:

- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

GENERAL PROCEDURES: Store product in original containers. Store container in a secure cool, dry, well-ventilated area. Opened containers should be blanketed with nitrogen gas at atmospheric pressure.

HANDLING: Use with sufficient ventilation to keep employee exposure below recommended limits. Provide adequate ventilation for storage, handling and use,

especially for enclosed or low spaces. Avoid contact of liquid with eyes and prolonged skin exposure. Avoid breathing in vapors, mists, and aerosols. Do not allow product to contact open flame or electrical heating elements because dangerous decomposition products may form.

STORAGE: Store and warehouse product in an appropriate area or facility. Segregate like materials together to avoid negative chemical reactions. Protect materials from excessive exposure to heat. Store in a cool, well-ventilated area. Store in original container. Keep away from heat and sources of ignition. Keep away from moisture.

INCOMPATIBLE MATERIALS: Will react with isocyanates and acids.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Control Parameters

Contains no substances with occupational exposure limit values.

Protective Equipment

Respiratory In the case of vapor formation use a respirator with an approved filter.
Respirator with a vapor filter (EN 141)

Hand Protection Nitrile Rubber
Wear Protective gloves. Break through time: >480 min

Eye Protection Safety glasses with side-shields conforming to EN166. Wear face-shield and protective suit for abnormal processing problems.

Hygiene Measures Avoid contact with skin, eyes and clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:	liquid
Color:	clear
Odor:	amine-like
Odor	Threshold: not established
pH:	ca. 8 Concentration: 1 g/l
Freezing temperature:	-26,1 °C DIN 51556
Boiling point/boiling range:	586.9 °F / 308.3 °C
Flash point:	>= 313 °F / 156 °C
Evaporation rate:	not established
Flammability (solid, gas):	not established
Burning number:	not applicable
Vapor pressure:	32.4 Pa (68 °F / 20 °C) Decomposition: no
Vapor density:	not established
Density:	1.0188 g/cm ³ (68 °F / 20 °C)

Water solubility:	22.7 g/l (68 °F / 20 °C)
Partition coefficient (n-octanol/water):	Pow: 24.1 (68 °F / 20 °C)
Autoignition temperature:	> 752 °F / 400 °C
Decomposition temperature:	not established
Viscosity, dynamic:	>= 286 mPa.s (68 °F / 20 °C)
Explosive properties:	not established
Dust explosion class:	not applicable
Oxidizing properties:	not established

Other information: The indicated values do not necessarily correspond to the product specification. Please refer to the technical information sheet for specification data.

SECTION 10. STABILITY AND REACTIVITY

- **Chemical stability:** Stable under recommended storage conditions.
- **Possibility of hazardous reactions:** Stable under recommended storage conditions. No hazards to be specially mentioned.
- **Conditions to avoid:** Heat.
- **Incompatible materials:** Strong acids and strong bases Oxidizing agents.
- **Hazardous decomposition products:** No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity, oral:

Diethylmethylbenzenediamine
 LD50 rat, male/female: ca. 738 mg/kg
 Method: OECD Test Guideline 401

Acute toxicity, dermal:

Diethylmethylbenzenediamine
 LD50 rat, male/female: > 2.000 mg/kg
 Method: OECD Test Guideline 402
 Harmful in contact with skin (classification 67/548/EWG / and 1272/2008/EG).

Acute toxicity, inhalation:

Diethylmethylbenzenediamine
 no data available

Primary skin irritation:

Diethylmethylbenzenediamine
 Species: rabbit
 Exposure duration: 4 h
 Result: non-irritant
 Classification: No skin irritation

Method: OECD Test Guideline 404

Primary mucosae irritation:

Diethylmethylbenzenediamine

Species: rabbit

Result: irritating

Classification: Causes serious eye irritation.

Sensitization:

Diethylmethylbenzenediamine

Skin sensitization:

Species: guinea pig

Result: No sensitizing effect known.

Respiratory sensitization

No data available.

Subacute, subchronic and prolonged toxicity:

Diethylmethylbenzenediamine

NOAEL: 3 mg/kg

LOAEL (Lowest observable adverse effect level): 8 mg/kg

Application Route: Oral

Species: rat, male/female

Dose Levels: 0 - 50 - 125 - 320 ppm

Exposure duration: 90 d

Frequency of treatment: daily

Target Organs: Pancreas

Method: OECD Test Guideline 408

NOAEL: 0,4 mg/kg

LOAEL (Lowest observable adverse effect level): 3,2 mg/kg

Application Route: Oral

Species: rat, male/female

Dose Levels: 0 - 10 - 35 - 70 ppm

Exposure duration: 2 a

Frequency of treatment: daily

Target Organs: Pancreas

Method: OECD Test Guideline 453

NOAEL: 100 mg/kg

Application Route: Dermal

Species: rabbit, male/female

Dose Levels: 0 - 1 - 10 - 100 mg/kg

Exposure duration: 21 d

Frequency of treatment: 6 hours a day, 5 days a week

Carcinogenicity:

