

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

1.1. Product identifier

Product form : Mixture
 Product name : MIDA FLOW 201 LG
 Product code : MFL201
 Type of product : Descaler
 Product group : CFH Product

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

1.2.1. Relevant identified uses

Main use category : Industrial use
 Industrial/Professional use spec : Industrial use
 Use of the substance/mixture : Descaler

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Christeyns Food Hygiene Ltd. Ltd
 2, Cameron Court, Winwick Quay
 GB- WA2 8RE Warrington – Cheshire
 United Kingdom
 T +44(0)1925 234696 - F +44(0)1925 234693
UK-foodinfo@christeyns.com - www.christeyns.com

Distributor

Casoria Company Ltd. Ltd
 1 Farnham Street
 IE- H12 A9K0 Cavan – Co. Cavan
 Ireland
 T 00353 49 4361869 - F 00353 49 436 1869
sds@casoria.ie - www.casoria.ie

1.4. Emergency telephone number

Emergency number : 01925 234696 (9:00 - 17:00 GMT)

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Met. Corr. 1 H290
 Acute Tox. 3 (Inhalation:vapour) H331
 Skin Corr. 1 H314
 Eye Dam. 1 H318

Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes severe skin burns and eye damage. Toxic if inhaled.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS06

CLP Signal word : Danger

Contains : Nitric acid

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Hazard statements (CLP)	: H290 - May be corrosive to metals. H314 - Causes severe skin burns and eye damage. H331 - Toxic if inhaled.
Precautionary statements (CLP)	: P260 - Do not breathe mist, spray. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a doctor. P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.. Immediately call a doctor. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor. P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
EUH-statements	: EUH071 - Corrosive to the respiratory tract.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nitric acid substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-no: 7697-37-2 Einecs nr: 231-714-2 EG annex nr: 007-004-00-1	30 – 60	Ox. Liq. 2, H272 Acute Tox. 3 (Inhalation:vapour), H331 Skin Corr. 1A, H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Nitric acid	CAS-no: 7697-37-2 Einecs nr: 231-714-2 EG annex nr: 007-004-00-1	(70 \leq C < 99) Ox. Liq. 3, H272 (99 \leq C \leq 100) Ox. Liq. 2, H272

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
Inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration as needed. Obtain medical attention if breathing difficulty persists.
Skin contact	: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Obtain emergency medical attention.
Ingestion	: Do NOT induce vomiting. Rinse mouth out with water. Obtain emergency medical attention.

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

Acute effects inhalation	: Irritating to the respiratory system, may cause throat pain and cough.
Acute effects skin	: Causes severe burns.
Acute effects eyes	: Causes serious eye damage.
Acute effects oral route	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Prompt treatment is essential to minimize damage.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Reactivity in case of fire : On heating/burning formation of small quantities of (nitrous vapours).

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Prevent fire fighting water from entering the environment.

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear recommended personal protective equipment.

6.1.1. For non-emergency personnel

Protective equipment : Avoid any direct contact with the product. Use personal protective equipment as required.

Emergency procedures : Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Cover spill with non combustible material, e.g.: sand, earth, vermiculite. Sweep or shovel spills into appropriate container for disposal.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. This material and its container must be disposed of in a safe way, and as per local legislation. Wash contaminated area with large amounts of water.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not mix with other products.

Hygiene measures : Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in original container. Store in a well-ventilated place. Keep cool. Avoid high temperatures.

Incompatible products : Strong bases. Chlorine Detergents. Organic compounds.

Incompatible materials : Aluminium. Zinc. Base metals and alloys.

7.3. Specific end use(s)

Descaler.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Nitric acid (7697-37-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Nitric acid
IOEL STEL	2.6 mg/m ³
IOEL STEL [ppm]	1 ppm
United Kingdom - Occupational Exposure Limits	
Local name	Nitric acid
WEL STEL (OEL STEL)	2.6 mg/m ³
WEL STEL (OEL STEL) [ppm]	1 ppm

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8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Good ventilation of the workplace required.

8.2.2. Personal protection equipment

Personal protective equipment:

Protective clothing. Safety glasses. Wear protective gloves.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Goggles. Use eye protection according to EN 166, designed to protect against liquid splashes. If there is a risk of liquid being splashed : Wear suitable face shield

8.2.2.2. Skin protection

Protective equipment:

Wear suitable protective clothing. PVC apron covering the tops of the boots. Boots made of PVC

Hand protection:

Wear suitable gloves resistant to chemical penetration. Chemical resistant PVC gloves (to European standard EN 374 or equivalent)

8.2.2.3. Respiratory protection

Respiratory protection:

Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment

Respiratory protection			
Device	Filter type	Condition	Standard
			EN 136, EN 140, EN 145, EN 143, EN 149

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Physical state/form	: Clear Liquid.
Odour	: Pungent.
Odour threshold	: Not available
Melting point/range	: Not available

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Freezing point	: < -20 °C
Boiling point/Boiling range	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Autoignition temperature	: Not available
Decomposition temperature	: Not available
pH	: < 0
pH solution	: 0.8 – 1.8 , 1% v/v
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1.3
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Contact with :Sodium hypochlorite Liberates very toxic gas. Reacts with (some) metals, release of highly flammable gases/vapours (hydrogen).

10.4. Conditions to avoid

Extremely high or low temperatures. Direct sunlight.

10.5. Incompatible materials

Aluminium. Zinc. Base metals and alloys. Sodium hypochlorite. Strong bases. Oxidising agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Toxic if inhaled.

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ATE CLP (vapours)	3 mg/l/4h
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Nitric acid (7697-37-2)

LC50 Inhalation - Rat (Vapours)	4.11 mg/l/4h
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Skin corrosion/irritation	: Causes severe skin burns. pH: < 0
Serious eye damage/irritation	: Causes serious eye damage. pH: < 0
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

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Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Nitric acid (7697-37-2)	
LC50 - Fish [1]	8226 mg/l
EC50 - Crustacea [1]	8609 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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Results of PBT assessment	The product does not meet the PBT and vPvB classification criteria

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available



SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG

ADR	IMDG
14.1. UN number or ID number	
UN 2031	UN 2031
14.2. UN proper shipping name	
NITRIC ACID	NITRIC ACID
Transport document description	
UN 2031 NITRIC ACID, 8, II, (E)	UN 2031 NITRIC ACID, 8, II
14.3. Transport hazard class(es)	
8	8
	
14.4. Packing group	
II	II

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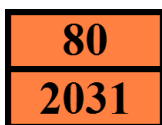
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG
14.5. Environmental hazards	
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No
No supplementary information available	

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C1
Limited quantities (ADR)	: 1I
Packing instructions (ADR)	: P001, IBC02
Special packing provisions (ADR)	: PP81, B15
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Tank special provisions (ADR)	: TU42
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel code	: E
EAC code	: 2R

Transport by sea

Limited quantities (IMDG)	: 1 L
Packing instructions (IMDG)	: P001
Special packing provisions (IMDG)	: PP81
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B15, B20

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

ANNEX I RESTRICTED EXPLOSIVES PRECURSORS

List of substances which shall not be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

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Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Nitric acid	7697-37-2	3 % w/w	10% w/w	ex 2808 00 00	ex 3824 99 96

Please see https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf
Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Tank special provisions (ADR)	Added	
	Supersedes	Modified	
	Review date	Modified	
1.1	Name	Modified	
5.3	EAC code	Modified	

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
EUH071	Corrosive to the respiratory tract.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Ox. Liq. 3	Oxidising Liquids, Category 3
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Met. Corr. 1	H290	Expert judgment

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 3 (Inhalation:vapour)	H331	Expert judgment
Skin Corr. 1	H314	On basis of test data
Eye Dam. 1	H318	On basis of test data

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.