DOMINO

SAFETY DATA SHEET
WL-200 WASH

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name	WL-200 WASH
Product number	WL-200
Synonyms; trade names	ethyl methyl ketone
REACH registration number	01-2119457290-43-XXXX
CAS number	78-93-3
EU index number	606-002-00-3
EC number	201-159-0

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

Identified uses	Printing Ink related material

1.3. Details of the supplier of the safety data sheet

Supplier	Domino UK Ltd Bar Hill Cambridge CB23 8TU Tel: +44 (0) 1954 782551 Fax: +44 (0) 1954 782874 Email: msds@domino-uk.com

1.4. Emergency telephone number

Emergency telephone	For emergencies call +44 (0)207 858 0111 (24 Hours)
National emergency telephone number	999 / 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards	Not Classified
Classification (67/548/EEC or 1999/45/EC)	F;R11 Xi;R36 R66 R67

2.2. Label elements

EC number	201-159-0

WL-200 WASH

Pictogram


Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash contaminated skin thoroughly after handling. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with local regulations.
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Supplementary precautionary statements	P233 Keep container tightly closed. P240 Ground/ bond container and receiving equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective clothing and gloves. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/ doctor if you feel unwell. P313 Get medical advice/ attention. P337 If eye irritation persists: P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	WL-200 WASH
REACH registration number	01-2119457290-43-XXXX
EU index number	606-002-00-3
CAS number	78-93-3
EC number	201-159-0
Composition comments	This product is a single substance. It is 100% Butanone (Methyl Ethyl Ketone), which is prepared and packaged specifically for use with Domino products.

SECTION 4: First aid measures

WL-200 WASH

4.1. Description of first aid measures

General information Keep affected person away from heat, sparks and flames.

Inhalation Move affected person to fresh air at once. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not induce vomiting. Get medical attention immediately.

Skin contact Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention immediately.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Vapours may cause headache, fatigue, dizziness and nausea.

Ingestion May cause nausea, headache, dizziness and intoxication.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact May cause severe eye irritation.

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

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Water spray.

5.2. Special hazards arising from the substance or mixture

Specific hazards Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO_2). Take precautionary measures against static discharges.

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities. Use water to keep fire exposed containers cool and disperse vapours. Move containers from fire area if it can be done without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

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6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from oxidising materials, heat and flames. Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 200 ppm 600 mg/m³
Short-term exposure limit (15-minute): WEL 300 ppm 899 mg/m³
Sk

Exposure limits

WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

DNEL

Workers - Dermal; Long term systemic effects: 1161 mg/kg/day
Workers - Inhalation; Long term systemic effects: 600 mg/m³
Consumer - Dermal; Long term systemic effects: 412 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 106 mg/m³
Consumer - Oral; Long term systemic effects: 31 mg/kg/day

PNEC

- Marine water; 55.8 mg/l
- Fresh water; 55.8 mg/l
- Intermittent release; 55.8 mg/l
- STP; 709 mg/l
- Sediment; 284.7 mg/kg/day
- Soil; 22.5 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls All handling should only take place in well-ventilated areas.

Eye/face protection Wear chemical splash goggles.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Do not smoke in work area. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes wet or contaminated. Use appropriate hand lotion to prevent defatting and cracking of skin.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Ketonic.
Odour threshold	0.00032 ppm
pH	pH (concentrated solution): ~ 7
Melting point	-87°C
Initial boiling point and range	~75-85°C @°C @ 760 mm Hg
Flash point	-6°C CC (Closed cup).
Evaporation rate	4 - 7.7 (butyl acetate = 1) 3.3 (diethyl ether = 1)
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.0 g/100 g Upper flammable/explosive limit: 11.5 g/100 g
Vapour pressure	10400 hPa @ 20°C 12600 hPa @ 25°C
Vapour density	2.5
Relative density	1.2
Bulk density	0.8 kg/l
Solubility(ies)	Partially miscible with water
Partition coefficient	log Kow: 0.3
Auto-ignition temperature	404°C
Decomposition Temperature	No specific test data are available.
Viscosity	0.42 mPa s @ 20°C
Oxidising properties	Not known.

