

Product:

HEXYLENE GLYCOL

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SDS No.: 000387-001 (Version 6.0)

Date 03.01.2023 (Cancel and replace : 25.03.2022)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Substance name:

REACH Registration Name: 2-methylpentane-2,4-diol
 REACH Registration Number: 01-2119539582-35-0000 (ARKEMA FRANCE)
 EC Nr: 203-489-0
 CAS-No.: 107-41-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture :

Sector of use :	Product category :
Distribution of the substance SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites SU 8,9: Manufacture of bulk, large scale substances (including petroleum products); manufacture of fine chemicals	
Formulation of the substance SU 10: Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)	PC34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids, PC37: Water treatment chemicals, PC39: Cosmetics, personal care products, PC41: Oil and gas exploration or production products
Use as binders and release agents (industrial) SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use in cleaning products (industrial) SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use in coating (industrial) SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use as a fuel (industrial) SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use in functional fluids (industrial) SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Industrial use as laboratory reagent SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Industrial use as an additive in lubricants and greases SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use in metal working fluids / rolling oils (industrial) SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use in Oil and Gas field drilling and production operations SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Use in metal working fluids / rolling oils (professional) SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Use in agrochemicals (professional) SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Use as binders and release agents (professional) SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Use in cleaning products (professional) SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Use in coating (professional) SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Professional use as laboratory reagent SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	

Professional use as an additive in lubricants and greases SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Professional use in road and construction applications SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	

1.3. Details of the supplier of the safety data sheet

Supplier ARKEMA Thiochimie
420 rue d'Estienne d'Orves
92705 Colombes Cedex, FRANCE
Telephone: +33 (0)1 49 00 80 80
Telefax: +33 (0)1 49 00 83 96
E-mail address: pars-drp-fds@arkema.com
http://www.arkema.com

E-mail address : Exposure scenario arkema-thiochem-reach-uses@arkema.com

1.4. Emergency telephone number

+ 33 1 49 00 77 77
European emergency phone number: 112
+1-703-741-5970 (CHEMTREC International emergency phone number)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):

Skin irritation, 2, H315
Eye irritation, 2, H319
Reproductive toxicity, 2, H361d

Additional information:

For the full text of the H, EUH-phrases mentioned in this Section, see Section 16.

2.2. Label elements

Label elements (REGULATION (EC) No 1272/2008):

Hazardous components which must be listed on the label:

No. in ANNEXE : 603-053-00-3

2-methylpentane-2,4-diol

Hazard
pictograms:



Signal word:

Warning

Hazard statements:

H315 : Causes skin irritation.
H319 : Causes serious eye irritation.
H361d : Suspected of damaging the unborn child.

Precautionary statements:

Prevention:

P201 : Obtain special instructions before use.
P264 : Wash skin thoroughly after handling.
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P308 + P313 : IF exposed or concerned: Get medical advice/ attention.
P337 + P313 : If eye irritation persists: Get medical advice/ attention.

Disposal:

P501 : Dispose of contents or container to an approved waste disposal plant.

2.3. Other hazards

Potential health effects:

Inhalation: At high vapour/mist concentrations headache Dizziness Drowsiness
Skin contact: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
Ingestion: May be harmful if swallowed. Ingestion may cause irritation to mucous membranes.

Physical and chemical hazards:

Flammable (when hot). At high temperature : thermal decomposition giving toxic products
Decomposition products: See chapter 10

Other:

Results of PBT and vPvB assessment :

According to REACH regulation, annex XIII, the substance does not meet PBT and vPvB criteria.

Endocrine disrupting properties - Health :

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

Endocrine disrupting properties - Environment :

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Chemical name ¹ & REACH Registration Number ²	EC-No.	CAS-No.	Concentration	Classification REGULATION (EC) No 1272/2008	specific concentration limit, M-Factors, Acute toxicity estimate
Hexylene glycol (N° ANNEX: 603-053-00-3)	203-489-0	107-41-5	99,9 - 100 %	Eye Irrit.2; H319 Skin Irrit.2; H315 Repr.2; H361d	

¹: See chapter 14 for Proper Shipping Name

SECTION 4: FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

General advice:

Under the shower: Take off immediately all contaminated clothing. including shoes.

Inhalation:

Inhalation of mists Move patient from contaminated area to fresh air. Oxygen or artificial respiration if needed. Keep under medical surveillance. In case of problems : Hospitalise.

