SAFETY DATA SHEET

According to EC Directive 2001/58/EC

Print Date Nov-20-2009 **Revision Date** Nov-20-2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code OSIMUCY
Product name **Optimizer Cyan (22390 - 440 ml, 22408 - 1L)**
Product description Eco Solvent Ink for Mutoh (OSI-MU)

Manufacturer or supplier's details .
GERMANY
DATAPLOT GmbH
Gutenbergstraße 15
D-24558 Henstedt-Ulzburg
Tel.: +49 4193-9950
Fax: +49 4193-995220

Emergency Telephone Number
GERMANY
Giftzentrale Mainz
Tel.: +49 6131/192-40

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Classification

Xn;R22 - Xi;R36
Xn - Harmful

Most Important Hazards
Harmful if swallowed
Irritating to eyes

Appearance Viscous liquid
Emergency Overview Harmful. Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	CAS-No	Weight %	Classification
Diethylene glycol diethyl ether	203-963-7	112-36-7	50 - 60	Xi;R36
Gamma Butyrolactone	202-509-5	96-48-0	10 - 20	Xn;R22 Xi;R36
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	5 - 10	Xn;R20/21
Dimethyl Glutarate	214-277-2	1119-40-0	5 - 10	Xi;R36/38
Dimethyl Adipate	211-020-6	627-93-0	1 - 5	Xn;R22

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4. FIRST AID MEASURES

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties No information available

Suitable Extinguishing Media Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.

Specific Hazards Arising from the Chemical Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.

Environmental Precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Component	European Union	The United Kingdom	France	Spain	Germany
Ethylene glycol monobutyl ether acetate		STEL: 50 ppm TWA: 20 ppm Skin	VME: 2 ppm VME: 13.3 mg/m^3 VLCT: 30 ppm VLCT: 199.8 mg/m^3 Skin	Skin VLA-EC: 333 mg/m^3 VLA-EC: 50 ppm VLA-ED: 133 mg/m^3 VLA-ED: 20 ppm	MAK: 10 ppm MAK: 66 mg/m^3 Skin Peak: 132 mg/m^3 Peak: 20 ppm

Component	Italy	Portugal	The Netherlands	Finland	Austria
Ethylene glycol monobutyl ether acetate	TWA: 133 mg/m^3 TWA: 20 ppm STEL: 333 mg/m^3 STEL: 50 ppm Skin	TWA: 20 ppm Skin notation	Skin STEL: 333 mg/m^3 TWA: 135 mg/m^3	TWA: 20 ppm TWA: 130 mg/m^3 STEL: 50 ppm STEL: 330 mg/m^3 Skin	Skin STEL: 40 ppm STEL: 270 mg/m^3 MAK: 20 ppm MAK: 133 mg/m^3

Component	Switzerland	Poland	Norway	Ireland	Denmark
Ethylene glycol monobutyl ether acetate	Skin STEL: 80 ppm STEL: 540 mg/m^3 MAK: 20 ppm MAK: 135 mg/m^3	NDSCh: 300 mg/m^3 NDS: 100 mg/m^3	TWA: 65 mg/m^3 TWA: 10 ppm Skin	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin	TWA: 130 mg/m^3 TWA: 20 ppm Skin
Dimethyl Glutarate	STEL: 20 mg/m^3 STEL: 3 ppm MAK: 3 ppm MAK: 20 mg/m^3				
Dimethyl Adipate	STEL: 1 mg/m^3 STEL: 0.14 ppm MAK: 1 mg/m^3 MAK: 0.14 ppm				

Occupational exposure controls

Engineering Measures Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment

Respiratory Protection Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

Skin Protection Wear protective gloves/clothing. Solvent-resistant apron and boots.