Diethylmethylbenzenediamine

Species: rat, male/female

Application Route: Oral

Dose Levels: 0 - 40 - 120 ppm

Exposure duration: 2 a

Frequency of treatment: daily

Result: negative

Species: rat, male/female

Application Route: Oral

Dose Levels: 0 - 10 - 35 - 70 ppm

Exposure duration: 2 a

Frequency of treatment: daily

Method: OECD Test Guideline 451

Result: The study is insufficient for a clear evaluation. On the basis, of these data labeling as carcinogenic is therefore not required.

Reproductive toxicity/Fertility:

Diethylmethylbenzenediamine

Available data show no indications for reproductive toxicity.

Reproductive toxicity/Teratogenicity:

Diethylmethylbenzenediamine

No data available.

Genotoxicity in vitro:

Diethylmethylbenzenediamine

Test type: Salmonella/microsome test (Ames test)

Metabolic activation: with

Result: positive

Test type: Salmonella/microsome test (Ames test)

Metabolic activation: without

Result: No indication of mutagenic effects.

Test type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma cells

Metabolic activation: with

Result: positive

Method: OECD Test Guideline 476

Test type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma cells

Metabolic activation: without

Result: negative

Method: OECD Test Guideline 476

Test type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Metabolic activation: with/without

Result: Ambiguous.

Method: OECD Test Guideline 473

Genotoxicity in vivo:

Diethylmethylbenzenediamine

Test type: Micronucleus test

Species: mouse, male/female

Application Route: Oral

Dose: 0 - 125 - 250 - 500 mg/kg

Result: negative

Method: OECD Test Guideline 474

STOT evaluation – one-time exposure:

Diethylmethylbenzenediamine -

Based on available data, the classification criteria are not met.

STOT evaluation – repeated exposure:

Diethylmethylbenzenediamine

Target Organs: Pancreas

May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity:

Diethylmethylbenzenediamine

Based on available data, the classification criteria are not met.

CMR Assessment:

Diethylmethylbenzenediamine

Carcinogenicity: Based on available data, the classification criteria are not met.

Mutagenicity: The mutagenic effect of this substance was investigated in various in vitro tests on bacteria and mammal cell cultures. The result was inconsistent. In vivo tests did not show mutagenic effects Based on available data, the classification criteria are not met.

Teratogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity/Fertility: Based on available data, the classification criteria are not met.

Toxicology Assessment:

Diethylmethylbenzenediamine

Acute effects: Harmful if swallowed. Causes serious eye irritation.

Sensitization: Based on available data, the classification criteria are not met.

Additional information:

Diethylmethylbenzenediamine

Special properties/effects: Risk of cutaneous absorption.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Acute Fish toxicity:

Diethylmethylbenzenediamine
LC50 200 mg/l
Species: *Leuciscus idus* (Golden orfe)
Exposure duration: 48 h
Method: DIN 38412

Acute toxicity for daphnia:

Diethylmethylbenzenediamine
EC50 0,5 mg/l
Test type: Immobilization
Species: *Daphnia magna* (Water flea)
Exposure duration: 48 h
Method: Directive 67/548/EEC, Annex V, C.2.

Acute toxicity for algae:

Diethylmethylbenzenediamine
ErC50 104 mg/l
Test type: Growth inhibition
Species: *Desmodesmus subspicatus* (Green algae)
Exposure duration: 72 h
Method: OECD Test Guideline 201

Acute bacterial toxicity:

Diethylmethylbenzenediamine
EC50 > 170 mg/l
Test type: Cell multiplication inhibition test
Species: *Pseudomonas putida*
Exposure duration: 24 h
Method: DIN 38412

Ecotoxicology Assessment:

Diethylmethylbenzenediamine
Acute aquatic toxicity: Very toxic to aquatic organisms. Chronic aquatic toxicity: May cause long-term adverse effects in the aquatic environment. Impact on Sewage Treatment: Because of the low bacterial toxicity, there is no risk of an adverse effect on the performance of biological waste-water treatment plants.

Persistence and degradability

Biodegradability:

Diethylmethylbenzenediamine

Test type: Closed Bottle test
Biodegradation: < 1 %, 28 d, i.e. not readily degradable
Method: Directive 67/548/EEC Annex V, C.4.E.

Stability in water:

Diethylmethylbenzenediamine
Test type: Hydrolysis. not applicable

Photodegradation:

Diethylmethylbenzenediamine
Test type: Phototransformation in air
Temperature: 25 °C
sensitizer: OH-radicals
Concentration sensibilisator: 1.500.000 1/cm³
Half-life indirect photolysis: 1,48 h
Method: SRC - AOP (calculation)
After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Volatility (Henry's Law constant):

Diethylmethylbenzenediamine
0,000266 Pa*m³/mol at 25 °C
Method: calculated
The substance has to be scored as non-volatile from water.

Bioaccumulative potential

Bioaccumulation:

Diethylmethylbenzenediamine
Bioconcentration factor (BCF): 2,75
Method: (calculated)
An accumulation in aquatic organisms is not to be expected.

Partition coefficient (n-octanol/water):

Diethylmethylbenzenediamine
log Pow: 1,16

Mobility in soil

Distribution among environmental compartments:

Diethylmethylbenzenediamine
Adsorption/Soil
Koc value: 551
Method: calculated
Moderately mobile in soils

Environmental distribution:

Diethylmethylbenzenediamine

Method: (calculated)

The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

Results of PBT and vPvB assessment

Diethylmethylbenzenediamine

This substance does not meet the criteria for classification as PBT or vPvB.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with local regulation.

Waste treatment methods

Contact waste disposal services. Do not dispose of waste into sewer. The product should not be allowed to enter drains, water courses or the soil. Containers must be recycled in compliance with national legislation and environmental regulations.

SECTION 14. TRANSPORTATION INFORMATION

DOT - Not dangerous goods. Shipment by ground under DOT is non-regulated

UN Number: Not Applicable

Proper Shipping Name: Not Applicable

Packaging Group: Not Applicable

Transport Hazard Class: Not Applicable

ADR/RID

UN Number : 3082

Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diethylmethylbenzenediamine)

Packaging group : III

Hazard identification No : 90

hazard label : 9

Environmentally hazardous : yes

ADN

UN Number : 3082

Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Diethylmethylbenzenediamine)

Packaging group : III

Hazard identification No : 90

hazard label : 9

Environmentally hazardous : yes

This classification data does not apply to transportation by tanker. If required, additional information can be requested from the manufacturer.

IATA

UN Number : 3082

Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diethylmethylbenzenediamine)

Class : 9

Packaging group : III

hazard label : 9

Packing instruction (cargo aircraft) : 964

Packing instruction (passenger aircraft) : 964

IMDG

UN Number: 3082

Description of the goods: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diethylmethylbenzenediamine)

Class : 9

Packaging group : III

IMDG-Labels : 9

Marine pollutant : yes

Special precautions for user : Environmentally hazardous substance. Keep dry.
Keep separated from foodstuffs.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards:

Acute Health Hazard

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

- This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
- This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
- This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
- This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Inter-mediate or Final VOC's (40 CFR 60.489).
- This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

- This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
- This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
- This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Diethylmethybenzenediamine 68479-98-1

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

SECTION 16. OTHER INFORMATION

Date written: October 24, 2014

Revision Information: January 15, 2024

MANUFACTURER DISCLAIMER: This SDS to the best of our knowledge conforms to the requirements of OSHA 29 CFR 1910.1200, 91/155/EEC and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact The Hanson Group. Responsibility for the product sold is subject to our standard terms and conditions. A copy is available upon request. The Hanson Group warrants only that its products meet the specifications stated in the sales contract. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information presented in this document is believed to be reliable and to represent the best available data on these products, **NO GUARANTEE, WARRANTY, OR REPRESENTATION IS MADE, INTENDED, OR IMPLIED AS TO THE CORRECTNESS, OR SUFFICIENCY OF ANY INFORMATION, OR AS TO THE MERCHANTABILITY OR SUITABILITY OR FITNESS OF ANY CHEMICAL COMPOUNDS OR OTHER PRODUCTS FOR ANY PARTICULAR USE OR PURPOSE, OR THAT ANY CHEMICAL COMPOUNDS OR OTHER PRODUCTS OR THE USE THEREOF ARE NOT SUBJECT TO A CLAIM BY A THIRD PARTY FOR INFRINGEMENT OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT.** Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. Liability by The Hanson Group for all claims, whether arising out of breach of warranty, negligence, strict liability, or otherwise, is limited to the purchase price of the material. Products may be toxic and require special precautions in handling. For all products listed, the user should obtain detailed information on toxicity, together with the proper shipping, handling and storage procedures, and comply with all applicable safety and environmental standards. Toxicity and risk characteristics of chemical compounds and other products may differ when used with other materials or in a manufacturing or other process. Those risk characteristics should be determined by the user and made known to handlers, processors, and end users.