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Camaçari – Bahia – Brasil
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Detalp® 360

Product: Heavy alkylate
MSDS N° : DT03
Pages. 1/6
Date of Revision: 10/15/2010 – rev. 07

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name: Heavy alkylate

1.2 Product Code:

Detalp® 360

Heavy alkylate containing basically dialkylbenzenes

CAS^a: 85117-41-5 EINECS^b: 285-591-5

(Benzene, mono C10-14 – alkyl derivative, fractionated bottom

Formula: Formed by complex mixture

Mean molecular weight: 350-380

Alternative names – heavy linear alkylbenzene, heavy alkylbenzene and alkylbenzene mixtures.

1.3 Product Use

The heavy alkylate Detalp is formed by the alkylbenzenes mixture that is obtained from the alkylation of benzene with two alkyl molecules of the C10 – 13 carbon distribution range. The heavy alkylate is a byproduct of the Linear Alkylbenzene production. It is an aromatic product whose formula is $(C_nH_{2n+1})_2$ (C6 H5); a middle carbon of the alkyl radical – 11,7.

Since the Heavy Alkylate presents high stability at temperature variations (from 60 to 300°C), this product can be used in several industrial applications, namely: thermal fluid, transformer oil, refrigerating oil, plasticizer solvents and lubricating greases.

1.4 Supplier/ Manufacturer's name

DETEN QUÍMICA S.A.

Address: Rua Hidrogênio 1744 – COPEC – Complexo Petroquímico de Camaçari – Bahia (Brazil)
Business phone: +55 71 3634-3207 / 08 Fax.: +55 71 3634-5155

1.5 Emergency Phone

DETEN QUÍMICA S.A.
+55 71 3634-3333
0800-284-8474

2. HAZARDS IDENTIFICATION

2.1 Physical/chemical Hazards

Eyes: Contact with the liquid or high vapor concentrations can cause irritation.

Skin: Prolonged or repeated skin exposure can cause irritation, dry skin and potential dermatitis.

Inhalation: Owing to its low volatility, the product does not pose inhalation risks under normal operation conditions. The overexposure to high vapor concentrations can cause dizziness and headaches.

Ingestion: If the product is swallowed, symptoms of such exposure can include nausea and diarrhea.

Overexposure effect:

Acute overexposure: Irritation, dizziness and nausea

Chronic overexposure: Unknown



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2.2 Fire and explosion hazard

None

See Section 10: "STABILITY AND REACTIVITY".

3. COMPOSITION/INFORMATION ON INGREDIENTS

See Section 1.1 "PRODUCT AND COMPANY IDENTIFICATION".

There are no hazardous substances or products.

According to the pertinent legislation, this product is not hazardous. However, care should be taken while handling chemicals (See Section 15: "REGULATIONS").

4. FIRST AID MEASURES

Contact with the eyes: Immediately flush eyes plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Seek the assistance of an ophthalmologist.

Contact with the skin: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. If irritation persists, seek medical assistance.

Inhalation: Move victim away from exposure to a ventilated area out of danger. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel and get medical.

Ingestion: Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Seek medical assistance.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.

5. PREVENTION AND FIRE FIGHTING MEASURES

Extinguishing media:

Suitable: Use dry chemical, CO₂, water spray (fog) or foam.

Not suitable : Do not use water.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Fire-fighting measures: Shut off all ignition sources. If fire cannot be extinguished, withdraw from area and allow the fire to burn. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products: carbon oxides (CO, CO₂).

Special exposure hazards : In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

6. SPILL AND LEAK CONTROL MEASURES

Personal precautions: Wear PPE (Personal Protective Equipment)

See Section 8: "EXPOSURE CONTROL AND PERSONAL PROTECTION"



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Environmental precautions

On land: Keep people away from the leak or spill. Eliminate the ignition sources. If possible, contain the spill. Avoid the contamination of sewers, courses of water and groundwater, as well as soil and vegetation contamination. Inform the authorities and warn the neighborhood, in case it persists.

Stop the spill with inert absorbing material such as sand or earth. Place the recovered material in suitable containers for recycling or disposal.

Consult an expert on recovered material disposal. The material can be incinerated under normal controlled conditions or placed in a landfill, according to local and official regulations.

On Water:

Inform shipping personnel. Notify the port or competent authority and keep people away from it.

Isolate the area and avoid ecological damage. Stop and confine the spill, if possible. Remove the product from the surface, by absorbing the contaminated cover with suitable absorbers.

Consult an expert on recovered material disposal and ensure the compliance with local and official regulations.

See also Section 4 "FIRST AIDS" and Section 10 "STABILITY AND REACTIVITY".

7. HANDLING AND STORAGE

Storage temperature: room temperature

Loading/unloading temperature: room temperature

Storage pressure: Atmospheric

Risk of electrostatic accumulation: None

Viscosity at loading/unloading temperature: 30 - 60 cST (a 20 °C)
14 - 23 cST (a 40 °C)

Normal shipping system:

Tank-car

Tank-truck

Drums

Coating and handling materials:

Appropriate: Carbon steel, baked epoxy or phenolic laminate or aluminum coating

Not appropriate: Natural and butyl rubber

Local vent is recommended in confined spaces or high temperatures. Incompatibility with strong oxidizers. Avoid storing material near them, which can aggravate fire hazard.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Personal Protective Equipment: Impervious PVC gloves in activities that have direct contact with the product, ventilation or air – supplied equipment in case of emergency and in closed spaces. Safety goggles to protect from organic products splash. Full clothes for skin protection.