9.2. Other information

Molecular weight	72.11

SECTION 10: Stability and reactivity

10.1. Reactivity

WL-200 WASH

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with strong oxidising agents.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg) 2,193.0

Species Rat

Notes (oral LD_{50}) REACH dossier information.

ATE oral (mg/kg) 2,193.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg) 8,000.0

Species Rat

ATE dermal (mg/kg) 8,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l) 34.5

Species Rat

ATE inhalation (vapours mg/l) 34.5

Respiratory sensitisation

Respiratory sensitisation Not available.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEC 5041 ppm, Inhalation, Rat

Inhalation Vapours may cause headache, fatigue, dizziness and nausea.

WL-200 WASH

Ingestion	May cause nausea, headache, dizziness and intoxication.
Skin contact	Product has a defatting effect on skin. May cause allergic contact eczema.
Eye contact	Irritating to eyes.
Route of entry	Ingestion. Skin absorption Inhalation

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity	Avoid discharge to the aquatic environment.
Acute toxicity - fish	LC_{50}, 48 hours: >100 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 7 days: >100 mg/l, Desmodesmus subspicatus
Acute toxicity - microorganisms	EC_0, 16 hour: 1150 mg/l,

12.2. Persistence and degradability

Biodegradation	The substance is readily biodegradable. - Degradation 89%: 20 days

12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation is unlikely. log Pow: ≤ 4,
Partition coefficient	log Kow: 0.3

12.4. Mobility in soil

Mobility	Not available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects	Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1193
UN No. (IMDG)	1193
UN No. (ICAO)	1193

WL-200 WASH

UN No. (ADN) 1193

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ETHYL METHYL KETONE (METHYL ETHYL KETONE)

Proper shipping name (IMDG) ETHYL METHYL KETONE (METHYL ETHYL KETONE)

Proper shipping name (ICAO) ETHYL METHYL KETONE (METHYL ETHYL KETONE)

Proper shipping name (ADN) ETHYL METHYL KETONE (METHYL ETHYL KETONE)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

ADN class 3

Transport labels

14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ADN packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS F-E, S-D

ADR transport category 2

Emergency Action Code •2YE

Hazard Identification Number (ADR/RID) 33

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

WL-200 WASH

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance Workplace Exposure Limits EH40.
Safety Data Sheets for Substances and Preparations.
Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
EINECS

Canada - DSL/NDSL
DSL

US - TSCA
Present.

US - TSCA 12(b) Export Notification
N/A

Australia - AICS
Yes

Japan - MITI
Yes

Korea - KECI
Yes

China - IECSC
Yes

Philippines – PICCS
Yes

SECTION 16: Other information

Revision date 12/05/2017

Revision 1

Supersedes date 13/04/2016

SDS number 21452

Risk phrases in full R11 Highly flammable.
R36 Irritating to eyes.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

WL-200 WASH

DOMINO

Exposure scenario
Used as a wash in printers

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

Identification

Product name	W-200 WASH
REACH registration number	01-2119457290-43-XXXX
CAS number	78-93-3
EC number	201-159-0
Revision date	22/02/2017
Author	Sarah Henly
Supplier	Domino UK Ltd Bar Hill Cambridge CB23 8TU Tel: +44 (0) 1954 782551 Fax: +44 (0) 1954 782874 Email: msds@domino-uk.com