Skin contact:

Wash immediately, abundantly and thoroughly with water.

Eye contact:

Wash open eyes immediately, abundantly and thoroughly for at least 15 minutes. Consult an ophthalmologist.

Ingestion:

Do NOT induce vomiting. In case of problems : Consult a doctor.

Protection of first-aiders:

If entering a saturated atmosphere, wear a self contained breathing apparatus. Protective suit

4.2. Most important symptoms and effects, both acute and delayed: No data available.

4.3. Indication of any immediate medical attention and special treatment needed: No data available.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Water spray, Dry powder, Carbon dioxide (CO2), Special foam for polar solvents

Unsuitable extinguishing media:

High volume water jet

5.2. Special hazards arising from the substance or mixture:

Flammable liquid (when hot), Thermal decomposition giving flammable and toxic products, Carbon monoxide

5.3. Advice for firefighters:

Specific methods:

Use water spray to cool unopened containers. Ensure containers can be rapidly moved. In case of fire nearby, remove exposed containers.

Special protective actions for fire-fighters:

In the event of fire, wear self-contained breathing apparatus. Complete suit protecting against chemicals

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Evacuate personnel to safe areas. Prohibit all sources of sparks and ignition - Do not smoke. Use personal protective equipment. Avoid contact with skin and eyes and inhalation of vapours.

6.2. Environmental precautions:

Dam up with sand or inert earth (do not use combustible materials). Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up:

Recovery:

Pump into a labelled inert emergency tank. Moist product : absorb the remainder with an inert absorbent material.

Elimination:

Destroy the product by incineration (in accordance with local and national regulations).

6.4. Reference to other sections: None.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Technical measures/Precautions:

Storage and handling precautions applicable to products: Liquid. Flammable (when hot). With vapours explosive in air. Irritant. Provide appropriate exhaust ventilation at machinery. Provide showers, eye-baths. Provide water supplies near the point of use. Provide fire-blanket nearby.

Safe handling advice:

Prohibit all sources of sparks and ignition - Do not smoke. Only use safety equipment. Provide waterproof electrical equipment.

Hygiene measures:

Do not smoke. Avoid inhalation of vapours. Do not get in eyes, on skin, or on clothing.
Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities:

Store protected from moisture and heat. Remove all sources of ignition. Keep tightly closed in a dry, cool and well-ventilated place. Provide earthing and safe electrical equipment. Provide a catch-tank in a bunded area.

Incompatible products:

Strong oxidizing agents Strong acids Halides Acid anhydrides

Packaging material:

Recommended: Ordinary steel, Stainless steel

7.3. Specific end use(s): None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure Limit Values

Not relevant

Derived No Effect Level (DNEL):

End Use	Inhalation	Ingestion	Skin contact
Workers	98 mg/m3 (ST, LE) 44 mg/m3 (LT, SE) 49 mg/m3 (LT, LE)		63 mg/kg bw/day (LT, SE)
Consumers	49 mg/m3 (ST, LE) 7,8 mg/m3 (LT, SE) 25 mg/m3 (LT, LE)		22,5 mg/kg bw/day (LT, SE)

LE : Local effects, SE : Systemic effects, LT : Long term, ST : Short term

Predicted No Effect Concentration:

Compartment:	Value:
Fresh water	0,429 mg/l
Marine water	0,043 mg/l
Water (Intermittent release)	4,29 mg/l
Effects on waste water treatment plants	20 mg/l
Sediment	1,59 mg/kg dw
Marine sediment	0,159 mg/kg dw
Soil	0,066 mg/kg dw

8.2. Exposure controls:

General protective measures:

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment:

Respiratory protection:

Low concentrations or short activity: Mask with specific cartridge Recommended Filter type: ABEK-filter

High concentrations or prolonged activity: Self contained Breathing Apparatus

Hand protection:

Gloves (PVC, neoprene)

According to permeation index EN 374: 1 (time elapsed > 10 mins)

Eye/face protection:

Safety glasses

Skin and body protection:

At the workplace : Protective clothing (cotton), Safety shoes, Boots

Intervention at incident: Waterproof suit, Safety shoes, Boots

Environmental exposure controls: See chapter 6

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:

Physical state (20°C):

liquid

Colour:

colourless

Odour:

mild

Odour Threshold:

50 ppm

Freezing point :

-50 °C (Pressure 1.013 hPa)

Boiling point/boiling range :

197,5 °C (Pressure 1.013 hPa)

Flammability:

No data available.

