According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 MEK (Methyl Ethyl Ketone)



Version Revision Date: 16.0 04/26/2018 Print Date: 01/29/2019 Date of last issue: 09/03/2015

SECTION 1. IDENTIFICATION

Product name	:	Methyl Ethyl Ketone		
Synonyms	:	butan-2-one, Ethyl methyl ketone, MEK		
CAS-No.	:	78-93-3		
Manufacturer or supplier's o	deta	ails		
Company	:	The Chemical Supply 9595 Six Pines Dr., Ste 8210 The Woodlands, TX 77380 info@thechemicalsupply.com		
Emergency telephone numb				
Chemtrec Domestic (24 hr) Chemtrec International (24 hr)	:	1-800-424-9300 1-703-527-3887		
Recommended use of the chemical and restrictions on use				
Recommended use	:	Use only in industrial processes.		

Restrictions on use : This product must not be used in applications other than the above without first seeking the advice of the supplier.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accord Flammable liquids	dan :	
Eye irritation	:	Category 2A
Specific target organ toxicity - single exposure	:	Category 3 (Central nervous system, Narcotic effects)
GHS label elements Hazard pictograms	:	
Signal word	:	Danger

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Haza	rd statements	 PHYSICAL HAZARDS: H225 Highly flammable liquid and vapour. HEALTH HAZARDS: H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Preca	autionary statements	 Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. 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. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
		 Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P370 + P378 In case of fire: Use appropriate media to extinguish. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/ attention. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/doctor if you feel unwell.
		 Storage: P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P235 Keep cool. P405 Store locked up. Disposal: P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Other hazards which do not result in classification

Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Even with proper grounding and bonding, this material can still accumulate an electrostatic

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charge.

If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable airvapour mixtures can occur. Exposure may enhance the toxicity of other materials.

See Chapter 11 for details.

Repeated exposure may cause skin dryness or cracking.

The classification of this material is based on OSHA HCS 2012 criteria.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : Solvent

Hazardous components

Chemical name	Synonyms	CAS-No.	Concentration (% w/w)
Methyl ethyl ketone	butanone	78-93-3	100

SECTION 4. FIRST-AID MEASURES

General advice :	DO NOT DELAY. Keep victim calm. Obtain medical treatment immediately.
If inhaled :	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
In case of skin contact :	Remove contaminated clothing. Flush exposed area with wa- ter and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
In case of eye contact :	Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Transport to the nearest medical facility for additional treat- ment.
If swallowed :	Call emergency number for your location / facility. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facili- ty: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.
Most important symptoms : and effects, both acute and delayed	If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Defatting dermatitis signs and symptoms may include a burn- ing sensation and/or a dried/cracked appearance. Eye irritation signs and symptoms may include a burning sen- sation, redness, swelling, and/or blurred vision.

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			Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light- headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.
	Protection of first-aiders	:	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
I	Indication of any immediate medical attention and special treatment needed		Potential for chemical pneumonitis. Call a doctor or poison control center for guidance.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam, water spray or fog. Dry chemical pow- der, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	None
Specific hazards during fire- fighting	:	The vapour is heavier than air, spreads along the ground and distant ignition is possible. Carbon monoxide may be evolved if incomplete combustion occurs.
Specific extinguishing meth- ods	:	Standard procedure for chemical fires.
Further information	:	Clear fire area of all non-emergency personnel. Keep adjacent containers cool by spraying with water.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : tive equipment and emer- gency procedures	Observe the relevant local and international regulations Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Vapour may form an explosive mixture with air.
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				Avoid contact with skin, eyes and clothing. Isolate hazard area and deny entry to unnecessary or unpro- tected personnel. Stay upwind and keep out of low areas.
	Environ	mental precautions	:	Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Ventilate contaminated area thoroughly. Monitor area with combustible gas indicator.
		s and materials for ment and cleaning up	:	For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
ļ	Additior	nal advice	:	For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.
				U.S. regulations may require reporting releases of this materi- al to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Center at (800) 424-8802.

SECTION 7. HANDLING AND STORAGE

Technical measures	 Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk as- sessment of local circumstances to help determine appropri- ate controls for safe handling, storage and disposal of this material.
	Ensure that all local regulations regarding handling and stor- age facilities are followed.