1. Title of exposure scenario

Main title	Used as a wash in printers
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.) within closed or contained systems, including incidental exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application activities and film formation) and equipment cleaning, maintenance and associated laboratory activities.
Product category	PC18 Ink and toners. PC9a Coatings and paints, thinners, paint removers.
Main sector	SU3 Industrial uses
Environment	
	Printing inks
Environmental release category	ERC4 Industrial use of processing aids in processes and products, not becoming part of articles. ERC8a Wide dispersive indoor use of processing aids in open systems. ERC8d Wide dispersive outdoor use of processing aids in open systems.
Worker	
	Printing inks
Process category	PROC1 Use in closed process, no likelihood of exposure. PROC2 Use in closed, continuous process with occasional controlled exposure

Used as a wash in printers

2. Conditions of use affecting exposure (Industrial - Environment 1)

Control of environmental exposure

Environmental release category	ERC4 Industrial use of processing aids in processes and products, not becoming part of articles. ERC8a Wide dispersive indoor use of processing aids in open systems. ERC8d Wide dispersive outdoor use of processing aids in open systems.

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Intermittent.

Risk management measures

Good practice	Handle all packages and containers carefully to minimise spills. Clear up spills immediately and dispose of waste safely.
Technical measures	Prevent environmental discharge consistent with regulatory requirements.
STP type	Municipal STP.

2. Conditions of use affecting exposure (Workers - Health 1)

Control of workers exposure

Process category	PROC1 Use in closed process, no likelihood of exposure. PROC2 Use in closed, continuous process with occasional controlled exposure PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Intermittent.

Human factors not influenced by risk management

Potentially exposed body parts	Hands and forearms.

Other given operational conditions affecting workers exposure

Setting	Indoor use.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Room size	Assumes large workrooms.
Ventilation rate	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

DOMINO

SAFETY DATA SHEET
WL-200 WASH

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name	WL-200 WASH
Product number	WL-200
Synonyms; trade names	ethyl methyl ketone
REACH registration number	01-2119457290-43-XXXX
CAS number	78-93-3
EU index number	606-002-00-3
EC number	201-159-0

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

Identified uses	Printing Ink related material

1.3. Details of the supplier of the safety data sheet

Supplier	Domino UK Ltd Bar Hill Cambridge CB23 8TU Tel: +44 (0) 1954 782551 Fax: +44 (0) 1954 782874 Email: msds@domino-uk.com

1.4. Emergency telephone number

Emergency telephone	For emergencies call +44 (0)207 858 0111 (24 Hours)
National emergency telephone number	999 / 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

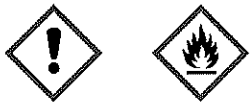
Physical hazards	Flam. Liq. 2 - H225
Health hazards	Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards	Not Classified
Classification (67/548/EEC or 1999/45/EC)	F;R11 Xi;R36 R66 R67

2.2. Label elements

EC number	201-159-0

WL-200 WASH

Pictogram



Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash contaminated skin thoroughly after handling. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with local regulations.
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Supplementary precautionary statements	P233 Keep container tightly closed. P240 Ground/ bond container and receiving equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective clothing and gloves. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/ doctor if you feel unwell. P313 Get medical advice/ attention. P337 If eye irritation persists: P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	WL-200 WASH
REACH registration number	01-2119457290-43-XXXX
EU index number	606-002-00-3
CAS number	78-93-3
EC number	201-159-0
Composition comments	This product is a single substance. It is 100% Butanone (Methyl Ethyl Ketone), which is prepared and packaged specifically for use with Domino products.

SECTION 4: First aid measures

WL-200 WASH

4.1. Description of first aid measures

General information Keep affected person away from heat, sparks and flames.

Inhalation Move affected person to fresh air at once. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not induce vomiting. Get medical attention immediately.

Skin contact Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention immediately.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Vapours may cause headache, fatigue, dizziness and nausea.

Ingestion May cause nausea, headache, dizziness and intoxication.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact May cause severe eye irritation.

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

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Water spray.

5.2. Special hazards arising from the substance or mixture

Specific hazards Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO_2). Take precautionary measures against static discharges.