Hand Protection Nitrile rubber. Neoprene gloves.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous liquid	**Physical State**	Liquid
Odor	Characteristic	**Odor Threshold**	No information available
pH	No information available	**Autoignition Temperature**	No information available
Boiling point/Boiling Range	>149°C / >300°F	**Melting Point/Range**	No information available
Freezing Point/Range	No information available	**Solubility**	No information available
Evaporation Rate	No information available	**Partition Coefficient (n-octanol/water)**	No information available
Vapour Pressure	No information available	**Vapour Density**	No information available
Flammability (solid, gas)	No information available		

Flammability Limits in Air
Upper No information available
Lower No information available

Flash Point 90°C / 194°F
Method No data available

Photochemically Reactive No

Weight Per Gallon (lbs/gal) 8.17

Specific Gravity 0.98

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO2). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol diethyl ether	4970 mg/kg (Rat)	6700 µL/kg (Rabbit)	
Gamma Butyrolactone	1540 mg/kg (Rat)		2.68 mg/L (Rat) 4 h
Ethylene glycol monobutyl ether acetate	1600 mg/kg (Rat)	1480 mg/kg (Rabbit)	
Dimethyl Glutarate	8191 mg/kg (Rat)		5.6 mg/L (Rat) 4 h
Dimethyl Adipate	1920 mg/kg (Rat)		

Chronic Toxicity
No information available

Sensitisation	No information available
Neurological Effects	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available
Teratogenicity	No information available
Chronic Effects	No information available
Target Organ Effects	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

We have no quantitative data concerning the ecological effects of this product. Environmental fate information is derived from consideration of the properties of the ingredients. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Gamma Butyrolactone	72 Hr EC50 Scenedesmus subspicatus: 360 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 79 mg/L	96 Hr LC50 Leuciscus idus: 220-460 mg/L [static]	48 Hr EC50 Daphnia magna Straus: >500 mg/L
Ethylene glycol monobutyl ether acetate	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L		48 Hr EC50 water flea: 37 mg/L
Dimethyl Glutarate		96 Hr LC50 Pimephales promelas: 19.6-26.2 mg/L [static]	48 Hr EC50 Daphnia magna: 122.1-163.5 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
Gamma Butyrolactone	-0.566
Ethylene glycol monobutyl ether acetate	1.51

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

RID

Not classified as dangerous in the meaning of transport regulations

ADR

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Labelling

Symbol(s) Xn - Harmful

R -phrase(s)
R22 - Harmful if swallowed
R36 - Irritating to eyes

S -phrase(s)
S 2 - Keep out of the reach of children
S25 - Avoid contact with eyes
S46 - If swallowed, seek medical advice immediately and show this container or label

International Inventories
Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006
Does NOT contain a listed substance

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R36 - Irritating to eyes
R22 - Harmful if swallowed
R20/21 - Harmful by inhalation and in contact with skin
R36/38 - Irritating to eyes and skin

Revision Date	Nov-20-2009
Revision Summary	New MSDS format

Disclaimer
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

End of Safety Data Sheet

SAFETY DATA SHEET

According to EC Directive 2001/58/EC

Print Date Nov-20-2009 **Revision Date** Nov-20-2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code OSIMUMG
Product name **Optimizer Magenta (22391 - 440 ml, 22409 - 1L)**
Product description Eco Solvent Ink for Mutoh (OSI-MU)

Manufacturer or supplier's details .
GERMANY
DATAPLOT GmbH
Gutenbergstraße 15
D-24558 Henstedt-Ulzburg
Tel.: +49 4193-9950
Fax: +49 4193-995220

Emergency Telephone Number
GERMANY
Giftzentrale Mainz
Tel.: +49 6131/192-40

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Classification

Xn;R22 - Xi;R36
Xn - Harmful

Most Important Hazards
Harmful if swallowed
Irritating to eyes

Appearance Viscous liquid
Emergency Overview Harmful. Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	CAS-No	Weight %	Classification
Diethylene glycol diethyl ether	203-963-7	112-36-7	50 - 60	Xi;R36
Gamma Butyrolactone	202-509-5	96-48-0	10 - 20	Xn;R22 Xi;R36
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	5 - 10	Xn;R20/21
Dimethyl Glutarate	214-277-2	1119-40-0	5 - 10	Xi;R36/38
Dimethyl Adipate	211-020-6	627-93-0	1 - 5	Xn;R22

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4. FIRST AID MEASURES

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties No information available

Suitable Extinguishing Media Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.

Specific Hazards Arising from the Chemical Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.

