464627 Lyreco Budget Correction Pen 7ml

Lyreco Group (Lyreco France)

Chemwatch:	4854-16	Print Date:	20/11/2013
Version No:	2.1.1.1	Issue Date:	22/04/2013
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)		S.REACH.GBR.EN	

SECTION 1 Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name:	464627 Lyreco Budget Correction Pen 7ml
Chemical Name:	Not Applicable
Synonyms:	Product Code: 464627
Proper shipping name:	METHYLCYCLOHEXANE
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable
EC number:	Not Applicable
Index number:	Not Applicable
REACH registration number:	Not Applicable

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

Relevant identified uses:	Correction pen., NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk.
Uses advised against:	Not Applicable

1.3. Details of the supplier of the safety data sheet

Registered company name:	Lyreco Group (Lyreco France)
Address:	Rue du 19 Mars 1962 Marly 59770 France
Telephone:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)
Fax:	Not Available
Website:	Not Available
Email:	Not Available

1.4. Emergency telephone number

Association / Organisation:	Not Available
Emergency telephone numbers:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)
Other emergency telephone numbers:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Considered a dangerous mixture according to Directive 1999/45/EC, Reg.

ChemWatch Hazard Ratings

		Min/Max
Flammability	3	
Toxicity	2	
Body Contact	2	
Reactivity	2	
Chronic	2	

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

DSD classification:

In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations

DPD classification[1]:

R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R38	Irritating to skin.
R67	Vapours may cause drowsiness and dizziness.
R65	HARMFUL-May cause lung damage if swallowed.
R43	May cause SENSITISATION by skin contact.
R11	Highly flammable.

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

Classification according to regulation (EC) No 1272/2008 [CLP][1]:

STOT - SE (Narcosis) Category 3, Aspiration Hazard Category 1, Chronic Aquatic Hazard Category 2, Flammable Liquid Category 2, Skin Corrosion/Irritation Category 2, Skin Sensitizer Category 1

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

2.2. Label elements

CLP label elements

Signal word:	DANGER

Hazard statement(s):

H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

Supplementary statement(s):

Not Applicable

Precautionary statement(s): Prevention

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s): Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P321	Specific treatment (see advice on this label).
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use… to extinguish.
P391	Collect spillage.

Precautionary statement(s): Storage

P403+P233	Store in a well-ventilated place.
P403+P235	Store in a well-ventilated place.
P405	Store locked up.

Precautionary statement(s): Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

DSD / DPD label elements

Relevant risk statements are found in section 2.1

Indication(s) of danger:	F, Xn, N

Safety advice:

S02	Keep out of reach of children.
S09	Keep container in a well ventilated place.
S13	Keep away from food, drink and animal feeding stuffs.
S16	Keep away from sources of ignition.
S23	Do not breathe gas/fumes/vapour/spray.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S35	This material and its container must be disposed of in a safe way.
S36	Wear suitable protective clothing.
S37	Wear suitable gloves.
S40	To clean the floor and all objects contaminated by this material, use water and detergent.

S41	In case of fire and/or explosion, DO NOT BREATHE FUMES.
S43	In case of fire use...
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well ventilated areas.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S57	Use appropriate container to avoid environmental contamination.
S61	Avoid release to the environment.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

2.3. Other hazards

Inhalation and/or ingestion may produce health damage*.

May produce discomfort of the eyes and respiratory tract*.

Limited evidence of a carcinogenic effect*.

Cumulative effects may result following exposure*.

Possible respiratory sensitizer*.

Repeated exposure potentially causes skin dryness and cracking*.

SECTION 3 Composition / information on ingredients

3.1. Substances

See 'Composition on ingredients' in Section 3.2

3.2. Mixtures

1. CAS No 2. EC No 3. Index No 4. REACH No	%[weight]	Name	Classification according to directive 67/548/EEC [DSD]	Classification according to regulation (EC) No 1272/2008 [CLP]
1. 13463-67-7 2. 236-675-5, 215-280-1, 215-282-2 3. Not Available 4. 01-2119489379-17-XXXX, 01-2119954396-27-XXXX	50-60	titanium dioxide	Not Applicable	Not Applicable
1. 108-87-2 2. 203-624-3 3. 601-018-00-7 4. 01-2119556887-18-XXXX	40-50	methylcyclohexane	R11, R38, R51/53, R65, R67[2]	Flam. , Asp. , Skin Irrit. , STOT SE 3, Aquatic Chronic 2; H225, H304, H315, H336, H411[3]
1. 97-86-9 2. 202-613-0 3. 607-113-00-X 4. 01-2119488331-38-XXXX	5-10	iso-butyl methacrylate	R10, R36/37/38, R43, R50[2]	Flam. , Eye Irrit. , STOT SE 3, Skin Irrit. , Skin Sens. , Aquatic Acute 1; H226, H319, H335, H315, H317, H400[3]

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

SECTION 4 First aid measures

4.1. Description of first aid measures

General:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.
- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do **NOT** induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Transport to hospital or doctor without delay.