Lower explosion limit :

No data available.

Upper explosion limit :

No data available.

Flash point:

closed cup: 97 °C (Standards ASTM D 3828 - IP 303 - ISO DIN 3679)

Auto-ignition temperature:

306 °C

Decomposition temperature:

No data available.

pH:

Neutral (diluted solutions)

Viscosity, kinematic:

No data available.

Viscosity, dynamic:

34 mPa.s , at 20 °C

Water solubility:

completely soluble at 20 °C

Solubility in other solvents:

Soluble in most organic solvents

Partition coefficient: n-octanol/water:

log Kow : < 1 (calculated)

Vapour pressure:

0,066 hPa , at 20 °C

Density:

923 kg/m³ , at 20 °C

Vapour density:

5,17 kg/m³ , at 20 °C

Relative vapour density:

No data available.

9.2. Other information:

Molecular weight:

118,1 g/mol

Explosive properties:

Explosivity:

Not relevant (due to its chemical structure)

Oxidizing properties:

Not relevant (due to its chemical structure)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: No data available.

10.2. Chemical stability:

The product is stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions: No data available.

10.4. Conditions to avoid:

Keep away from heat and sources of ignition.

10.5. Incompatible materials to avoid:

Strong oxidizing agents, Strong acids, Halides, Acid anhydrides

10.6. Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products :, Organic vapours, Carbon oxides (by combustion)

SECTION 11: TOXICOLOGICAL INFORMATION

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity:

Inhalation:	Slightly harmful by inhalation
• In man :	At high vapour/mist concentrations, May cause headache and dizziness., Drowsiness, Possible loss of consciousness
• In animals :	No mortality/8 h/Rat: 70 ppm (vapour saturated atmosphere)
Ingestion:	May be harmful if swallowed.
• In man :	Ingestion may cause irritation to mucous membranes.
• In animals :	LD50/Rat: 2 - 4,7 g/kg (Method: OECD Test Guideline 401)
Dermal:	Slightly harmful in contact with skin.
• In animals :	No mortality/Rat: 2.000 mg/kg (Method: OECD Test Guideline 402)

Local effects (Corrosion / Irritation / Serious eye damage):

Skin contact:	Slightly irritating
• In man :	Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
• In animals :	Mild skin irritation (OECD Test Guideline 404, Rabbit, Exposure time: 4 h)
Eye contact:	Causes serious eye irritation.
• In man :	Exposure to vapours, Eye irritation (50 ppm)
• In animals :	Mild eye irritation (OECD Test Guideline 405, Rabbit)

Respiratory or skin sensitisation:

Inhalation:	No data available.
Skin contact:	Not a skin sensitizer
• In animals :	No skin allergy was observed (Method: OECD Test Guideline 406 Guinea pig maximization test)

CMR effects :

Mutagenicity:	Not genotoxic
In vitro	Inactive in genotoxic in vitro tests Ames test in vitro: Tests for chromosome aberrations in vitro on mammalian cells: In vitro gene mutations test on mammalian cells:
Carcinogenicity:	Based on the available data, the substance is not suspected of having carcinogenic potential
Reproductive toxicity:	
Fertility:	Suspected of damaging the unborn child.
• In animals :	Extended One-Generation Reproductive Toxicity Study: Absence of toxic effects upon the reproductive system, At high dose :, Effects on offspring No observed adverse effect level (Parental toxicity): 800 mg/kg bw/day No observed adverse effect level (Fertility): 250 mg/kg bw/day (Method: OECD Test Guideline 443, Rat, Oral)

Reproduction Test: Absence of toxic effects upon the reproductive system, At high dose :, Effects on offspring
NOAEL (Parental toxicity) : 0,2 g/kg
NOAEL (Fertility) : 1 g/kg
NOAEL (Developmental Toxicity) : 0,5 g/kg
(Method: OECD Test Guideline 421, Rat, By oral route)

Foetal development:

- In animals :

Based on the available data, the substance is not suspected of having developmental toxicity potential.