Environmental Precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Component	European Union	The United Kingdom	France	Spain	Germany
Ethylene glycol monobutyl ether acetate		STEL: 50 ppm TWA: 20 ppm Skin	VME: 2 ppm VME: 13.3 mg/m^3 VLCT: 30 ppm VLCT: 199.8 mg/m^3 Skin	Skin VLA-EC: 333 mg/m^3 VLA-EC: 50 ppm VLA-ED: 133 mg/m^3 VLA-ED: 20 ppm	MAK: 10 ppm MAK: 66 mg/m^3 Skin Peak: 132 mg/m^3 Peak: 20 ppm

Component	Italy	Portugal	The Netherlands	Finland	Austria
Ethylene glycol monobutyl ether acetate	TWA: 133 mg/m^3 TWA: 20 ppm STEL: 333 mg/m^3 STEL: 50 ppm Skin	TWA: 20 ppm Skin notation	Skin STEL: 333 mg/m^3 TWA: 135 mg/m^3	TWA: 20 ppm TWA: 130 mg/m^3 STEL: 50 ppm STEL: 330 mg/m^3 Skin	Skin STEL: 40 ppm STEL: 270 mg/m^3 MAK: 20 ppm MAK: 133 mg/m^3

Component	Switzerland	Poland	Norway	Ireland	Denmark
Ethylene glycol monobutyl ether acetate	Skin STEL: 80 ppm STEL: 540 mg/m^3 MAK: 20 ppm MAK: 135 mg/m^3	NDSCh: 300 mg/m^3 NDS: 100 mg/m^3	TWA: 65 mg/m^3 TWA: 10 ppm Skin	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin	TWA: 130 mg/m^3 TWA: 20 ppm Skin
Dimethyl Glutarate	STEL: 20 mg/m^3 STEL: 3 ppm MAK: 3 ppm MAK: 20 mg/m^3				
Dimethyl Adipate	STEL: 1 mg/m^3 STEL: 0.14 ppm MAK: 1 mg/m^3 MAK: 0.14 ppm				

Occupational exposure controls

Engineering Measures Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment

Respiratory Protection Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

Skin Protection Wear protective gloves/clothing. Solvent-resistant apron and boots.

Hand Protection Nitrile rubber. Neoprene gloves.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous liquid	**Physical State**	Liquid
Odor	Characteristic	**Odor Threshold**	No information available
pH	No information available	**Autoignition Temperature**	No information available
Boiling point/Boiling Range	>149°C / >300°F	**Melting Point/Range**	No information available
Freezing Point/Range	No information available	**Solubility**	No information available
Evaporation Rate	No information available	**Partition Coefficient (n-octanol/water)**	No information available
Vapour Pressure	No information available	**Vapour Density**	No information available
Flammability (solid, gas)	No information available		

Flammability Limits in Air
Upper No information available
Lower No information available

Flash Point 90°C / 194°F
Method No data available

Photochemically Reactive No

Weight Per Gallon (lbs/gal) 8.141

Specific Gravity 0.976

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO2). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol diethyl ether	4970 mg/kg (Rat)	6700 µL/kg (Rabbit)	
Gamma Butyrolactone	1540 mg/kg (Rat)		2.68 mg/L (Rat) 4 h
Ethylene glycol monobutyl ether acetate	1600 mg/kg (Rat)	1480 mg/kg (Rabbit)	
Dimethyl Glutarate	8191 mg/kg (Rat)		5.6 mg/L (Rat) 4 h
Dimethyl Adipate	1920 mg/kg (Rat)		

Chronic Toxicity
No information available

Sensitisation	No information available
Neurological Effects	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available
Teratogenicity	No information available
Chronic Effects	No information available
Target Organ Effects	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

We have no quantitative data concerning the ecological effects of this product. Environmental fate information is derived from consideration of the properties of the ingredients. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Gamma Butyrolactone	72 Hr EC50 Scenedesmus subspicatus: 360 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 79 mg/L	96 Hr LC50 Leuciscus idus: 220-460 mg/L [static]	48 Hr EC50 Daphnia magna Straus: >500 mg/L
Ethylene glycol monobutyl ether acetate	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L		48 Hr EC50 water flea: 37 mg/L
Dimethyl Glutarate		96 Hr LC50 Pimephales promelas: 19.6-26.2 mg/L [static]	48 Hr EC50 Daphnia magna: 122.1-163.5 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
Gamma Butyrolactone	-0.566
Ethylene glycol monobutyl ether acetate	1.51