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Eye Contact:

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

Ingestion:

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do **NOT** induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Transport to hospital or doctor without delay.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
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SECTION 5 Firefighting measures

5.1. Extinguishing media

- Foam.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3. Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.

Fire/Explosion Hazard:

- Liquid and vapour are highly flammable.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills:

- Remove all ignition sources.

Major Spills:

- Clear area of personnel and move upwind.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling

- **DO NOT**

Fire and explosion protection

See section 5

Other information

- Store in original containers in approved flame-proof area.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container:

- Packing as supplied by manufacturer.

Storage incompatibility:

- Avoid reaction with oxidising agents

Package Material Incompatibilities:

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Derived No Effect Level (DNEL)

Exposure Pattern	Workers	General Population
Long term - dermal, systemic effects	Not Available	Not Available
Long term - inhalation, systemic effects	Not Available	Not Available
Long term - oral, systemic effects	Not Available	Not Available
Long term - dermal, local effects	Not Available	Not Available
Long term - inhalation, local effects	Not Available	Not Available
Short term - dermal, systemic effects	Not Available	Not Available
Short term - inhalation, systemic effects	Not Available	Not Available
Short term - oral, systemic effects	Not Available	Not Available
Short term - dermal, local effects	Not Available	Not Available
Short term - inhalation, local effects	Not Available	Not Available

Predicted No Effect Level (PNEC)

Compartment	Value
Fresh Water	Not Applicable
Marine Water	Not Applicable
Aqua	Not Applicable
Fresh water sediment	Not Applicable
Marine water sediment	Not Applicable
Soil	Not Applicable
STP	Not Applicable
ORAL	Not Applicable

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	titanium dioxide	Titanium dioxide total inhalable / Titanium dioxide respirable	10 (mgm3) / 4 (mgm3)	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
titanium dioxide	15(ppm)	15(ppm)	15(ppm)	500(ppm)
methylcyclohexane	500(ppm)	1200(ppm)	1200(ppm)	1200(ppm)

Ingredient	Original IDLH	Revised IDLH
titanium dioxide	N.E.(mgm3)N.E.(ppm)	5,000(mgm3)
methylcyclohexane	10,000(ppm)	1,200 [LEL] / 500(ppm)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.

8.2.2. Personal protection

Eye and face protection:

- Safety glasses with side shields.

Skin protection:

See Hand protection below

Hand protection:

- Wear chemical protective gloves, e.g. PVC.

Body protection:

See Other protection below

Other protection:

- Overalls.

Thermal hazards:

Recommended material(s):

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
464627 Lyreco Budget Correction Pen 7ml

Not Available

Material	CPI

* CPI - Chemwatch Performance Index

Respiratory protection:

Type A-P Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Highly flammable liquid; does not mix with water.

Physical state	Liquid	**Relative density (Water = 1)**	>1.1
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature**	>500
Melting point / freezing point (°C)	-126	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	99	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	-2.5	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	7.2	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	1.1	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Immiscible	**pH as a solution(1%)**	Not Available
Vapour density (Air = 1)	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1. Reactivity:

See section 7.2

10.2. Chemical stability:

- Presence of incompatible materials.

10.3. Possibility of hazardous reactions:

See section 7.2

10.4. Conditions to avoid:

See section 7.2

10.5. Incompatible materials:

See section 7.2

10.6. Hazardous decomposition products:

See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Inhaled:

Inhalation of vapours may cause drowsiness and dizziness.

Ingestion:

Accidental ingestion of the material may be damaging to the health of the individual.

Skin Contact:

Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period.

Eye:

Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Chronic:

Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.

