EURAM CHEMICALS LTD
SAFETY DATA SHEET (EEC)

Reference: SD00251/14

Product: K-FLEX 500P

1. Identification of the substance/preparation and of the company

Product trade name: K-FLEX 500P

Chemical Description Blend of Glycol dibenzoates

Supplier

Manufacturer/Supplier: **Euram Chemicals Ltd**
PO Box 3346
Marlow SL7 1WH
Telephone: **44 (0) 1628 472848**
Fax no **44 (0) 1628 890095**
Emergency information **44 (0) 7785 267921**

2. Hazards identification

2.1. Classification of the substance or mixture:

Product classification according to Regulation (EC) 1272/2008 (CLP):
Hazardous to the aquatic environment - Chronic Category 3, H412.

Product classification according to Directive 67/548/EEC or 1999/45/EC: Dangerous for the environment
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements:

Product labeling according to Regulation (EC) 1272/2008 (CLP):

Hazard pictogram(s):	Not Applicable
Signal word:	Not Applicable
Hazard statements:	H412 Harmful to aquatic life with long lasting effects.
Precautionary statements:	P273 Avoid release to the environment. P501 Dispose of contents/container in accordance with local, regional and international regulations.
Supplemental information:	Not Applicable
Notes:	No Additional Information.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

Product labeling according to Directive 67/548/EEC or 1999/45/EC:

Indications of danger:	Dangerous for the environment	
Risk phrases:	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases:	S61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

2.3. Other hazards:

PBT/vPvB criteria:	This product does not meet the PBT and vPvB classification criteria.
Other hazards:	No Additional Information

See Section 11 for toxicological information.

3. Composition / information on ingredients

3.2. Mixture:

CAS-No.	Chemical Name	Weight %	REACH Registration No.	EC Number
0027138-31-4	Dipropylene glycol dibenzoate	25-50	Not Available	248-258-5

CAS-No.	Chemical Name	Symbols (67/548/EEC)	Classification - (EC 1272/2008)	H Statements (EC 1272/2008)

EU R Phrases (67/548/EEC)

0027138-31-4	Dipropylene glycol dibenzoate	N	R51/53	Aquatic Chronic 3 H412

See Section 16 for full text of R (Risk) phrases and H (Hazard) statements.

Notes: No Additional Information

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

4. First aid measures

4.1. Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur.

Skin contact: Wash the affected area thoroughly with plenty of soap and water. Get medical attention if symptoms occur.

Inhalation: If affected, remove to fresh air. Get medical attention if symptoms occur.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

4.2. Most important symptoms and effects, both acute and delayed:

Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

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

Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media:

Suitable: Use water spray, ABC dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unsuitable: None known.

5.2. Special hazards arising from substance or mixture:

Unusual fire/explosion hazards: Product is not considered a fire hazard, but will burn if ignited. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Hazardous combustion products: Irritating or toxic substances will be emitted upon burning, combustion or decomposition. See section 10 (10.6 Hazardous decomposition products) for additional information.

5.3. Advice for fire-fighters:

Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources.

6.2. Environmental precautions:

Do not flush product into public sewer, water systems or surface waters.

6.3. Methods and material for containment and cleaning up:

Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

6.4. References to other sections:

See Section 8 for recommendations on the use of personal protection and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling:

As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse. Provide eyewash fountains and safety showers in the work area.

7.1. Conditions for safe storage, including any incompatibilities:

Keep away from heat, sparks and open flames. Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Empty container contains residual product which may exhibit hazards of product. Do not reuse empty container without commercial cleaning or reconditioning. Plasticizer products will soften plastic materials and as a result they should not be transported in piping systems constructed from these materials.

7.2. Specific end use(s):

No Additional Information.

8. Exposure controls / personal protection

8.1. Control parameters:

Occupational exposure limits:

Chemical Name	EU OELV	EU IOELV	ACGIH - TWA ----------	ACGIH - STEL ----------
Dipropylene glycol dibenzoate	N/E	N/E	N/E	N/E

Chemical Name	UK WELs
Dipropylene glycol dibenzoate	N/E

N/E=Not established (no exposure limits established for listed substances for listed country/region/organization).

Derived No Effect Levels (DNELs) - Workers:

Chemical Name	Inhalation-Acute (Local)	Inhalation-Acute (Systemic)	Inhalation-Long Term (Local)	Inhalation-LongTerm (Systemic)
Dipropylene glycol dibenzoate	N/E	35.08 mg/m3	N/E	8.8 mg/m3

Chemical Name	Dermal-Acute (Local)	Dermal-Acute (Systemic)	Dermal-Long Term (Local)	Dermal-Long Term (Systemic)

Dipropylene glycol dibenzoate	N/E	170 mg/kg bw/day	N/E	10 mg/kg bw/day

Predicted No Effect Concentration (PNECs):

Chemical Name	Freshwater	Marine water	Intermittent releases	Sediment (freshwater)	Sediment (marine)
Dipropylene glycol dibenzoate	3.7 ug/L	0.37 ug/L	37 ug/L	1.49 mg/kg sediment dw	0.149 mg/kg sediment dw

Chemical Name	Soil	STP	Oral
Dipropylene glycol dibenzoate	1 mg/kg soil dw	10 mg/L	333 mg/kg food

N/E=Not established; N/A=Not applicable (not required); bw=body weight; dw=dry weight; ww=wet weight.

8.2. Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear eye protection.

Hand protection: Avoid skin contact when mixing or handling the material by wearing impervious and chemical resistant gloves. In case of prolonged immersion or frequently repeated contact, gloves with breakthrough times greater than 240 minutes (protection class 5 or greater) are recommended. For brief contact or splash applications, gloves with breakthrough times of 10 minutes or greater are recommended (protection class 1 or greater). The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374. Suitability and durability of a glove is dependent on usage (e.g. frequency and duration of contact, other chemicals which may be handled, chemical resistance of glove material and dexterity). Always seek advice of the glove supplier as to the most suitable glove material.

Skin and body protection: Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: Respiratory protection is not needed with proper ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Further information: Eyewash fountains and safety showers are recommended in the work area.

Environmental exposure controls: See Sections 6 and 12.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Form	Liquid	**pH**	Not Available
Appearance	Colorless to light yellow	**Relative density**	1.14
Odour	Slight aromatic	**Partition coefficient (n-octanol/water)**	>3 - <4
Odour threshold	Not Available	**%Volatile by weight**	0.9%
Solubility in water	Negligible	**VOC**	0.9% ASTM D2369
Evaporation rate	<1	**Flash point**	210℃ (410℉) ASTM D-92
Vapour pressure	<0.1 mm Hg @ 20 ℃	**Boiling Point ℃**	191℃ @ 5 mm Hg
Vapour density	11.3 (Air=1)	**Boiling Point ℉**	376℉ @ 5 mm Hg
Viscosity	70 cSt @ 25℃; 25 cSt @ 40℃	**Autoignition temperature**	Not Available
Melting point / Freezing point	6℃ (43℉)	**Flammability (solid, gas)**	Not Applicable (liquid)
Oxidising properties	Not oxidizing	**Flammability or explosive limits**	LFL/LEL Not Available UFL/UEL Not Available
Explosive properties	Not explosive	**Surface tension**	44.4 dynes/cm @ 25℃ (ASTM D1331)

Decomposition temperature

Not Available

9.2. Other information:

Amounts specified are typical and do not represent a specification.

10. Stability and reactivity

10.1. Reactivity:

None known.

10.2. Chemical stability:

This product is stable.

10.3. Possibility of hazardous reactions:

Hazardous polymerization will not occur.

10.4. Conditions to avoid:

Excessive heat and ignition sources.

10.5. Incompatible materials:

Avoid strong acids, bases, and oxidizing agents. Avoid contact with phenols.

10.6. Hazardous decomposition products:

Carbon dioxide, carbon monoxide and hydrocarbons.

Notes: No Additional Information.