Exposure during pregnancy: Absence of congenital malformations and embryotoxic effects in rats at non-toxic doses for the mothers, No teratogenic effects
NOAEL (Developmental Toxicity) : 300 mg/kg bw/day
NOAEL (Maternal Toxicity) : 300 mg/kg bw/day
(Method: OECD Test Guideline 414, Rat)
Exposure during pregnancy: Absence of toxic effects for foetal development at non toxic maternal doses
No observed adverse effect level (Maternal Toxicity) : 600 mg/kg bw/day
(Method: OECD Test Guideline 414, Rabbit, Oral)

Specific target organ toxicity :

Single exposure :

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Inhalation:

Olfactory threshold: 50 ppm

Repeated exposure:

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

- In animals :

By oral route: No major effect
NOAEL= 450mg/kg/j (Rat, 3 Months)

Aspiration hazard:

Not applicable

11.2. Information on other hazards:

Endocrine disrupting properties:

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

Other information:

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicology Assessment:

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

12.1. Toxicity :

Fish:

Slightly harmful to fish

LC50, 96 h (Gambusia affinis (Mosquito fish)) : 8.510 mg/l (Method: OECD Test Guideline 203)

Aquatic invertebrates:

Slightly harmful to daphnia

EC50, 48 h (Daphnia magna (Water flea)) : 5.410 mg/l (Immobilization)

Aquatic plants:

Slightly harmful to algae

EC50, 72 h (Pseudokirchneriella subcapitata (microalgae)) : > 429 mg/l (Method: OECD Test Guideline 201)

Microorganisms:

NOEC, 10 Days (Bacteria) : 200 mg/l

12.2. Persistence and degradability :

Biodegradation (In water):

Readily biodegradable

Readily biodegradable: 81 % after 28 d (Method: OECD Test Guideline 301 F)

12.3. Bioaccumulative potential :

Bioaccumulation:

Low potential to bioaccumulate

Partition coefficient: n-octanol/water: log Kow : < 1 (Method: calculated)

12.4. Mobility in soil - Distribution among environmental compartments:

Vapor pressure:

0,066 hPa, 20 °C

12.5. Results of PBT and vPvB assessment :

According to REACH regulation, annex XIII, the substance does not meet PBT and vPvB criteria.

12.6. Endocrine disrupting properties:

Based on the available information, it is not possible to conclude on the endocrine disruptor potential.

12.7. Other adverse effects:

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:

Disposal of product: Destroy the product by incineration (in accordance with local and national regulations).

Disposal of packaging: Clean container with water. Recover waste water for processing later. Destroy packaging by incineration at an approved waste disposal site.

SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: REGULATORY INFORMATION

Safety data sheets: accordance with Annex II of Regulation (EC) No 1907/2006 and its amendment(s)

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

15.2. Chemical safety assessment:

A Chemical Safety Assessment has been carried out for this substance.

INVENTORIES:

European union/EEA : In the event of purchase from an Arkema legal entity based in the European Economic Area (EEA), it is established that this product complies with the registration provisions of REACH Regulation (EC) No. 1907/2006, given that all of its components are excluded, exempted and / or registered. If purchasing from a legal entity established outside the EEA, please contact your local representative for more information.

TSCA (USA) : The components of this product are all on the TSCA Inventory
DSL/NDL (CA) : All components of this product are on the Canadian DSL
IECSC (CN) : All components of this product are listed or exempted
ENCS (JP) : All components of this product are listed or exempted
ISHL (JP) : All components of this product are listed or exempted
KECI (KR) : All components of this product are listed or exempted
PICCS (PH) : All components of this product are listed or exempted
NZIOC (NZ) : All components of this product are listed or exempted
AIIC (AU) : All components of this product are listed or exempted
TCSI (TW) : All components of this product are listed or exempted

SECTION 16: OTHER INFORMATION

Full text of H, EUH-phrases referred to under sections 2 and 3

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.

Update:

Safety datasheet sections which have been updated:		Type:
2	Classification and labelling	Revisions
3	Composition/information on ingredients	Revisions
2, 1112	REGULATION (UE) N°2020/878	Revisions
10	Incompatible products, Decomposition products	Revisions
7	Incompatible products	Revisions

Thesaurus:

NOAEL : No Observed Adverse Effect Level (NOAEL)
LOAEL : Lowest Observed Adverse Effect Level (LOAEL)
bw : Body weight
food : oral feed
dw : Dry weight
vPvB : very Persistent and very Bioaccumulative
PBT : Persistent, Bioaccumulative and Toxic

This information applies to the PRODUCT AS SUCH and conforming to specifications of ARKEMA. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).