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities. Use water to keep fire exposed containers cool and disperse vapours. Move containers from fire area if it can be done without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

WL-200 WASH

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from oxidising materials, heat and flames. Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 200 ppm 600 mg/m³
Short-term exposure limit (15-minute): WEL 300 ppm 899 mg/m³
Sk

Exposure limits

WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

DNEL

Workers - Dermal; Long term systemic effects: 1161 mg/kg/day
Workers - Inhalation; Long term systemic effects: 600 mg/m³
Consumer - Dermal; Long term systemic effects: 412 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 106 mg/m³
Consumer - Oral; Long term systemic effects: 31 mg/kg/day

PNEC

- Marine water; 55.8 mg/l
- Fresh water; 55.8 mg/l
- Intermittent release; 55.8 mg/l
- STP; 709 mg/l
- Sediment; 284.7 mg/kg/day
- Soil; 22.5 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls All handling should only take place in well-ventilated areas.

Eye/face protection Wear chemical splash goggles.

WL-200 WASH

Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Do not smoke in work area. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes wet or contaminated. Use appropriate hand lotion to prevent defatting and cracking of skin.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Ketonic.
Odour threshold	0.00032 ppm
pH	pH (concentrated solution): ~ 7
Melting point	-87°C
Initial boiling point and range	~75-85°C @°C @ 760 mm Hg
Flash point	-6°C CC (Closed cup).
Evaporation rate	4 - 7.7 (butyl acetate = 1) 3.3 (diethyl ether = 1)
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.0 g/100 g Upper flammable/explosive limit: 11.5 g/100 g
Vapour pressure	10400 hPa @ 20°C 12600 hPa @ 25°C
Vapour density	2.5
Relative density	1.2
Bulk density	0.8 kg/l
Solubility(ies)	Partially miscible with water
Partition coefficient	log Kow: 0.3
Auto-ignition temperature	404°C
Decomposition Temperature	No specific test data are available.
Viscosity	0.42 mPa s @ 20°C
Oxidising properties	Not known.

9.2. Other information

Molecular weight	72.11

SECTION 10: Stability and reactivity

10.1. Reactivity

WL-200 WASH

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not available.

10.4. Conditions to avoid

Conditions to avoid	Avoid contact with strong oxidising agents.

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,193.0
Species	Rat
Notes (oral LD_{50})	REACH dossier information.
ATE oral (mg/kg)	2,193.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	8,000.0
Species	Rat
ATE dermal (mg/kg)	8,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	34.5
Species	Rat
ATE inhalation (vapours mg/l)	34.5

Respiratory sensitisation

Respiratory sensitisation	Not available.

Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEC 5041 ppm, Inhalation, Rat
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea.

WL-200 WASH

Ingestion	May cause nausea, headache, dizziness and intoxication.
Skin contact	Product has a defatting effect on skin. May cause allergic contact eczema.
Eye contact	Irritating to eyes.
Route of entry	Ingestion. Skin absorption Inhalation

SECTION 12: Ecological information

12.1. Toxicity

Toxicity	Avoid discharge to the aquatic environment.
Acute toxicity - fish	LC_{50}, 48 hours: >100 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 7 days: >100 mg/l, Desmodesmus subspicatus
Acute toxicity - microorganisms	EC_0, 16 hour: 1150 mg/l,

12.2. Persistence and degradability

Biodegradation	The substance is readily biodegradable. - Degradation 89%: 20 days

12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation is unlikely. log Pow: ≤ 4,
Partition coefficient	log Kow: 0.3

12.4. Mobility in soil

Mobility	Not available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects	Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1193
UN No. (IMDG)	1193
UN No. (ICAO)	1193

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UN No. (ADN)	1193

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ETHYL METHYL KETONE (METHYL ETHYL KETONE)
Proper shipping name (IMDG)	ETHYL METHYL KETONE (METHYL ETHYL KETONE)
Proper shipping name (ICAO)	ETHYL METHYL KETONE (METHYL ETHYL KETONE)
Proper shipping name (ADN)	ETHYL METHYL KETONE (METHYL ETHYL KETONE)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels

14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-D
ADR transport category	2
Emergency Action Code	•2YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

WL-200 WASH

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance Workplace Exposure Limits EH40.
Safety Data Sheets for Substances and Preparations.
Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
EINECS

Canada - DSL/NDSL
DSL

US - TSCA
Present.