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

RID

Not classified as dangerous in the meaning of transport regulations

ADR

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Labelling

Symbol(s) Xn - Harmful

R -phrase(s)
R22 - Harmful if swallowed
R36 - Irritating to eyes

S -phrase(s)
S 2 - Keep out of the reach of children
S25 - Avoid contact with eyes
S46 - If swallowed, seek medical advice immediately and show this container or label

International Inventories
Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006
Does NOT contain a listed substance

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R36 - Irritating to eyes
R22 - Harmful if swallowed
R20/21 - Harmful by inhalation and in contact with skin
R36/38 - Irritating to eyes and skin

Revision Date	Nov-20-2009
Revision Summary	New MSDS format

Disclaimer
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

End of Safety Data Sheet

SAFETY DATA SHEET

According to EC Directive 2001/58/EC

Print Date Nov-20-2009 **Revision Date** Nov-20-2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code OSIMUYE
Product name Optimizer Yellow (22392 - 440 ml, 22410 - 1L)
Product description Eco Solvent Ink for Mutoh (OSI-MU)

Manufacturer or supplier's details .
GERMANY
DATAPLOT GmbH
Gutenbergstraße 15
D-24558 Henstedt-Ulzburg
Tel.: +49 4193-9950
Fax: +49 4193-995220

Emergency Telephone Number
GERMANY
Giftzentrale Mainz
Tel.: +49 6131/192-40

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Classification

Xn;R22 - Xi;R36
Xn - Harmful

Most Important Hazards
Harmful if swallowed
Irritating to eyes

Appearance Viscous liquid
Emergency Overview Harmful. Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	CAS-No	Weight %	Classification
Diethylene glycol diethyl ether	203-963-7	112-36-7	50 - 60	Xi;R36
Gamma Butyrolactone	202-509-5	96-48-0	10 - 20	Xn;R22 Xi;R36
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	5 - 10	Xn;R20/21
Dimethyl Glutarate	214-277-2	1119-40-0	5 - 10	Xi;R36/38
Dimethyl Adipate	211-020-6	627-93-0	1 - 5	Xn;R22

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4. FIRST AID MEASURES

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties No information available

Suitable Extinguishing Media Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.

Specific Hazards Arising from the Chemical Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.

Environmental Precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Component	European Union	The United Kingdom	France	Spain	Germany
Ethylene glycol monobutyl ether acetate		STEL: 50 ppm TWA: 20 ppm Skin	VME: 2 ppm VME: 13.3 mg/m^3 VLCT: 30 ppm VLCT: 199.8 mg/m^3 Skin	Skin VLA-EC: 333 mg/m^3 VLA-EC: 50 ppm VLA-ED: 133 mg/m^3 VLA-ED: 20 ppm	MAK: 10 ppm MAK: 66 mg/m^3 Skin Peak: 132 mg/m^3 Peak: 20 ppm

Component	Italy	Portugal	The Netherlands	Finland	Austria
Ethylene glycol monobutyl ether acetate	TWA: 133 mg/m^3 TWA: 20 ppm STEL: 333 mg/m^3 STEL: 50 ppm Skin	TWA: 20 ppm Skin notation	Skin STEL: 333 mg/m^3 TWA: 135 mg/m^3	TWA: 20 ppm TWA: 130 mg/m^3 STEL: 50 ppm STEL: 330 mg/m^3 Skin	Skin STEL: 40 ppm STEL: 270 mg/m^3 MAK: 20 ppm MAK: 133 mg/m^3

Component	Switzerland	Poland	Norway	Ireland	Denmark
Ethylene glycol monobutyl ether acetate	Skin STEL: 80 ppm STEL: 540 mg/m^3 MAK: 20 ppm MAK: 135 mg/m^3	NDSCh: 300 mg/m^3 NDS: 100 mg/m^3	TWA: 65 mg/m^3 TWA: 10 ppm Skin	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin	TWA: 130 mg/m^3 TWA: 20 ppm Skin
Dimethyl Glutarate	STEL: 20 mg/m^3 STEL: 3 ppm MAK: 3 ppm MAK: 20 mg/m^3				
Dimethyl Adipate	STEL: 1 mg/m^3 STEL: 0.14 ppm MAK: 1 mg/m^3 MAK: 0.14 ppm				

Occupational exposure controls

Engineering Measures Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment

Respiratory Protection Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

Skin Protection Wear protective gloves/clothing. Solvent-resistant apron and boots.

Hand Protection Nitrile rubber. Neoprene gloves.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous liquid	**Physical State**	Liquid
Odor	Characteristic	**Odor Threshold**	No information available
pH	No information available	**Autoignition Temperature**	No information available
Boiling point/Boiling Range	>149°C / >300°F	**Melting Point/Range**	No information available
Freezing Point/Range	No information available	**Solubility**	No information available
Evaporation Rate	No information available	**Partition Coefficient (n-octanol/water)**	No information available
Vapour Pressure	No information available	**Vapour Density**	No information available
Flammability (solid, gas)	No information available		

Flammability Limits in Air
Upper No information available
Lower No information available

Flash Point 90°C / 194°F
Method No data available

Photochemically Reactive No

Weight Per Gallon (lbs/gal) 8.176

Specific Gravity 0.981

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO2). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol diethyl ether	4970 mg/kg (Rat)	6700 µL/kg (Rabbit)	
Gamma Butyrolactone	1540 mg/kg (Rat)		2.68 mg/L (Rat) 4 h
Ethylene glycol monobutyl ether acetate	1600 mg/kg (Rat)	1480 mg/kg (Rabbit)	
Dimethyl Glutarate	8191 mg/kg (Rat)		5.6 mg/L (Rat) 4 h
Dimethyl Adipate	1920 mg/kg (Rat)		

Chronic Toxicity
No information available

Sensitisation	No information available
Neurological Effects	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available
Teratogenicity	No information available
Chronic Effects	No information available
Target Organ Effects	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

We have no quantitative data concerning the ecological effects of this product. Environmental fate information is derived from consideration of the properties of the ingredients. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Gamma Butyrolactone	72 Hr EC50 Scenedesmus subspicatus: 360 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 79 mg/L	96 Hr LC50 Leuciscus idus: 220-460 mg/L [static]	48 Hr EC50 Daphnia magna Straus: >500 mg/L
Ethylene glycol monobutyl ether acetate	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L		48 Hr EC50 water flea: 37 mg/L
Dimethyl Glutarate		96 Hr LC50 Pimephales promelas: 19.6-26.2 mg/L [static]	48 Hr EC50 Daphnia magna: 122.1-163.5 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
Gamma Butyrolactone	-0.566
Ethylene glycol monobutyl ether acetate	1.51

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

RID

Not classified as dangerous in the meaning of transport regulations

ADR

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Labelling

Symbol(s) Xn - Harmful

R -phrase(s)
R22 - Harmful if swallowed
R36 - Irritating to eyes

S -phrase(s)
S 2 - Keep out of the reach of children
S25 - Avoid contact with eyes
S46 - If swallowed, seek medical advice immediately and show this container or label

International Inventories
Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006
Does NOT contain a listed substance

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R36 - Irritating to eyes
R22 - Harmful if swallowed
R20/21 - Harmful by inhalation and in contact with skin
R36/38 - Irritating to eyes and skin

Revision Date	Nov-20-2009
Revision Summary	New MSDS format

Disclaimer
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

End of Safety Data Sheet

SAFETY DATA SHEET

According to EC Directive 2001/58/EC

Print Date Nov-20-2009 **Revision Date** Nov-20-2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code OSIMUBK
Product name **Optimizer Black (22393 - 440 ml, 22411 - 1L)**
Product description Eco Solvent Ink for Mutoh (OSI-MU)

Manufacturer or supplier's details .
GERMANY
DATAPLOT GmbH
Gutenbergstraße 15
D-24558 Henstedt-Ulzburg
Tel.: +49 4193-9950
Fax: +49 4193-995220

Emergency Telephone Number
Germany
Giftzentrale Mainz
Tel.: +49 6131/192-40

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Classification

Xn;R22 - Xi;R36
Xn - Harmful

Most Important Hazards
Harmful if swallowed
Irritating to eyes

Appearance Viscous liquid
Emergency Overview Harmful. Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	CAS-No	Weight %	Classification
Diethylene glycol diethyl ether	203-963-7	112-36-7	60 - 70	Xi;R36
Gamma Butyrolactone	202-509-5	96-48-0	10 - 20	Xn;R22 Xi;R36
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	5 - 10	Xn;R20/21
Dimethyl Glutarate	214-277-2	1119-40-0	5 - 10	Xi;R36/38
Carbon black	215-609-9 435-640-3	1333-86-4	1 - 5	-
Dimethyl Adipate	211-020-6	627-93-0	1 - 5	Xn;R22

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties No information available

Suitable Extinguishing Media Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.

Specific Hazards Arising from the Chemical Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.

Environmental Precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Component	European Union	The United Kingdom	France	Spain	Germany
Ethylene glycol monobutyl ether acetate		STEL: 50 ppm TWA: 20 ppm Skin	VME: 2 ppm VME: 13.3 mg/m^3 VLCT: 30 ppm VLCT: 199.8 mg/m^3 Skin	Skin VLA-EC: 333 mg/m^3 VLA-EC: 50 ppm VLA-ED: 133 mg/m^3 VLA-ED: 20 ppm	MAK: 10 ppm MAK: 66 mg/m^3 Skin Peak: 132 mg/m^3 Peak: 20 ppm
Carbon black		STEL: 7 mg/m^3 TWA: 3.5 mg/m^3	VME: 3.5 mg/m^3	VLA-ED: 3.5 mg/m^3	

Component	Italy	Portugal	The Netherlands	Finland	Austria
Ethylene glycol monobutyl ether acetate	TWA: 133 mg/m^3 TWA: 20 ppm STEL: 333 mg/m^3 STEL: 50 ppm Skin	TWA: 20 ppm Skin notation	Skin STEL: 333 mg/m^3 TWA: 135 mg/m^3	TWA: 20 ppm TWA: 130 mg/m^3 STEL: 50 ppm STEL: 330 mg/m^3 Skin	Skin STEL: 40 ppm STEL: 270 mg/m^3 MAK: 20 ppm MAK: 133 mg/m^3
Carbon black		TWA: 3.5 mg/m^3		TWA: 3.5 mg/m^3 STEL: 7 mg/m^3	

Component	Switzerland	Poland	Norway	Ireland	Denmark
Ethylene glycol monobutyl ether acetate	Skin STEL: 80 ppm STEL: 540 mg/m^3 MAK: 20 ppm MAK: 135 mg/m^3	NDSCh: 300 mg/m^3 NDS: 100 mg/m^3	TWA: 65 mg/m^3 TWA: 10 ppm Skin	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin	TWA: 130 mg/m^3 TWA: 20 ppm Skin
Dimethyl Glutarate	STEL: 20 mg/m^3 STEL: 3 ppm MAK: 3 ppm MAK: 20 mg/m^3				
Carbon black		NDS: 4.0 mg/m^3	TWA: 3.5 mg/m^3	TWA: 3.5 mg/m^3 STEL: 7 mg/m^3	TWA: 3.5 mg/m^3
Dimethyl Adipate	STEL: 1 mg/m^3 STEL: 0.14 ppm MAK: 1 mg/m^3 MAK: 0.14 ppm				

Occupational exposure controls

Engineering Measures Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment

Respiratory Protection Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

Skin Protection Wear protective gloves/clothing. Solvent-resistant apron and boots.

Hand Protection Nitrile rubber. Neoprene gloves.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous liquid	**Physical State**	Liquid
Odor	Characteristic	**Odor Threshold**	No information available
pH	No information available	**Autoignition Temperature**	No information available
Boiling point/Boiling Range	>149°C / >300°F	**Melting Point/Range**	No information available
Freezing Point/Range	No information available	**Solubility**	No information available
Evaporation Rate	No information available	**Partition Coefficient (n-octanol/water)**	No information available
Vapour Pressure	No information available	**Vapour Density**	No information available
Flammability (solid, gas)	No information available		

Flammability Limits in Air
Upper No information available
Lower No information available

Flash Point 90°C / 194°F
Method No data available

Photochemically Reactive No

Weight Per Gallon (lbs/gal) 8.164

Specific Gravity 0.979

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO2). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol diethyl ether	4970 mg/kg (Rat)	6700 µL/kg (Rabbit)	
Gamma Butyrolactone	1540 mg/kg (Rat)		2.68 mg/L (Rat) 4 h
Ethylene glycol monobutyl ether acetate	1600 mg/kg (Rat)	1480 mg/kg (Rabbit)	
Dimethyl Glutarate	8191 mg/kg (Rat)		5.6 mg/L (Rat) 4 h
Carbon black	15400 mg/kg (Rat)	3 g/kg (Rabbit)	
Dimethyl Adipate	1920 mg/kg (Rat)		

Chronic Toxicity
No information available

Sensitisation No information available
Neurological Effects No information available
Mutagenic Effects No information available
Reproductive Effects No information available
Developmental Effects No information available
Teratogenicity No information available
Chronic Effects No information available
Target Organ Effects No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

We have no quantitative data concerning the ecological effects of this product. Environmental fate information is derived from consideration of the properties of the ingredients. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Gamma Butyrolactone	72 Hr EC50 Scenedesmus subspicatus: 360 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 79 mg/L	96 Hr LC50 Leuciscus idus: 220-460 mg/L [static]	48 Hr EC50 Daphnia magna Straus: >500 mg/L
Ethylene glycol monobutyl ether acetate	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L		48 Hr EC50 water flea: 37 mg/L
Dimethyl Glutarate		96 Hr LC50 Pimephales promelas: 19.6-26.2 mg/L [static]	48 Hr EC50 Daphnia magna: 122.1-163.5 mg/L
Carbon black			24 Hr EC50 Daphnia magna: >5600 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
Gamma Butyrolactone	-0.566
Ethylene glycol monobutyl ether acetate	1.51

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

RID

Not classified as dangerous in the meaning of transport regulations

ADR

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Labelling

Symbol(s) Xn - Harmful

R -phrase(s)
R22 - Harmful if swallowed
R36 - Irritating to eyes

S -phrase(s)
S 2 - Keep out of the reach of children
S25 - Avoid contact with eyes
S46 - If swallowed, seek medical advice immediately and show this container or label

International Inventories
Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006
Does NOT contain a listed substance

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R36 - Irritating to eyes
R22 - Harmful if swallowed
R20/21 - Harmful by inhalation and in contact with skin
R36/38 - Irritating to eyes and skin

Revision Date	Nov-20-2009
Revision Summary	New MSDS format

Disclaimer
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

End of Safety Data Sheet

SAFETY DATA SHEET

According to EC Directive 2001/58/EC

Print Date Nov-20-2009 **Revision Date** Nov-19-2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code OSIMUCL
Product name Optimizer Flush (22394 - 440 ml, 22412 - 1L)
Product description Eco Solvent Ink for Mutoh (OSI-MU)

Manufacturer or supplier's details .
GERMANY
DATAPLOT GmbH
Gutenbergstraße 15
D-24558 Henstedt-Ulzburg
Tel.: +49 4193-9950
Fax: +49 4193-995220

Emergency Telephone Number
GERMANY
Giftzentrale Mainz
Tel.: +49 6131/192-40

2. HAZARDS IDENTIFICATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Classification

Xn;R20/21
Xn - Harmful

Most Important Hazards

Harmful by inhalation and in contact with skin

Appearance Water-white
Emergency Overview Harmful.

Eyes May cause eye irritation.
Skin Harmful in contact with skin. May be absorbed through the skin in harmful amounts. May cause skin irritation and/or dermatitis.
Inhalation Harmful by inhalation. Avoid breathing vapors or mists. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	CAS-No	Weight %	Classification
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	20 - 30	Xn;R20/21
Gamma Butyrolactone	202-509-5	96-48-0	10 - 20	Xn;R22 Xi;R36

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4. FIRST AID MEASURES

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties No information available

Suitable Extinguishing Media Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.

Specific Hazards Arising from the Chemical Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.

Environmental Precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Component	European Union	The United Kingdom	France	Spain	Germany
Ethylene glycol monobutyl ether acetate		STEL: 50 ppm TWA: 20 ppm Skin	VME: 2 ppm VME: 13.3 mg/m^3 VLCT: 30 ppm VLCT: 199.8 mg/m^3 Skin	Skin VLA-EC: 333 mg/m^3 VLA-EC: 50 ppm VLA-ED: 133 mg/m^3 VLA-ED: 20 ppm	MAK: 10 ppm MAK: 66 mg/m^3 Skin Peak: 132 mg/m^3 Peak: 20 ppm

Component	Italy	Portugal	The Netherlands	Finland	Austria
Ethylene glycol monobutyl ether acetate	TWA: 133 mg/m^3 TWA: 20 ppm STEL: 333 mg/m^3 STEL: 50 ppm Skin	TWA: 20 ppm Skin notation	Skin STEL: 333 mg/m^3 TWA: 135 mg/m^3	TWA: 20 ppm TWA: 130 mg/m^3 STEL: 50 ppm STEL: 330 mg/m^3 Skin	Skin STEL: 40 ppm STEL: 270 mg/m^3 MAK: 20 ppm MAK: 133 mg/m^3

Component	Switzerland	Poland	Norway	Ireland	Denmark
Ethylene glycol monobutyl ether acetate	Skin STEL: 80 ppm STEL: 540 mg/m^3 MAK: 20 ppm MAK: 135 mg/m^3	NDSCh: 300 mg/m^3 NDS: 100 mg/m^3	TWA: 65 mg/m^3 TWA: 10 ppm Skin	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin	TWA: 130 mg/m^3 TWA: 20 ppm Skin

Occupational exposure controls

Engineering Measures Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment

Respiratory Protection Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

Skin Protection Wear protective gloves/clothing. Solvent-resistant apron and boots.

Hand Protection Nitrile rubber. Neoprene gloves.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Water-white
Odor Characteristic
pH No information available
Boiling point/Boiling Range >149°C / >300°F
Freezing Point/Range No information available
Evaporation Rate No information available
Vapour Pressure No information available
Flammability (solid, gas) No information available

Flammability Limits in Air
Upper No information available
Lower No information available

Weight Per Gallon (lbs/gal) 8.091

Physical State Liquid
Odor Threshold No information available
Autoignition Temperature No information available
Melting Point/Range No information available
Solubility No information available
Partition Coefficient (n-octanol/water) No information available
Vapour Density No information available

Flash Point 64°C / 147°F
Method Setaflash closed cup

Photochemically Reactive No

Specific Gravity 0.97

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO2). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylene glycol monobutyl ether acetate	1600 mg/kg (Rat)	1480 mg/kg (Rabbit)	
Gamma Butyrolactone	1540 mg/kg (Rat)		2.68 mg/L (Rat) 4 h

Chronic Toxicity
No information available

Sensitisation No information available
Neurological Effects No information available
Mutagenic Effects No information available
Reproductive Effects No information available
Developmental Effects No information available
Teratogenicity No information available
Chronic Effects No information available
Target Organ Effects No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

We have no quantitative data concerning the ecological effects of this product. Environmental fate information is derived from consideration of the properties of the ingredients. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Ethylene glycol monobutyl ether acetate	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L		48 Hr EC50 water flea: 37 mg/L
Gamma Butyrolactone	72 Hr EC50 Scenedesmus subspicatus: 360 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 79 mg/L	96 Hr LC50 Leuciscus idus: 220-460 mg/L [static]	48 Hr EC50 Daphnia magna Straus: >500 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
Ethylene glycol monobutyl ether acetate	1.51
Gamma Butyrolactone	-0.566

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

RID

Not classified as dangerous in the meaning of transport regulations

ADR

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Labelling

Contains Ethylene glycol monobutyl ether acetate

Symbol(s) Xn - Harmful

R -phrase(s)
R20/21 - Harmful by inhalation and in contact with skin

S -phrase(s)
S 2 - Keep out of the reach of children
S46 - If swallowed, seek medical advice immediately and show this container or label
S36/37 - Wear suitable protective clothing and gloves

International Inventories
Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006
Does NOT contain a listed substance

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R36 - Irritating to eyes
R22 - Harmful if swallowed
R20/21 - Harmful by inhalation and in contact with skin

Revision Date Nov-19-2009

Revision Summary New MSDS format

Disclaimer

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

End of Safety Data Sheet