**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name	COSMACOL/EMI.
INCI	DI-C12-13 ALKYL MALATE
REACH No.	01-0000016057-73-0000
Substance name (REACH/ CLP)	bis(C12-C13)alkyl-2-hydroxybutandioate

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

Use	raw material for cosmetic agents
Uses advised against	

1.3 Details of the supplier of the safety data sheet

Company	Sasol Italy S.p.A. Viale Forlanini, 23 20134 Milano Italy Telephone: +39 02 58453-1 Telefax: +39 02 58453-205
Information (Product safety):	Telephone: +39 02 58453-1 Telefax: +39 02 58453-315
E-mail:	msds-info.italy@it.sasol.com

1.4 Emergency telephone number

Emergency telephone number	+39 0931 988-290
-----------------------------------	------------------

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Classification (67/548/EEC, 1999/45/EC)

This substance is not classified as dangerous according to Directive 67/548/EEC.

2.2 Label elements

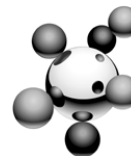
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Remarks on classification and labelling

The UVCB substance with its components, was assessed for human health and environmental behavior and then classified accordingly.

2.3 Other hazards

No hazards to be specially mentioned.

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance in the meaning of regulation (EC) 1907/2006.

CHEMICAL CHARACTERIZATION**Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters****component type:** Active ingredient**EC-No.:** 413-390-6**Index-No.:****CAS-No.:** 149144-85-4**REACH No.:** 01-0000016057-73-0000**Substance name (REACH/ CLP):** bis(C12-C13)alkyl-2-hydroxybutandioate**COMPONENTS TO BE NAMED IN ACCORDANCE WITH REGULATION (EC) 1907/2006 AS WELL AS OTHER HAZARDOUS INGREDIENTS AND CONTAINED SUBSTANCES WITH WORK PLACE LIMIT VALUES**

No dangerous ingredients according to Regulation (EC) No. 1907/2006

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures**

General advice	No hazards which require special first aid measures.
If inhaled	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.
In case of skin contact	Wash off with soap and water.
In case of eye contact	Rinse with plenty of water.
If swallowed	Consult a physician if necessary. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	Symptoms: No information available. Risks: No information available.
--------------------------------------------------------------------	-------------------------------------------------------------------------

4.3 Indication of any immediate medical attention and special treatment needed

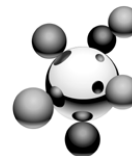
Indication of any immediate medical attention and special treatment needed	Treatment: No information available.
-----------------------------------------------------------------------------------	--------------------------------------

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media	Water, Foam, Dry powder, Carbon dioxide (CO ₂)
-------------------------------------	------------------------------------------------------------

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	Dangerous gases or fumes may occur in case of fire.
---------------------------------------------	-----------------------------------------------------

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

5.3 Advice for firefighters

Special protective equipment for firefighters	Wear self contained breathing apparatus for fire fighting if necessary.
Further information	Prevent fire extinguishing water from contaminating surface water or the ground water system. In the event of fire, cool tanks with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions	Handle in accordance with good industrial hygiene and safety practice.
Special precautions	Forms slippery/greasy layers with water.

6.2 Environmental precautions

Environmental precautions	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.
----------------------------------	-----------------------------------------------------------------------------------------

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Use mechanical handling equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, saw dust).
--------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling**

Advice on safe handling	No special technical protective measures required.
Advice on protection against fire and explosion	Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	No special storage conditions required.
Storage class (TRGS 510)	10: Combustible liquids not in Storage Class 3
Other data	Protect from frost, heat and sunlight.

7.3 Specific end use(s)

Specific use(s)	This information is not available.
------------------------	------------------------------------

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****COMPONENTS WITH WORKPLACE CONTROL PARAMETERS****NATIONAL OCCUPATIONAL EXPOSURE LIMITS**

no data available

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

no data available

DERIVED NO EFFECT LEVEL (DNEL)**bis(C12-C13)alkyl-2-hydroxybutandioate**

End Use	Exposure routes	Value	Note
			This information is not available.

PREDICTED NO EFFECT CONCENTRATION (PNEC)**bis(C12-C13)alkyl-2-hydroxybutandioate**

Environmental Compartment	Value	Note
		This information is not available.

8.2 Exposure controls**ENGINEERING MEASURES**

Provide sufficient air exchange and/or exhaust in workrooms.

PERSONAL PROTECTIVE EQUIPMENT**Respiratory protection**

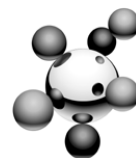
No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.

Hand protection

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the breakthrough time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

gloves suitable for permanent contact:

Material: butyl-rubber
Break through time: >= 480 min
Material thickness: >= 0,7 mm

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

gloves suitable for splash protection:

Material: Nitrile rubber/nitrile latex

Break through time: >= 30 min

Material thickness: >= 0,4 mm

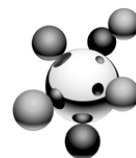
Eye protection	Safety glasses
Skin and body protection	Protective suit
Hygiene measures	General industrial hygiene practice.
Protective measures	No special protective equipment required.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.
-----------------------	-----------------------------------------------------------------------------------------

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Physical state	liquid; 20 °C; 1.013 hPa
Form	liquid
Colour	colourless
Odour	characteristic
Odour Threshold	no data available
pH	not applicable
Melting point/range	< -20 °C; 1.013 hPa
Boiling point/boiling range	> 270 °C; 1.013 hPa
Flash point	153 °C; 1.013 hPa
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	< 0,001 hPa
Relative vapour density	16,76
Density	0,927 g/cm ³ ; 20 °C; 1.013 hPa
Solubility in other solvents	Medium: Alcohol; 20 °C; soluble Medium: Acetone; 20 °C; soluble Medium: Hydrocarbons; 20 °C; soluble
Water solubility	0,00105 g/l; 20 °C; 1.013 hPa

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

Partition coefficient: n-octanol/water	log Pow : 6,4
Ignition temperature	329 °C
Auto-ignition temperature	no data available
Viscosity, kinematic	95,5 mm ² /s; 20 °C 33,8 mm ² /s; 40 °C
Explosive properties	Not explosive
Oxidizing properties	no data available

9.2 Other data

None known.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity**

Note Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Note No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions Hazardous decomposition products formed under fire conditions.
No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.

10.5 Incompatible materials to avoid

Materials to avoid no data available;

10.6 Hazardous decomposition products

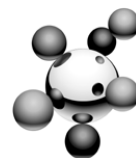
Hazardous decomposition products No decomposition if stored normally.

Thermal decomposition No decomposition if used as directed.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity**

Acute oral toxicity Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters:
LD50 rat: > 5.000 mg/kg; OECD Test Guideline 401
Based on available data, the classification criteria are not met.

Acute inhalation toxicity Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters:
study scientifically unjustified
Justification:

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

	Negligible or unlikely exposure pathways Sufficient data are available from alternative routes of exposure.
Acute dermal toxicity	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: LD50 rat: > 2.000 mg/kg; Directive 67/548/EEC, Annex V, B.3. Based on available data, the classification criteria are not met.
Skin corrosion/irritation	
Skin irritation	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: rabbit: not irritating; OECD Test Guideline 404 Based on available data, the classification criteria are not met.
Human experience - Skin contact	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: not irritating
Serious eye damage/eye irritation	
Eye irritation	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: rabbit: slightly irritating; OECD Test Guideline 405 Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	
Sensitisation	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Maximisation Test guinea pig: not sensitizing; OECD Test Guideline 406 Based on available data, the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity in vitro	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: In vitro tests did not show mutagenic effects
Genotoxicity in vivo	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: In vivo tests did not show mutagenic effects
Remarks	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Based on available data, the classification criteria are not met.
Carcinogenicity	
Remarks	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential.
Reproductive toxicity	
Reproductive toxicity	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: rat; Oral NOAEL ((parents)): 170 mg/kg (based on body weight and day) NOAEL (F1): 170 mg/kg (based on body weight and day); OECD Test Guideline 415 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Bis(2-Ethylhexyl)adipate
Remarks Reproductive toxicity	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Based on available data, the classification criteria are not met.
Teratogenicity	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: rat; Oral NOAEL: 170 mg/kg (based on body weight and day) NOAEL (dam): 170 mg/kg (based on body weight and day); OECD Test Guideline 414 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Bis(2-Ethylhexyl)adipate

**COSMACOL/EMI.**

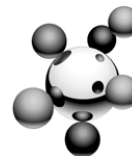
Version: 4.00

Revision Date 20.06.2013

Remarks-Teratogenicity	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: Based on available data, the classification criteria are not met.
STOT - single exposure	
Remarks	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Remarks	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: mouse; Oral; 91 d NOAEL: 200 mg/kg (based on body weight and day); OECD Test Guideline 408 Symptoms: reduced body weight gain (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Bis(2-Ethylhexyl)adipate
Aspiration hazard	
Aspiration toxicity	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: not applicable
Toxicological information	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: None known.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: LC50 (96 h) Brachydanio rerio: > 100 mg/l; OECD Test Guideline 203
Toxicity to fish - Chronic toxicity	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: study scientifically unjustified Justification: In the range of water solubility not toxic under test conditions.
Toxicity to daphnia and other aquatic invertebrates	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: EC50 (48 h) Daphnia magna (Water flea): > 100 mg/l; static test; OECD Test Guideline 202
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: study scientifically unjustified Justification: In the range of water solubility not toxic under test conditions.
Toxicity to aquatic plants	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: ErC50 (72 h) Selenastrum capricornutum: > 100 mg/l; static test; OECD Test Guideline 201
Toxicity to bacteria	Butanedioic acid, hydroxy,di-(C12-C13) alkyl esters: The study is not necessary. Justification: In the range of water solubility not toxic under test conditions. Readily biodegradable.

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

Toxicity to soil dwelling organisms	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: study scientifically unjustified Justification: Readily biodegradable.
Toxicity to terrestrial flora	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: study scientifically unjustified Justification: Readily biodegradable.
Toxicity for other terrestrial non-mammalian fauna	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: no data available
12.2 Persistence and degradability	
Biodegradability	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301F
12.3 Bioaccumulative potential	
Bioaccumulation	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Bioconcentration factor (BCF): 195,4; calculated Bioaccumulation is unlikely.
12.4 Mobility in soil	
Mobility	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Adsorption/Soil; log Koc: 5,02; calculated strong adsorption to soil immobile
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: Based on available data, the classification criteria are not met.
12.6 Other adverse effects	
General advice	Butanedioic acid, hydroxy, di-(C12-C13) alkyl esters: None known.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Product	Can be incinerated, when in compliance with local regulations.
Contaminated packaging	Empty remaining contents.
waste code of the European Union: EWC	A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. The waste code must be determined in agreement with the regional waste disposal authority or company.

SECTION 14: TRANSPORT INFORMATION**14.1 UN number**

ADR	Not dangerous goods
RID	Not dangerous goods

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.2 Proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.3 Transport hazard class

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.4 Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.5 Environmental hazards

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no
IMDG	Marine pollutant	no
ICAO/IATA	Environmentally hazardous	no

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

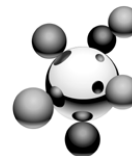
14.7 Transport in bulk according to AnnexII of MARPOL 73/78 and the IBC Code

Remarks No information available.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****NATIONAL/OTHER REGULATIONS**

Directive 96/82/EC on the control of major-accident hazards involving dangerous

list entry in the directive: Directive 96/82/EC does not apply

**COSMACOL/EMI.**

Version: 4.00

Revision Date 20.06.2013

substances**NOTIFICATION STATUS**

US. Toxic Substances Control Act	TSCA	n (Negative listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	n (Negative listing)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	n (Negative listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	n (Negative listing)
Japan. Kashin-Hou Law List	ENCS (JP)	n (Negative listing)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	n (Negative listing)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	n (Negative listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	n (Negative listing)
China. Inventory of Existing Chemical Substances	INV (CN)	y (positive listing)
Switzerland. Consolidated Inventory	CH INV	n (Negative listing)

Please note: the names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

15.2 Chemical Safety Assessment**bis(C12-C13)alkyl-2-hydroxybutandioate**

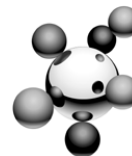
A Chemical Safety Assessment is not required for this substance.

SECTION 16: OTHER INFORMATION**Safety data sheet sections which have been updated:**

- 5. Firefighting measures
- 8. Exposure controls/personal protection
- 9. Physical and chemical properties
- 10. Stability and reactivity
- 11. Toxicological information
- 12. Ecological information
- 15. Regulatory information

Further information:

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. This safety data sheet only contains information relating to safety and does not



COSMACOL/EMI.

Version: 4.00

Revision Date 20.06.2013

replace any product information or product specification.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
AICS	Australian Inventory of Chemical Substances
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials (US)
BCF	Bioconcentration factor
CLP	Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DIN	Deutsches Institut für Normung
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC...	Effect concentration ... %
ENCS	Existing Notified Chemical Substances (Japan)
EWC	European Waste Catalogue
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organization for Standardization
IUAPC	International Union of Pure and Applied Chemistry
KECI	Korea Existing Chemicals Inventory
LC...	Lethal Concentration, ...%
LD...	Lethal Dose, ...%
MARPOL	International Convention for the Prevention of Pollution From Ships
NDSL	Non-Domestic Substances List
NOAEL	no observable adverse effect level
NOEL/NOEC	No Observed-effect level/concentration
NZIoC	New Zealand Inventory of Chemicals
OECD	Organisation for Economic Co-operation and Development
PBT	persistent, bioaccumulative, toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
TG	Test Guideline
TRGS	Technische Regeln für Gefahrstoffe
TSCA	Toxic Substances Control Act
vPvB	very persistent, very bioaccumulative
WGK	Wassergefährdungsklasse