11. Toxicological information

Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

11.1. Information on toxicological effects:

Information on likely routes of exposure:

General: No Additional Information

Eyes: May cause eye irritation.

Skin: May cause skin irritation. Repeated or prolonged skin contact may cause irritation.

Inhalation: High airborne concentrations of vapors resulting from heating, misting or spraying may cause irritation of the respiratory tract and mucous membranes.

Ingestion: May be harmful if swallowed. Ingestion may cause irritation.

Acute toxicity information: Not classified (based on available data, the classification criteria are not met).

ATEmix (oral) = >4000 - <5000 mg/kg.

Chemical Name	LC50 Inhalation	Species	LD50 Oral	Species	LD50 Skin	Species
Dipropylene glycol dibenzoate	>200 mg/L (aerosol, 4 hours)	Rat/ adult	3914 mg/kg	Rat/ adult	>2000 mg/kg	Rat/ adult

Chemical Name	LC50 Inhalation	Species	LD50 Oral	Species	LD50 Skin	Species
Dipropylene glycol dibenzoate	N/E		4462 mg/kg	Mouse	>2000 mg/kg	Rabbit/ adult

Corrosion/Irritation/Sensitization information:

Skin corrosion/irritation: Not classified (based on available data, the classification criteria are not met).

Serious eye damage/irritation: Not classified (based on available data, the classification criteria are not met).

Respiratory or skin sensitization: Not classified (based on available data, the classification criteria are not met).

Chemical Name	Eye Irritation	Species/Dose	Skin Irritation	Species/Dose	Skin Sensitisation	Species/Dose
Dipropylene glycol dibenzoate	Slight irritant	Rabbit/ adult	Slight irritant	Rabbit/ adult	Non-sensitizer	Guinea Pig/ adult

Carcinogenicity/Mutagenicity/Reproductive toxicity information:

Carcinogenicity: Not classified (based on available data, the classification criteria are not met).

Germ cell mutagenicity: Not classified (based on available data, the classification criteria are not met). DIPROPYLENE GLYCOL DIBENZOATE: In vitro testing showed no mutagenic activity.

Reproductive toxicity: Not classified (based on available data, the classification criteria are not met). DIPROPYLENE GLYCOL DIBENZOATE: Reproductive toxicity, 2-generation oral study in rats: NOAEL (no-observed adverse-effect-level) 500 mg/kg bw/day. Developmental toxicity, oral, rats: NOAEL of 500 mg/kg bw/day.

Specific target organ toxicity (STOT):

STOT-single exposure: Not classified (based on available data, the classification criteria are not met).

STOT-repeated exposure: Not classified (based on available data, the classification criteria are not met). DIPROPYLENE GLYCOL DIBENZOATE: A 13-week dietary study in rats observed decreased body weights, and liver, spleen and caecum effects at a dose of 2500 mg/kg/day which showed completed recovery within 4 weeks after exposure. NOAEL (No-Observed-Adverse-Effect-Level), oral, rat - 1000 mg/kg bw/day.

Aspiration hazard: Not classified (based on available data, the classification criteria are not met).

Other toxicity information:

No additional information available.

12. Ecological information

12.1. Toxicity:

Chemical Name	Fish 96 hour LC50	Species	Fish 96 hour LC50	Species	Fish Chronic NOEC	Species
Dipropylene glycol dibenzoate	3.7 mg/L	Pimephalis promelas (Fathead minnow)	>3 mg/L	Oncorhynchus mykiss (Rainbow trout)	N/E	

Chemical Name	Invertebrates 48 hour EC50	Species	Invertebrates 24 hour EC50	Species	Invertebrates Chronic NOEC	Species
Dipropylene glycol dibenzoate	EL50=19.3 mg/L	Daphnia magna	N/E		N/E	

Chemical Name	Algal 96 hour EC50	Species	Algal 72 hour EC50	Species	Algal Chronic NOEC	Species
Dipropylene glycol dibenzoate	EL50=3.6 mg/L	Selenastrum capricornutum	EL50=4.9 mg/L	Selenastrum capricornutum	NOELR: 96 hour=0.46 mg/L; 72 hour=1 mg/L	Selenastrum capricornutum

12.2. Persistence and degradability:

Chemical Name	Biodegradation
Dipropylene glycol dibenzoate	Readily biodegradable (OECD 301B)

Expected to readily biodegrade, based on similar material(s).

12.3. Bioaccumulative potential:

Chemical Name	Bioconcentration Factor (BCF)	Log Kow
Dipropylene glycol dibenzoate	<200 L/kg	3.9 (20℃)

Not expected to bioaccumulate.

12.4. Mobility in soil:

Chemical Name	Mobility in soil (Koc/Kow)
Dipropylene glycol dibenzoate	3981 @ 20°C

No specific information available.

12.5. Results of PBT and vPvB assessment:

This product does not meet the PBT and vPvB classification criteria.

12.6. Other adverse effects:

No Additional Information

13. Disposal considerations

13.1. Waste treatment methods:

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

14. Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

14.1. UN number: N/A

14.2. UN proper shipping name:

Not regulated - See Bill of Lading for Details

14.3. Transport hazard class(es):

U.S. DOT hazard class:	N/A
Canada TDG hazard class:	N/A
Europe ADR/RID hazard class:	N/A
IMDG Code (ocean) hazard class:	N/A
ICAO/IATA (air) hazard class:	N/A

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

14.4. Packing group: N/A

14.5. Environmental hazards:

Marine pollutant: Not Applicable

Hazardous substance (USA): Not Applicable

14.6. Special precautions for user:

Not Applicable

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

Not Applicable

Notes: No Additional Information

15. Regulatory information

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

EU Authorizations and/or restrictions on use: Not Applicable

Other EU information: No Additional Information

National regulations: No Additional Information

Chemical inventories:

Regulation	Status
Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ELINCS):	N
Europe REACH (EC) 1907/2006:	N
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed.

Chemical inventory notes: No Additional Information

15.2. Chemical safety assessment:

Not Applicable

Notes: No Additional Information

16. Other Information

Risk (R) phrases in the Composition section (Section 3):
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard (H) Statements in the Composition section (Section 3):
H412 Harmful to aquatic life with long lasting effects.

Reason for revision: Changes in Section(s): 9

Evaluation method for classification of mixtures: Calculation method, Read-across

Notes: No Additional Information

ADR/RID:	European dangerous goods transport road and rail regulations
ATE:	Acute Toxicity Estimate
bw:	body weight
CAS No:	Chemical Abstract Service Registry Number
COSHH:	Control of Substances Hazardous to Health (United Kingdom)
DMEL:	Derived Minimal Effect Level
DNEL:	Derived No Effect Level
DOT:	Department of Transportation (U.S.)
EC:	European Community
EU:	European Union
EU OELV:	European Union Occupational Exposure Limit Value
EU IOELV:	European Union Indicative Occupational Exposure Limit Value
GHS:	Globally Harmonized System for the classification and labeling of chemical (United Nations)
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG code:	International Maritime Dangerous Goods code
LFL/LEL:	Lower Flammable Limit/Lower Explosive Limit
LEV:	Local Exhaust Ventilation
N/A:	Not Applicable
N/E:	None Established
OC:	Operational Conditions
OEL:	Occupational Exposure Limits
PBT:	Persistent, Bioaccumulative, Toxic
PNEC:	Predicted No Effect Concentration
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) 1907/2006
RMM:	Risk Management Measures
S or Skin:	Can be absorbed through the skin
SDS:	Safety Data Sheet
STEL:	Short Term Exposure Limit
TDG:	Canadian Transportation of Dangerous Goods Act and Regulations
TWA:	Time Weighted Average (exposure for 8-hour workday)
UFL/UEL:	Upper Flammable Limit/Upper Explosive Limit
UK:	United Kingdom
UN:	United Nations
U.S.:	United States
vPvB:	very Persistent, very Bioaccumulative
WEL:	Workplace Exposure Limits (UK)