SAFETY DATA SHEET
WL-200 WASH

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name	WL-200 WASH
Product number	WL-200
Synonyms; trade names	Methyl Ethyl Ketone, Ethyl methyl ketone, M.E.K
CAS number	78-93-3

Recommended use of the chemical and restrictions on use

Application	Printing Ink Related Material.

Details of the supplier of the safety data sheet

Supplier	Domino Amjet Inc 1290 Lakeside Drive Gurnee, Illinois 60031 Tel: +1 847 244 2501 Fax: +1 847 244 1421 Email: sds@domino-uk.com

Emergency telephone number

Emergency telephone	For MEDICAL emergencies call: International Poison Control Center, USA 1-800-228-5635 (24 Hours) +1 612-851-8180 (24 hours, International). For TRANSPORTATION emergencies call: CHEMTREC 1-800-424-9300 (US Calls) +1 703-527-3887 (International calls)

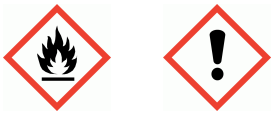
2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Eye Irrit. 2A - H319 STOT SE 3 - H336
Environmental hazards	Not Classified

Label elements

Hazard symbols



Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

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Precautionary statements	P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing. 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+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/ container in accordance with national regulations.

Other hazards

None known.

3. Composition/information on ingredients

Substances

Product name	WL-200 WASH
CAS number	78-93-3
Ingredient notes	Methyl ethyl ketone : MEK; 2-Butanone

4. First-aid measures

Description of first aid measures

General information	Get medical attention. Show this Safety Data Sheet to the medical personnel.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	IF SWALLOWED: Get medical attention. Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Skin Contact	IF ON SKIN: Rinse immediately with plenty of water.
Eye contact	IF IN EYES: Rinse immediately with plenty of water. Get medical attention if irritation persists after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo. Headache. Nausea, vomiting.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	Irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

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Specific hazards	Flammable liquid and vapour. Vapors may be ignited by a spark, a hot surface or an ember. Vapors may form explosive mixtures with air. Containers can burst violently or explode when heated, due to excessive pressure build-up. Take precautionary measures against static discharges.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Carbon monoxide (CO). Carbon dioxide (CO2).

Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. No smoking, sparks, flames or other sources of ignition near spillage.

Environmental precautions

Environmental precautions	Contain spillage with sand, earth or other suitable non-combustible material. Use appropriate containment to avoid environmental contamination.

Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Collect and dispose of spillage as indicated in Section 13.
Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions	Flammable/combustible materials. Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use only non-sparking tools.
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage precautions	Eliminate all sources of ignition. Keep away from oxidizing materials, heat and flames. Keep only in the original container. Keep containers upright. Take precautionary measures against static discharges.
Storage class	Flammable liquid storage.

Specific end uses(s)

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Specific end use(s)	The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): OSHA 200 ppm 590 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 590 mg/m³
Short-term exposure limit (15-minute): ACGIH 300 ppm 885 mg/m³

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.

Immediate danger to life and health	3000 ppm

Exposure controls

Protective equipment

Appropriate engineering controls	As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Ensure control measures are regularly inspected and maintained. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment for eye and face protection should comply with OSHA 1910.133.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Frequent changes are recommended. It is recommended that gloves are made of the following material: Laminate of polyethylene and ethylene vinyl alcohol (PE/EVOH). The selected gloves should have a breakthrough time of at least 8 hours. Polyvinyl alcohol (PVA). The selected gloves should have a breakthrough time of at least 0.75 hours. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. It should be noted that liquid may penetrate the gloves.
Other skin and body protection	Wear anti-static protective clothing if there is a risk of ignition from static electricity. Wear appropriate clothing to prevent skin contamination.
Hygiene measures	Provide eyewash station and safety shower. Wash contaminated clothing before reuse. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.
Environmental exposure controls	Keep container tightly sealed when not in use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Colorless.
Odor	Ketonic.
Odor threshold	Not available.
pH	Not applicable.

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Melting point	-86°C
Initial boiling point and range	~79.6°C @ 1013 hPa
Flash point	-6°C Closed cup.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.5 % Upper flammable/explosive limit: 11.5 %
Vapor pressure	105 hPa @ 20°C 126 hPa @ 25°C
Vapor density	> 1
Relative density	0.8
Solubility(ies)	270 g/l water @ 20°C Soluble in the following materials: Organic solvents.
Partition coefficient	log Pow: 0.3
Auto-ignition temperature	404°C
Decomposition Temperature	Not available.
Viscosity	0.40 mPa s @ 20°C 0.405 mPa s @ 25°C
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.
Volatile organic compound	This product contains a maximum VOC content of 100 %. This product contains a maximum VOC content of 0.81 kg/l.

10. Stability and reactivity

Reactivity	See Section 10 (Possibility of hazardous reactions) for further information.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	The following materials may react strongly with the product: Oxidizing agents.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented. Do not pressurize, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.
Materials to avoid	Oxidizing materials.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Carbon dioxide (CO2). Carbon monoxide (CO).

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	LD_{50} >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50})	LD_{50} >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

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Skin corrosion/irritation	
Animal data	Based on available data the classification criteria are not met.
Serious eye damage/irritation	
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory sensitization	
Respiratory sensitization	Based on available data the classification criteria are not met.
Skin sensitization	
Skin sensitization	Based on available data the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
Reproductive toxicity	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure	
STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
Aspiration hazard	
Aspiration hazard	Based on available data the classification criteria are not met.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo. Headache. Nausea, vomiting.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin Contact	Prolonged contact may cause dryness of the skin.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	Central nervous system

12. Ecological information

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Toxicity	Avoid discharge to the aquatic environment.
Acute aquatic toxicity	
Acute toxicity - fish	REACH dossier information. LC_{50}, 96 hours: 2993 mg/l, Pimephales promelas (Fat-head Minnow)

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Acute toxicity - aquatic invertebrates	REACH dossier information. EC_{50}, 48 hours: 308 mg/l, Daphnia magna
Acute toxicity - aquatic plants	REACH dossier information. EC_{50}, 72 hours: 1972 mg/l, Selenastrum capricornutum

Persistence and degradability

Persistence and degradability	The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential	Based on available data the classification criteria are not met.
Partition coefficient	log Pow: 0.3

Mobility in soil

Mobility	Volatile liquid. The product contains organic solvents which will evaporate easily from all surfaces.

Other adverse effects

Other adverse effects	None known.

13. Disposal considerations

Waste treatment methods

General information	The generation of waste should be minimized or avoided wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out.
Disposal methods	Dispose of waste product or used containers in accordance with local regulations Only store in correctly labeled containers.

14. Transport information

UN Number

UN No. (TDG)	1193
UN No. (IMDG)	1193
UN No. (ICAO)	1193
UN No. (DOT)	UN1193

UN proper shipping name

Proper shipping name (TDG)	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 (DOT)	METHYL ETHYL KETONE

Transport hazard class(es)

DOT hazard class	3
DOT hazard label	3
TDG class	3
TDG label(s)	3
IMDG Class	3
ICAO class/division	3

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Transport labels

DOT transport labels

Packing group

TDG Packing Group	II
IMDG packing group	II
ICAO packing group	II
DOT packing group	II

Environmental hazards

Environmentally Hazardous Substance
No.

Special precautions for user

EmS	F-E, S-D
DOT reportable quantity	RQ: Methyl ethyl ketone (MEK) (5000 lbs)
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
None of the ingredients are listed or exempt.

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

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OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List
None of the ingredients are listed or exempt.

Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
None of the ingredients are listed or exempt.

New Jersey "Right To Know" List
None of the ingredients are listed or exempt.

Pennsylvania "Right To Know" List
None of the ingredients are listed or exempt.

16. Other information

Abbreviations and acronyms used in the safety data sheet	ATE: Acute toxicity estimate. CAS: Chemical abstracts service. EC_{50}: 50% of maximal effective concentration. GHS: Globally harmonized system. IARC: International agency for research on cancer. IATA: International air transport association. Kow: Octanol-water partition coefficient. LC_{50}: Lethal concentration to 50 % of a test population. LD_{50}: Lethal dose to 50% of a test population (median lethal dose). LOAEL: Lowest observed adverse effect level. NOAEL: No observed adverse effect level. PBT: Persistent, bioaccumulative and toxic substance. vPvB: Very persistent and very bioaccumulative.
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/ Supplier's information.
Revision comments	DUE TO AN UPDATE OF OUR SDS DATABASE THE VERSION NUMBER OF THIS SDS HAS REVERTED TO V1 AND SUPERSEDES PREVIOUS OLDER VERSIONS
Revision date	2/19/2019
Revision	4
Supersedes date	1/16/2019

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SDS No.	2462
Hazard statements in full	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
NFPA - health hazard	Irritation, minor residual injury. (1)
NFPA - flammability hazard	Ignites easily. (3)
NFPA - instability hazard	Normally stable. (0)
ACA HMIS Health rating.	Moderate Hazard. (2)
ACA HMIS Flammability rating.	Ignites easily. (3)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B