TOXICITY	IRRITATION
464627 Lyreco Budget Correction Pen 7ml	
Not Available	Not Available

titanium dioxide

Oral (Mouse) LD50: >10000 mg/kg *	Skin (human): 0.3 mg /3D (int)-mild *
Oral (Rat) LD50: >20000 mg/kg *	
Not Available	Not Available

methylcyclohexane

Inhalation (mouse) LC50: 41500 mg/m3/2h	
Intravenous (mouse) LD50: 234 mg/kg	
Oral (mouse) LD50: 2250 mg/kg	
Not Available	Not Available

iso-butyl methacrylate

Dermal (guinea pig) LD50: 17700 mg/kg	h
Oral (mouse) LD50: 11990 mg/kg	
Oral (rat) LD50: 6400 mg/kg	
Not Available	Not Available

* Value obtained from manufacturer's msds

464627 Lyreco Budget Correction Pen 7ml

No significant acute toxicological data identified in literature search.

TITANIUM DIOXIDE

The material may produce moderate eye irritation leading to inflammation.
* IUCLID

ISO-BUTYL METHACRYLATE

The following information refers to contact allergens as a group and may not be specific to this product.
Reproductive effector in rats

Acute Toxicity:	Not Applicable	**Carcinogenicity:**	Not Applicable
Skin Irritation/Corrosion:	Skin Corrosion/Irritation Category 2	**Reproductivity:**	Not Applicable
Serious Eye Damage/Irritation:	Not Applicable	**STOT - Single Exposure:**	STOT - SE (Narcosis) Category 3
Respiratory or Skin sensitisation:	Skin Sensitizer Category 1	**STOT - Repeated Exposure:**	Not Applicable
Mutagenicity:	Not Applicable	**Aspiration Hazard:**	Aspiration Hazard Category 1

CMR STATUS

SECTION 12 Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

12.4. Mobility in soil

Ingredient	Mobility
Not Available	Not Available

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT and vPvB Criteria fulfilled?	Not Available	Not Available	Not Available

12.6. Other adverse effects

No data available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal:

- Recycle wherever possible or consult manufacturer for recycling options.

Waste treatment options:

Sewage disposal options:

No relevant data

SECTION 14 Transport information

Labels Required:

Marine Pollutant

HAZCHEM: 3YE

Land transport (ADR)

14.1. UN number	2296	**14.4. Packing group**	II
14.2. UN proper shipping name	METHYLCYCLOHEXANE	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	Class: 3 Subrisk:	**14.6. Special precautions for user**	Hazard identification (Kemler): 33 Classification code: F1 Hazard Label: 3 Special provisions: limited quantity: 1 L

Air transport (ICAO-IATA / DGR)

14.1. UN number	2296	**14.4. Packing group**	II
14.2. UN proper shipping name	Methylcyclohexane	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	ICAO/IATA Class: 3 ICAO / IATA Subrisk: ERG Code: 3H	**14.6. Special precautions for user**	Special provisions: Cargo Only Packing Instructions: 364 Cargo Only Maximum Qty / Pack: 60 L Passenger and Cargo Packing Instructions: 353 Passenger and Cargo Maximum Qty / Pack: 5 L Passenger and Cargo Limited Quantity Packing Instructions: Y341 Passenger and Cargo Maximum Qty / Pack: 1 L

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	2296	**14.4. Packing group**	II
14.2. UN proper shipping name	METHYLCYCLOHEXANE	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	IMDG Class: 3 IMDG Subrisk:	**14.6. Special precautions for user**	EMS Number: F-E,S-D Special provisions: Limited Quantities: 1 L

Inland waterways transport (ADN)

14.1. UN number	2296	**14.4. Packing group**	II
14.2. UN proper shipping name	METHYLCYCLOHEXANE	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	3:	**14.6. Special precautions for user**	Classification code: F1 Limited quantity: 1 L Equipment required: PP, EX, A Fire cones number: 1

