

	<b>Safety Data Sheet</b>	Crea. date	2007.10.27
	According to Regulation (EC) No 1907/2006 (REACH), Annex II(COMMISSION REGULATION (EU) No 2020/878)	( )th	3th
	Product Name : MMA CAS No : 80-62-6	Rev. date	2024.06.01

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Substance name	: 2-Methyl-2-propenoic acid methyl ester
EC No.	: 201-297-1
REACH Registration No.	: 01-2119452498-28-0018
CAS No.	: 80-62-6

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

#### 1.2.1. Relevant identified uses

- Artificial Marbles, Transparent ABS, MBS, Adhesives, SB-Latex, PMMA, Paint, Casting Sheet, Fiber Materials, Cement Fluidization Material

#### 1.2.2. Uses advised against

- Not available

### 1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier	: LX MMA Corporation
Address	: 58, YeosuSandan 4-ro, Yeosu-si, Jeollanam-do, Korea
Telephone	: +82-2-6930-3847

### 1.4. Emergency telephone number

EU-wide emergency number : 112

See section 16.6 for the list of telephone number of National Helpdesks in the European Economic Area.

## SECTION 2: HAZARD IDENTIFICATION

### 2.1. Classification of the substance/mixture

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

- Flammable liquids : Category2, H225
- Skin corrosion/irritation : Category2, H315
- Skin sensitization : Category1, H317
- Serious eye damage/eye irritation : Category 2A, H319
- Respiratory sensitization : Category 1, H334
- Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation), H335

### 2.2. Label elements

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

##### \* Hazard Pictogram(s)



\* Signal word : Danger

##### \* Hazard statement(s)

- H225 Highly flammable liquid and vapour
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled
- H335 May cause respiratory irritation.

##### \* Precautionary statement(s)

**1) Prevention**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P284 [In case of inadequate ventilation] wear respiratory protection

**2) Response**

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/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.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- P362 Take off contaminated clothing.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

**3) Storage**

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

**4) Disposal**

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

**2.3. Other hazards**

- Not available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances**

Name	EC No.	CAS No.	REACH registration No.	% [weight]	Classification [1272/2008/EC]	SCL / M-factor / ATE
2-Methyl-2-propenoic acid methyl ester	201-297-1	80-62-6	01-2119452498-28-0018	100	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H319 Skin Sens. 1, H334 STOT SE 3, H335	-

**3.2. Mixtures**

- Not applicable

**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures****General**

- No general information.

**Inhalation**

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.

**Skin contact**

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Wash thoroughly after handling.

**Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

**Ingestion**

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

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

- Not available

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

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media****Suitable extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, water spray

**Unsuitable extinguishing media**

- Avoid use of water jet for extinguishing

**5.2. Special hazards arising from the substance or mixture****Hazardous combustion products**

- Not available

**5.3. Advice for firefighters**

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local fire station and inform the location of the fire and characteristics hazard.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Use fire fighting procedures suitable for surrounding area.
- Vapor or gas is burned at distant ignition sources can be spread quickly.
- Due to the extremely low flash point, irrigating fire extinguishing may be less effective when put out a fire.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal Precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

- Protective equipment: Wear proper protective equipment.
- Emergency procedures: Not applicable
- If required, notify relevant authorities according to all applicable regulations.

**6.1.2. For emergency responders**

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Remove all sources of ignition.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.

## 6.2. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.
- Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.

## 6.3. Methods and material for containment and cleaning up

### 6.3.1. For containment

- Clear area of personnel and move up wind.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, flame or ignition sources.
- Stop leak if safe to do so.

### 6.3.2. For cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.
- Disposal of waste shall be in compliance with the Wastes Control?Act
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Do not use plastic containers.

### 6.3.3. Other information

- Slippery when spilt.

## 6.4. Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

- Refer to Engineering controls and personal protective equipment.
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources.

### 7.2. Conditions for safe storage, including any incompatibilities

- Save in cool, dry and well ventilated place.
- Do not use damaged containers.
- Do not apply direct heat.
- No open fire.
- Collected them in sealed containers.

### 7.3. Specific end use(s)

- See Section 1 for information on 1.2 Relevant identified uses.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****8.1.1. Occupational exposure limits****European Union (EU) Commission Directive 2006/15/EC (IOELVs)**

- Not available

**European Union (EU) Commission Directive 2006/15/EC (IOELVs) - Skin**

- Not available

**Greece Occupational Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - Exposure Limit : 100 ppm ; Exposure Limit : 410 mg/m<sup>3</sup> (Μεθαακρυλικός μεθυλεστεράς)

**Netherlands Occupational Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - TWA 8 hours : 205 mg/m<sup>3</sup> ; TWA 15-minutes : 410 mg/m<sup>3</sup> (Methylmethacrylaat)

**Denmark Indicative List of Organic Solvents**

- [2-Methyl-2-propenoic acid methyl ester] - Substances in the list of limit values : 25 ppm (Methyl methacrylate (1996))

**Denmark List of Limit Values for Dust**

- Not available

**Latvia Occupational Exposure Limit Values (OELV) for Chemical Substances in the Work Environment AtmbExcel Air & Hydraulics<sup>9</sup>**

- [2-Methyl-2-propenoic acid methyl ester] - Occupational Exposure Limit Values (OELV) 8hr : 10 mg/m<sup>3</sup> (Metilmetakrilāts (2-metilpropēnskābes metilesteris, metil-2-metilpropeonāts))

**Latvia Carcinogens and their Occupational Exposure Limit Values (OELV)**

- Not available

**Bulgaria Occupational Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - Limit values 15 min : 50.0 mg/m<sup>3</sup> (Метилметакрилат)

**Bulgaria Limit values for the chemical agents in the air at the working environment**

- [2-Methyl-2-propenoic acid methyl ester] - Limit Values 8 hours : 50.0 mg/m<sup>3</sup> (Methyl methacrylate)

**Sweden Occupational Exposure Limit Values**

- [2-Methyl-2-propenoic acid methyl ester] - NGV : 50 ppm ; NGV : 200 mg/m<sup>3</sup> ; KTV : 150 ppm ; KTV : 600 mg/m<sup>3</sup> (Metylmetakrylat)

**Sweden Occupational Exposure Limit Values and Measures against Air Contaminants**

- [2-Methyl-2-propenoic acid methyl ester] - LLV : 50 ppm ; LLV : 200 mg/m<sup>3</sup> ; STV : 150 ppm ; STV : 600 mg/m<sup>3</sup> (Methyl methacrylate)

**Spain Changes Proposed for Occupational Exposure Limit Values**

- Not available

**Spain Occupational Exposure Limit for Chemical Agents**

- [2-Methyl-2-propenoic acid methyl ester] - VLA- ED : 50 ppm ; VLA- ED : 208 mg/m<sup>3</sup> ; VLA- EC : 100 ppm ; VLA- EC : 416 mg/m<sup>3</sup> (Methyl methacrylate)

**Slovak Republic Highest Admissible Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - PEAK : 210 ppm ; PEAK : 50 mg/m<sup>3</sup> (2-Methyl-2-propenoic acid methyl ester)

**Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with fibrogenic effect**

- Not available

**Slovak Republic Highest Admissible Exposure Limits - Solid aerosols with possible fibrogenic effect**

- Not available

**Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with nonspecific effect**

- Not available

**Ireland Occupational Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - Occupational Exposure Limit Value (8-hour reference period) : 50 ppm ; Occupational Exposure Limit Value (15-minute reference period) : 100 ppm (Methyl methacrylate)

**UK Workplace Exposure Limits (WELs)**

- [2-Methyl-2-propenoic acid methyl ester] - Long-term Exposure Limit : 50 ppm ; Long-term Exposure Limit : 208 mg/m<sup>3</sup> ; Short-term Exposure Limit : 100 ppm ; Short-term Exposure Limit : 416 mg/m<sup>3</sup> (Methyl methacrylate)

**Austria Technical Exposure Limits (TRK Values)**

- Not available

**Austria Occupational Exposure Limits - Maximum Workplace Concentrations (MAK)**

- [2-Methyl-2-propenoic acid methyl ester] - TMW : 50 ppm ; TMW : 210 mg/m<sup>3</sup> ; KZW : 100 ppm ; KZW : 420 mg/m<sup>3</sup> (Methylmethacrylat)

**Italy Occupational Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - TWA : 50 ppm ; STEL : 100 ppm (Methyl methacrylate)

**Czech Republic Occupational Exposure Limits (PEL and NPK-P)**

- [2-Methyl-2-propenoic acid methyl ester] - PEL : 50 mg/m<sup>3</sup> ; NPK-P : 150 mg/m<sup>3</sup> (Methylmetakrylát)

**Czech Republic Occupational Exposure Limits - Dusts predominately with fibrogenic effect**

- Not available

**Czech Republic Occupational Exposure Limits - Dusts with possible fibrogenic effect**

- Not available

#### **Czech Republic Occupational Exposure Limits - Dusts predominately with nonspecific effect**

- Not available

#### **Czech Republic Occupational Exposure Limits - Dusts predominately with irritating effect**

- Not available

#### **Czech Republic Occupational Exposure Limits - Mineral fibrous dusts**

- Not available

#### **Poland Workplace Maximum Allowable Concentration - Dust**

- Not available

#### **Poland Workplace Maximum Allowable Concentration**

- [2-Methyl-2-propenoic acid methyl ester] - NDS 8h/d - 40h/w : 100 mg/m<sup>3</sup> ; NDSCh 15min : 300 mg/m<sup>3</sup> (Metakrylan metylu)

#### **France Threshold Limit Values for Occupational Exposure - VLE/VME**

- [2-Methyl-2-propenoic acid methyl ester] - VME : 100 ppm ; VME : 410 mg/m<sup>3</sup> (Méthacrylate de méthyle)

#### **Finland Occupational Exposure Levels - Concentrations Known to be Harmful**

- [2-Methyl-2-propenoic acid methyl ester] - HTP Value (8h) : 10 ppm ; HTP Value (8h) : 42 mg/m<sup>3</sup> ; HTP Value (15min) : 50 ppm ; HTP Value (15min) : 210 mg/m<sup>3</sup> (Metylmetakrylat)

#### **Hungary Occupational Exposure Limits**

- [2-Methyl-2-propenoic acid methyl ester] - TWA : 210 mg/m<sup>3</sup> ; STEL : 210 mg/m<sup>3</sup> (METIL-METAKRILÁ T)

#### **8.1.2. Recommended Monitoring Procedures**

- Personal, workplace atmosphere 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.

#### **8.1.3. DNEL/PNEC - Values**

- Not available

## **8.2. Exposure controls**

### **8.2.1. Appropriate engineering controls**

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

### **8.2.2. Individual protection measures, such as personal protective equipment**

#### **Hand protection**

- Wear appropriate chemical resistant glove.

#### **Eye protection**

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

- Provide an emergency eye wash station and quick drench shower in the immediate work area.

#### **Respiratory Protection**

- Respiratory protection is ranked in order from minimum to maximum.

- Consider warning properties before use.

- Any chemical cartridge respirator with organic vapor cartridge(s).

- Any chemical cartridge respirator with a full facepiece and organic vaporcartridge(s).

- Any air-purifying respirator with a full facepiece and an organic vapor canister.

- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

#### **Skin protection**

- Wear appropriate chemical resistant protective clothing.

### **8.2.3 Environmental exposure controls**

- Do not let product enter drains. For ecological information refer to section 12.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1. Information on basic physical and chemical properties**

Physical state	Liquid
Color	Clear, colorless

Odor	Characteristic odor
pH	Not available
Melting point/Freezing point	-48.2 °C
Initial boiling point and boiling range	100.3 °C
Flash point	10 °C (Open cup)
Evaporation rate	3.1 (Ethyl acetate = 1)
Flammability(solid, gas)	Not available
Upper/Lower Flammability or explosive limits	1.7 – 12.5
Vapour pressure	38.5 mmHg (25 °C) [IPCS]
Vapour density	3.5 (air=1, 20 °C)
Relative density	0.94 (water=1)
Solubility	15.6g/L (water, 20 °C)
Partition coefficient of n-octanol/water	1.38
Autoignition temperature	421 °C (1,013 hPa)
Decomposition temperature	Not available
Viscosity	0.60 mPa s at 20 °C
Particle characteristics	Not available

## 9.2. Other information

- Not available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

- Product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.2. Chemical Stability

- This material is stable under recommended storage and handling conditions.

### 10.3. Possibility of hazardous reactions

- Cylinders exposed to fire may vent and release flammable gas.

### 10.4. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

### 10.5. Incompatible materials

- Contact with polymerization catalysts (e.g. peroxides, persulfates), nitric acid, strong oxidizers and other bases (e.g. ammonia, amines), halogens and halogen compounds.

### 10.6. Hazardous decomposition products

- Oxides of carbon (COx).

## SECTION 11: TOXICOLOGICAL INFORMATION

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

#### (a) Acute toxicity

##### - Oral

- LD50 7,872 mg/kg Rat (RTECS)

##### - Dermal

- LD50 >5,000 mg/kg Rabbit (RTECS)

##### - Inhalation

- LC50 78,000 mg/m<sup>3</sup>/4hrs Rat (RTECS)

#### (b) Skin corrosion/irritation

-Although at 2 and 5 g/kg bw (after 24 h of exposure), reversal of tissue damage was not demonstrated by day 14 , the fact that is used a 24 hr contact period, and that reversibility was observed at 0.2 g/kg bw, correspond more closely to the applied dose used under a guideline skin irritation study (0.5 ml / 4 h ) the overall conclusion from these dermal irritation and toxicity studies is that MMA is irritant to the skin of rabbits.

**(c) Serious eye damage/irritation**

- Irritating, and may injure eye tissue if not removed promptly.

**(d) Respiratory sensitization**

- Respiratory irritation data

**(e) Skin sensitization**

- May cause an allergic skin reaction

**(f) Germ cell mutagenicity**

- Not available

**(g) Carcinogenicity**

**- IARC**

- [2-Methyl-2-propenoic acid methyl ester] : Group 3

**- OSHA**

- Not available

**- ACGIH**

- [2-Methyl-2-propenoic acid methyl ester] : A4

**- NTP**

- Not available

**- EU CLP**

- Not available

**(h) Reproductive toxicity**

- Exposure by inhalation to methyl methacrylate concentrations up to 8.44 mg/L (2028 ppm) resulted in no embryo or fetal toxicity or malformations even at exposure levels that resulted in maternal toxicity. (ECHA)

**(i) Specific target organ toxicity(single exposure):**

- May cause respiratory irritation. (EU CoRAP, 2018)

**(j) Specific target organ toxicity(repeated exposure):**

- No relevant effects were observed up to the highest dose tested (2000 ppm, limited by palatability) in a 2 years study in rats by oral administration in drinking water. (ECHA)

**(k) Aspiration hazard**

- Not available

## 11.2. Information on other hazards

- Not available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### 12.1.1. Fish

- LC50 191 mg/L 96hr *Lepomis macrochirus* (EPA, 1975)

- LC50 >79 mg/L 96hr *Oncorhynchus mykiss* (EPA, 40 CFR Part 797 Guideline 797.1400)

#### 12.1.2. Invertebrate

- EC50 69 mg/L 48hr *Daphnia magna* (EPA, 1975, flow through protocol)

#### 12.1.3. Algae

- EC50 37 mg/L 7 days *Scenedesmus quadricauda*

### 12.2. Persistence and degradability

#### 12.2.1. Persistence

- Persistence : 1.38 log Kow

#### 12.2.2. Degradability

- Not available

### 12.3. Bioaccumulative potential

#### 12.3.1. Bioaccumulation

- BCF: 2 - 6.59 (calculated), 2.35 (calculated)

#### 12.3.2. Biodegradability



- 88% after 28 days (aerobic)(GLP)

#### 12.4. Mobility in soil

- If MMA released into the soil, MMA is expected to quickly evaporate.  
On the basis of its vapor pressure and its low absorption to soil ( $K = 21.3 - 34$ ), MMA is expected to volatilize relatively rapidly from soil [Online literature search, Environfate data base, 1991 SRC, 1988].

#### 12.5. Results of PBT and vPvB assessment

- Not available

#### 12.6. Endocrine disrupting properties

- Not available

#### 12.7. Other adverse effects

- Not available

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- It shall be treated by incineration
- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

### SECTION 14: TRANSPORT INFORMATION

#### 14.1. UN number or ID number

##### 14.1.1. UN No. (ADR/RID/ADN)

- 1247

##### 14.1.2. UN No. (IMDG CODE/IATA DGR)

- 1247

##### 14.1.3. UN No. (ICAO)

- 1247

#### 14.2. UN proper shipping name

- Methyl methacrylate monomer, stabilized

#### 14.3. Transport hazard class(es)

##### 14.3.1. ADR/RID/ADN Class

- 3

##### 14.3.2. ADR/RID/ADN Class

- Class : 3, METHYL METHACRYLATE MONOMER, STABILIZED

##### 14.3.3. ADR Label No.

- 3

##### 14.3.4. IMDG Class

- 3

##### 14.3.5. ICAO Class/Division

- 3

##### 14.3.6. Transport Labels



#### 14.4. Packing group

##### 14.4.1. ADR/RID/ADN Packing group

- II

##### 14.4.2. IMDG Packing group

- II

##### 14.4.3. ICAO Packing group

- II

#### 14.5. Environmental hazards

- Not applicable

#### 14.6. Special precautions for user

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-D (Flammable liquids)
- Emergency Action Code : 3YE
- Hazard No.(ADR) : 339
- Tunnel Restriction Code : 2 (D/E)

#### 14.7. Maritime transport in bulk according to IMO instruments

- Not applicable

### SECTION 15: REGULATORY INFORMATION

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

##### 15.1.1. Europe regulatory

###### 15.1.1.1 REACH Restricted substance under REACH

- Not applicable

###### 15.1.1.2 REACH Substances subject to authorization under REACH

- Not applicable

###### 15.1.1.3 REACH SVHC

- Not applicable

###### 15.1.1.4 Europe PBT

- Not applicable

###### 15.1.1.5 European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List

- Not applicable

#### 15.2. Chemical Safety Assessment

- Not conducted

### SECTION 16: OTHER INFORMATION

#### 16.1. Indication of changes

- The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the Commission Regulation (EC) No. 878/2020

#### 16.2. Abbreviations and acronyms

- 1272/2008 CLP : Classification, Labelling and Packaging regulation.
- REACH : Registration, Evaluation and authorisation of chemical substances.
- DNEL : Derive no effects level

- PNEC : Predicted no effect concentration

### 16.3. Key literature references and sources for data

- This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB

### 16.4. Classification procedure

- The mixture classification has been derived based on the classification of the individual components in accordance with the rules set out in Regulation (EC) No 1272/2008 (CLP) as well as the translation tables in Annex VII to the same regulation.

### 16.5. Training advice

- Not applicable

### 16.6. Further information

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

- 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.

- Contact National Helpdesks, List of Telephone Numbers : AUSTRIA (Vienna Wien) +43 1 515 61 0, BELGIUM (Brussels Bruxelles) +32 070 245 245, BULGARIA (Sofia) +359 2 9888 205, Croatia +385 1 2348 342 CZECH REPUBLIC (Prague Praha) +420 224 919 293 or +420 224 915 402, DENMARK (Copenhagen) 82 12 12 12, ESTONIA (Tallinn) 112, FINLAND (Helsinki) +358 9 471 977, FRANCE (Paris) +33 1 45 42 59 59, GERMANY (Berlin) +49 30 19240, GREECE (Athens Athinai) +30 210 77 93 777, HUNGARY (Budapest) +36 80 201 199, ICELAND (Reykjavik) +354 543 2222 or 112, IRELAND (Dublin) +353 1 8379964 or +353 1 809 2166, ITALY (Rome) +39 06 305 4343, LATVIA (Riga) 112 or +371 6704 2473, LITHUANIA (Vilnius) +370 5 236 20 52 or +370 687 53378, Luxembourg +352 70 245 245, MALTA +356 2122 4071, NETHERLANDS (Bilthoven) +31 30 274 88 88, NORWAY (Oslo) 22 591300, POLAND (Gdansk) +48 58301 65 16 or +48 58 349 2831, PORTUGAL (Lisbon Lisboa) 808 250 143, ROMANIA (Bucharest) +40 21 3183606 SLOVAKIA (Bratislava) +421 2 54 77 4166, SLOVENIA (Ljubljana) + 386 41 650 500, SPAIN +34 91 562 04 20(spanish language) or +34 91 768 98 00(You can request to be served in English), SWEDEN (Stockholm) 112 or +46 10 456 6700 (mon-fri 9.00-17.00), UNITED KINGDOM (London) 112 or 0845 4647 (NHS Direct).