Take off the wet/contaminated clothes, contain few product quantity, that can cause skin irritation or exsiccation not notice in the beginning.

Hygiene at work: Avoid contact with the product and overexposure to high vapor concentrations.

Threshold limit value (TLV): not established.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance:

Physical state: Liquid

Color: Pale yellow



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Odor: Characteristic

pH: Not applicable

Boiling point: 290 – 420 °C (ASTM D 86-82)

Melting/freezing point: <-40 °C (ASTM D 97-87)

Flash point , P/M: 180 °C (160 min)°C (ASTM D 93-85)

Auto-ignition temperature: 334 °C (ASTM and 659-78)

Flammable limits in air (% vol): Unknown

Vapor pressure (at 20 °C): <0.1 mm Hg (ASTM D 323-89)

Density (at 15 °C): 0.860-0.880 g/cm³ (ASTM D 4052 –86)

Solubility in water (at 20 °C): Insoluble in the following materials: cold water and hot water.

Octanol/water partition coefficient: >1

Vapor density (Air = 1) : Unknown

Viscosity: Kinematic (20°C): 0,3 to 0,6 cm²/s (30 to 60 cSt)

Kinematic (40°C (104°F)): 0,14 to 0 ,23 cm²/s (14 to 23 cSt)

Molecular weight: 350 to 380 g/mole

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid stability: Not applicable

Materials and conditions to avoid incompatibility: Not exist

Conditions to avoid polymerization: Not applicable

Hazardous decomposition products: None

Thermal decomposition: Vaporizes without decomposition

Hazardous reactions: Not known.

11. TOXICOLOGICAL INFORMATION

Acute lethal dermal dose for rats: > 2,0 g/kg

Contact with the skin: Dermal irritation in rabbits from mild to well defined.

Contact with the eyes: When instilled on rabbit's eyes, it does not provoke positive reaction, according to the test criteria of the OECD¹.

Inhalation: No available information

Ingestion : Acute lethal oral dose for rats: > 5,0 g/kg

Overexposure effects:

Acute: irritation, dizziness, nausea

Chronic: Unknown

12. ECOLOGICAL INFORMATION

12.1 Biotic environment toxicity

LC 50 (fish), 96 hr - No effects observed

EC 50 (Daphnia)²: 48 hr - No effects observed

EC 50, (Alga)³: 72 hr - No effects observed



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12.2 Environment risks

This product shows a low bioaccumulation potential
Biodegradation: in rotating aerated disks: >96% eliminated in 24 hours
Photodegradation: half-life : < 0.6 days (OECD¹ test)
Bioaccumulation: Log Pow > 5

13. TREATMENT AND DISPOSAL CONSIDERATIONS

Avoid contact with the eyes and skin when disposing water or surplus material. Wear impervious gloves, overalls and safety goggles.

The wastes can be incinerated under controlled conditions or placed in landfill, according to the official regulations (national and/or local).

Do not mix up with strongly oxidizing products.

Hazardous waste: Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

14. TRANSPORTATION INFORMATION

Hazard class

Code:

IMO⁴/IMCO⁵: Not hazardous

UN⁶: not applicable

IATA⁷: not applicable

TPC/ADR: not harmful

IBC CODE/Marpol⁸: Alkyl Benzene Distillation Bottoms – Pollution Category: Y – Ship type: 2

Other data:

Transportation Temperature: Room temperature

Transportation pressure: Atmospheric

Load/unload : Room temperature

15. REGULATIONS

Classification and labeling according to Ministry of Transportation Act number 40 of 2004 that regulates land transportation of hazardous products:

Classification/symbol: not controlled – hazardous product

Decree no. 96.044 – Road transportation of hazardous products and successive modifications and adaptations.

European Union: Conforms to EU Directive 91/155/EEC, as amended by 2001/58/EC.

Regulation EC No 1907/2006.

16. OTHER INFORMATION

If necessary or in case of doubts, contact Deten Química or visit our web site at: www.deten.com.br.

Additional information available upon formal request.

a. CAS - Chemical Abstract System No.

b. EINECS - European Inventory of Existing Commercial Chemical Substances

1. OCDE: Organization for Cooperation Development and Economic

2. Samples of sediments were collected at the bottom of Sinos river with the Daphnia magna micro-crustaceus



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3. Unicellular seaweed. They are represented by Clorófitas seaweed as the Chlamydomona, Chlorella, Volvox and Scenedesmus.
4. IMO: International Maritime Organization
5. IMCO: International Maritime Consultative Organization – UN Organism
6. UN: United Nations
7. IATA: International Air Transport Association
8. IBC/Marpol: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk / Regulations for the control of pollution by noxious liquid substances in bulk.

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