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

Not Applicable

SECTION 15 Regulatory information

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

titanium dioxide(13463-67-7) is found on the following regulatory lists

"GESAMP/EHS Composite List - GESAMP Hazard Profiles","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","FisherTransport Information","Sigma-AldrichTransport Information","CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP","International Fragrance Association (IFRA) Survey: Transparency List","International Numbering System for Food Additives","OECD List of High Production Volume (HPV) Chemicals","IMO IBC Code Chapter 17: Summary of minimum requirements","UK Workplace Exposure Limits (WELs)","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","EU Cosmetic Directive 76/768/EEC Annex VII Part 1 List of permitted UV filters which cosmetic products may contain (English)","European Union Register of Feed Additives pursuant to Regulation (EC) No 1831/2003 - Annex I: List of Additives","EU Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products - Annex VI List of UV Filters Allowed in Cosmetic Products","EU Cosmetic Directive 76/768/EEC Annex IV Part 1: List of Colouring Agents Allowed for Use in Cosmetic Products (Danish)","EU approved additives","Europe Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food - Annex I: Substances","EU Cosmetic Directive 76/768/EEC Annex IV Part 1: List of Colouring Agents Allowed for Use in Cosmetic Products (English)","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Inventory of Ingredients used in Cosmetic Products","Europe Substances Listed in EU Directives on Plastics in Contact with Food","EU Cosmetic Directive 76/768/EEC Annex VII Part 1 List of permitted UV filters which cosmetic products may contain (German)","EU Cosmetic Directive 76/768/EEC Annex VI Part 1 List of Preservatives Allowed (German)","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","EU Cosmetic Directive 76/768/EEC Annex IV Part 1: List of Colouring Agents Allowed for Use in Cosmetic Products (German)","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe ECHA Registered Substances - Classification and Labelling - GHS","EU Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products - Annex IV List of Colorants Allowed in Cosmetic Products","Europe ECHA Substances identified by industry to be registered by 31 May 2013"

methylcyclohexane(108-87-2) is found on the following regulatory lists

"GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","FisherTransport Information","Sigma-AldrichTransport Information","OECD List of High Production Volume (HPV) Chemicals","IMO IBC Code Chapter 17: Summary of minimum requirements","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe ECHA Registered Substances - Classification and Labelling - GHS","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Maritime Dangerous Goods Requirements (IMDG Code)","UK Dangerous Goods Emergency Action Code List 2013","ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Directive 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into

Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III","OSPAR National List of Candidates for Substitution – Norway"

iso-butyl methacrylate(97-86-9) is found on the following regulatory lists

"GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","FisherTransport Information","IOFI Global Reference List of Chemically Defined Substances","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","IMO IBC Code Chapter 17: Summary of minimum requirements","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","Europe European Commission Database of flavouring substances","EU list of flavouring substances which can be used in food -Regulation EU 872/2012","Europe Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food - Annex I: Substances","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","Europe Substances Listed in EU Directives on Plastics in Contact with Food","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe ECHA Registered Substances - Classification and Labelling - GHS","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Maritime Dangerous Goods Requirements (IMDG Code)","UK Dangerous Goods Emergency Action Code List 2013","ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Directive 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III"

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
titanium dioxide	13463-67-7	Not Available	01-2119489379-17-XXXX, 01-2119954396-27-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
2	**Not Classified, Acute Tox. 4, Carc. 2, Eye Irrit. 2, STOT SE 3, STOT RE 1, Skin Irrit. 2, STOT SE 2, Carc. 1B, Aquatic Chronic 4, STOT RE 2**	**GHS08, Wng, Dgr, GHS06**	**H332, H335, H372, H315, H350, H412, H318, H302, H312, H319, H351**
1	**Not Classified**	**GHS08, Wng, Dgr, GHS06**	**H332, H335, H372, H315, H350, H412, H318, H302, H312, H319, H351**
Ingredient	**CAS number**	**Index No**	**ECHA Dossier**
methylcyclohexane	108-87-2	601-018-00-7	01-2119556887-18-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
2	**Flam. Liq. 2, Asp. Tox. 1, Skin Irrit. 2, STOT SE 3, Aquatic Chronic 2, Aquatic Acute 1, Aquatic Chronic 1, Eye Irrit. 2**	**GHS09, GHS08, Dgr, GHS01**	**H225, H304, H315, H336, H410, H335, H319**
1	**Flam. Liq. 2, Asp. Tox. 1, Skin Irrit. 2, STOT SE 3, Aquatic Chronic 2**	**GHS02, GHS09, GHS08, Dgr**	**H225, H304, H315, H336, H411**
Ingredient	**CAS number**	**Index No**	**ECHA Dossier**
iso-butyl methacrylate	97-86-9	607-113-00-X	01-2119488331-38-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
2	**Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Not Classified**	**GHS07, GHS09, Wng, GHS01, Dgr**	**H226, H315, H317, H319, H335, H400, H336**
1	**Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Eye Irrit. 2, STOT SE 3, Aquatic Acute 1**	**GHS07, GHS02, GHS09, Wng**	**H226, H315, H317, H319, H335, H400**

SECTION 16 Other information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards: