OCTAMINE® DROP



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SECTION 1. IDENTIFICATION

Product identifier

Product name : OCTAMINE® DROP

Other means of identification : bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine

Recommended use of the chemical and restrictions on use

Recommended use : Rubber products

Antioxidant

Restrictions on use : Reserved for industrial and professional use.

Manufacturer or supplier's details

Supplier

Company : SI Group USA (USAA), LLC

Address : 4 Mountainview Terrace

Suite 200 Danbury, CT

United States of America (USA)

06810

E-mail address : msdsrequest@siigroup.com

Emergency telephone number

Emergency Phone Number : CHEMTREC/US: +1 703-741-5970

NCEC/CHINA: 400 120 6011 NCEC/INDIA: 000 800 100 7479 NCEC/ROW: +44 1235 239670

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

May form combustible dust concentrations in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance / Mixture Pure substance

Substance name bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine

CAS-No. 15721-78-5

Chemical nature **Amines**

> Rubber products Antioxidant

Hazardous components

Non-hazardous ingredients

SECTION 4. FIRST AID MEASURES

General advice No hazards which require special first aid measures.

If inhaled Move to fresh air in case of accidental inhalation of dust or

> fumes from overheating or combustion. If symptoms persist, call a physician.

In case of skin contact Take off contaminated clothing and shoes immediately.

Wash off with soap and plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. In case of eye contact

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

rinsina.

If swallowed Clean mouth with water and drink afterwards plenty of water.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person. Product dust may be irritating to eyes, skin and respiratory

system.

Most important symptoms and effects, both acute and

delayed

No information available.

Notes to physician The first aid procedure should be established in consultation

with the doctor responsible for industrial medicine.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Unsuitable extinguishing

media

Specific hazards during fire-

fighting

High volume water jet

Do not allow run-off from fire fighting to enter drains or water

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a

potential dust explosion hazard.

No information available.

Hazardous combustion prod- :

ucts

No hazardous combustion products are known.

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Further information

Standard procedure for chemical fires.

Special protective equipment

for firefighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces

with compressed air).

Non-sparking tools should be used.

Avoid dust formation.

Methods and materials for containment and cleaning up

Sweep up and shovel.

Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

Advice on safe handling

Avoid dust formation. Provide appropriate exhaust ventilation

at places where dust is formed.

Minimize dust generation and accumulation.

Routine housekeeping should be instituted to ensure that

dusts do not accumulate on surfaces.

Dry powders can build static electricity charges when subject-

ed to the friction of transfer and mixing operations. Keep away from heat and sources of ignition.

For personal protection see section 8. No special handling advice required.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated

place.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to con-

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ditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at work-places have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

Use mechanical ventilation for general area control. Dust must be extracted directly at the point of origin. Ensure that extracted air cannot be returned to the workplace through the ventilation system.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally re-

quired.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

Environmental exposure controls

Water : Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid, flakes, or, Pastilles

Colour : brown

Odour : characteristic
Odour Threshold : No data available

pH : 5.7

Melting point/range : $185 - 201 \, ^{\circ}\text{F} / 85 - 94 \, ^{\circ}\text{C}$

Boiling point/boiling range : $> 464 \, ^{\circ}\text{F} / 240 \, ^{\circ}\text{C}$

(1,013 hPa)

Flash point : 392 °F / 200 °C

(970.2 hPa)Method: closed cup

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Evaporation rate <Ether

No data available Flammability (solid, gas) Upper explosion limit No data available Lower explosion limit No data available

Vapour pressure < 0.1 Pa (77 °F / 25 °C)

Method: estimated

: Heavier than air Relative vapour density Relative density No data available

Density 0.555 g/cm3 (68 °F / 20 °C)

Bulk density No data available

Solubility(ies)

Water solubility < 0.052 mg/l (82 °F / 28 °C)

Solubility in other solvents soluble

Partition coefficient: n-

octanol/water

log Pow: 10.81

(calculated)

No data available Auto-ignition temperature

Decomposition temperature

No data available Viscosity, dynamic No data available Viscosity, kinematic No data available Explosive properties Not applicable Oxidizing properties No data available

Heat of combustion 4.28 kJ/g

Surface tension not determined

SECTION 10. STABILITY AND REACTIVITY

Stable under recommended storage conditions. Reactivity Chemical stability

Possibility of hazardous reac-

tions

No decomposition if stored and applied as directed.