US - TSCA 12(b) Export Notification
N/A

Australia - AICS
Yes

Japan - MITI
Yes

Korea - KECI
Yes

China - IECSC
Yes

Philippines – PICCS
Yes

SECTION 16: Other information

Revision date 12/05/2017

Revision 1

Supersedes date 13/04/2016

SDS number 21452

Risk phrases in full R11 Highly flammable.
R36 Irritating to eyes.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

WL-200 WASH

DOMINO

Exposure scenario
Used as a wash in printers

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

Identification

Product name	W-200 WASH
REACH registration number	01-2119457290-43-XXXX
CAS number	78-93-3
EC number	201-159-0
Revision date	22/02/2017
Author	Sarah Henly
Supplier	Domino UK Ltd Bar Hill Cambridge CB23 8TU Tel: +44 (0) 1954 782551 Fax: +44 (0) 1954 782874 Email: msds@domino-uk.com

1. Title of exposure scenario

Main title	Used as a wash in printers
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.) within closed or contained systems, including incidental exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application activities and film formation) and equipment cleaning, maintenance and associated laboratory activities.
Product category	PC18 Ink and toners. PC9a Coatings and paints, thinners, paint removers.
Main sector	SU3 Industrial uses
Environment	
	Printing inks
Environmental release category	ERC4 Industrial use of processing aids in processes and products, not becoming part of articles. ERC8a Wide dispersive indoor use of processing aids in open systems. ERC8d Wide dispersive outdoor use of processing aids in open systems.
Worker	
	Printing inks
Process category	PROC1 Use in closed process, no likelihood of exposure. PROC2 Use in closed, continuous process with occasional controlled exposure

Used as a wash in printers

2. Conditions of use affecting exposure (Industrial - Environment 1)

Control of environmental exposure

Environmental release category	ERC4 Industrial use of processing aids in processes and products, not becoming part of articles. ERC8a Wide dispersive indoor use of processing aids in open systems. ERC8d Wide dispersive outdoor use of processing aids in open systems.

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Intermittent.

Risk management measures

Good practice	Handle all packages and containers carefully to minimise spills. Clear up spills immediately and dispose of waste safely.
Technical measures	Prevent environmental discharge consistent with regulatory requirements.
STP type	Municipal STP.

2. Conditions of use affecting exposure (Workers - Health 1)

Control of workers exposure

Process category	PROC1 Use in closed process, no likelihood of exposure. PROC2 Use in closed, continuous process with occasional controlled exposure PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Intermittent.

Human factors not influenced by risk management

Potentially exposed body parts	Hands and forearms.

Other given operational conditions affecting workers exposure

Setting	Indoor use.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Room size	Assumes large workrooms.
Ventilation rate	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Used as a wash in printers

Technical protective measures Avoid direct eye contact with product, also via contamination on hands.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Regular cleaning of work area.

Risk management measures

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection.

Additional advice Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Avoid breathing vapour/spray.

Keep good industrial hygiene.

3. Exposure estimation (Environment 1)

Environmental release category ERC4 Industrial use of processing aids in processes and products, not becoming part of articles.
ERC8a Wide dispersive indoor use of processing aids in open systems.
ERC8d Wide dispersive outdoor use of processing aids in open systems.

Sector of use SU3 Industrial uses
SU22 Professional uses

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.

3. Exposure estimation (Health 1)

Process category PROC1 Use in closed process, no likelihood of exposure.
PROC2 Use in closed, continuous process with occasional controlled exposure

Sector of use SU3 Industrial uses

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.