No adverse effects are expected under normal conditions of

use.

Conditions to avoid No data available Incompatible materials Strong oxidizing agents

Hazardous decomposition No hazardous decomposition products are known.

products

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

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Acute oral toxicity : LD50: > 2,000 mg/kg

Method: OECD Test Guideline 423

Acute inhalation toxicity : Remarks: Not classified due to lack of data.

Acute dermal toxicity : LD50: > 2,000 mg/kg

Method: OECD Test Guideline 402

Skin corrosion/irritation

Product:

Species : Rabbit

Method : OECD-Guideline No. 404

Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

Respiratory or skin sensitisation

Product:

Method : OECD Test Guideline 429
Result : Not a skin sensitizer.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: Ames test

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo : Remarks: No data available

Germ cell mutagenicity -

Assessment

: Mutagenicity studies were negative.

Carcinogenicity

Product:

Remarks : This information is not available.

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Carcinogenicity - Assessment : Not classified due to lack of data.

IARC No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Effects on fertility : Test Type: reproductive and developmental toxicity study

General Toxicity - Parent: NOAEL: 250 mg/kg body weight

Method: OECD Test Guideline 421

Effects on foetal develop-

ment

: Species: Rat, male and female

Teratogenicity: NOAEL: 250 mg/kg body weight

Reproductive toxicity - As-

sessment

Not classified due to data which are conclusive although insuf-

ficient for classification.

STOT - single exposure

Product:

Assessment : Not classified due to data which are conclusive although insuf-

ficient for classification.

STOT - repeated exposure

Product:

Assessment : Not classified due to data which are conclusive although insuf-

ficient for classification.

Repeated dose toxicity

Product:

Species : Rat, male and female

NOAEL : 600 mg/kg

Aspiration toxicity

Product:

No aspiration toxicity classification

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Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish

Remarks: No data available

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: No data available

Toxicity to algae/aquatic

plants

Remarks: No data available

Toxicity to microorganisms : EC50: 10,000 mg/l

Persistence and degradability

Product:

Biodegradability : Result: Not biodegradable

Method: estimated

Stability in water : Degradation half life: 13 y

Bioaccumulative potential

Product:

Bioaccumulation : Bioconcentration factor (BCF): 1,000,000

Mobility in soil

Product:

Mobility : Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB

assessment

This substance is not considered to be persistent, bioaccumu-

lating and toxic (PBT).

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protec-

tion of Stratospheric Ozone - CAA Section 602 Class I Sub-

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stances

Remarks: 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).

Additional ecological infor-

mation

: There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Offer surplus and non-recyclable solutions to a licensed dis-

posal company.

Contaminated packaging : Empty remaining contents. Empty containers should be taken

to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

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 302 Extremely Hazardous Substances Threshold Planning Quantity

Components CAS-No. Component TPQ (lbs)
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SARA 311/312 Hazards : No SARA Hazards

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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.

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

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 Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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

Not listed

New Jersey Right To Know

Not listed

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.

The components of this product are reported in the following inventories:

REACH : This substance has been registered according to Regulation

(EC) No. 1907/2006 (REACH).

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

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ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

Not relevant

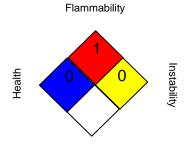
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Special hazard.

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Sub-

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stances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (O)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT -Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

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The information and recommendations contained in this safety data sheet are, to the best of SI Group's knowledge, belief and experience, accurate and reliable as of the date of its publication and describe the product only with regard to safety requirements. It is the user's responsibility to confirm that it is using the most current available version of this safety data sheet. The information and recommendations herein are offered for the user's consideration and examination. Identified uses in this safety data sheet do neither represent an agreement on the quality of the Product nor a designated use. For the avoidance of doubt, nothing herein shall be construed as relieving the user of its responsibility to ensure that the product is suitable for the intended use and that any proprietary rights, existing laws and legislation are observed. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING THE PRODUCT DESCRIPTIONS, DATA OR INFORMATION HEREIN. This safety data sheet is neither a Certificate of Analysis (CoA) nor a technical data sheet and shall not be mistaken for a description of the product's specifications. If user repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the packaging.

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