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Advi	ce on safe handling	:	Avoid contact with skin, eyes and clothing. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Bulk storage tanks should be diked (bunded). Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic discharge may cause fire. Ensure electrical con- tinuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flamma- ble. Properly dispose of any contaminated rags or cleaning mate- rials in order to prevent fires. Do NOT use compressed air for filling, discharging, or han- dling operations.
Avoi	dance of contact	:	Strong oxidising agents.
Proc	luct Transfer	:	Refer to guidance under Handling section.
Con	ditions for safe storage	:	The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Refer to section 15 for any additional specific legislation cov- ering the packaging and storage of this product.
Pacl	kaging material	:	Suitable material: For containers, or container linings use mild steel, stainless steel. Unsuitable material: Natural, butyl, neoprene or nitrile rubbers.
Con	tainer Advice	:	Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Spe	cific use(s)	:	Not applicable
			Ensure that all local regulations regarding handling and stor- age facilities are followed. See additional references that provide safe handling practices: American Petroleum Institute 2003 (Protection Against Igni- tions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity). IEC/TS 60079-32-1: Electrostatic hazards, guidance

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

· · ·	•			
Components	CAS-No.	Value type	Control parame-	Basis

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		(Form of exposure)	ters / Permissible concentration	
Methyl ethyl ketone	78-93-3	TWA	200 ppm	ACGIH
Methyl ethyl ketone		STEL	300 ppm	ACGIH
Methyl ethyl ketone		TWA	200 ppm 590 mg/m3	OSHA Z-1

Biological occupational exposure limits

Components	CAS-No.	Control	Biological	Sam-	Permissible	Basis
		parameters	specimen	pling	concentra-	
				time	tion	
Methyl ethyl ketone	78-93-3	methyl ethyl ketone	Urine	End of shift (As soon as possible after	2 mg/l	ACGIH BEI
				exposure		
				ceases)		

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures

: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.

Appropriate measures include:

Use sealed systems as far as possible.

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.

Local exhaust ventilation is recommended.

Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

General Information: Always observe good personal hygiene measures, such as

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		 washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle.
Perso	nal protective equipme	ent
Respir	atory protection	 If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapours [Type A boiling point >65°C (149°F)]. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.
	protection marks	: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Butyl rubber. Nitrile rubber. Incidental contact/Splash protection: PVC or neoprene rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes

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		are followed. Glove thickness is not a good predictor of glo resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should typically greater than 0.35 mm depending on the glove mal and model. Suitability and durability of a glove is depender on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be re- placed. Personal hygiene is a key element of effective han care. Gloves must only be worn on clean hands. After usin gloves, hands should be washed and dried thoroughly. App cation of a non-perfumed moisturizer is recommended.
Eye pr	rotection	: Wear goggles for use against liquids and gas. Wear full face shield if splashes are likely to occur.
Skin a	nd body protection	 Wear antistatic and flame retardant clothing if a local risk assessment deems it so. Skin protection is not required under normal conditions of use. For prolonged or repeated exposures use impervious cloth over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programmes.
Protec	tive measures	: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Therm	al hazards	: Not applicable
Hygier	ne measures	: Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use.
Enviro	onmental exposure o	ntrols
Genera	al advice	 Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containin vapour. Minimise release to the environment. An environmental assessment must be made to ensure compliance with local e ronmental legislation. Information on accidental release measures are to be foun section 6.
SECTION 9	9. PHYSICAL AND C	EMICAL PROPERTIES
Appea	arance	: Liquid.
Colour	r	: clear

Odour : characteristic

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Odour Threshold	:	Data not available
рН	:	Not applicable
Melting point/freezing point	:	-86 °C / -123 °F
Boiling point/boiling range	:	79.5 °C / 175.1 °F
Flash point	:	-9 °C / 16 °F
Evaporation rate	:	3.3 Method: DIN 53170, di-ethyl ether=1
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / upper flammability limit	:	upper flammability limit 11.5 %(V)
Lower explosion limit / Lower flammability limit	:	Lower flammability limit 1.8 %(V)
Vapour pressure	:	12.600 Pa (20 °C / 68 °F)
Relative vapour density	:	2.4 (20 °C / 68 °F)
Relative density	:	0.804 - 0.806 (20 °C / 68 °F) Method: ASTM D4052
Density	:	0.804 - 0.806 kg/m3 (20 °C / 68 °F) Method: ASTM D4052
Solubility(ies) Water solubility	:	250 g/l Miscible. (20 °C / 68 °F)
Partition coefficient: n- octanol/water	:	log Pow: 0.3
Auto-ignition temperature	:	515 °C / 959 °F
Decomposition temperature	:	Data not available
Viscosity Viscosity, dynamic	:	0.42 mPa.s (20 °C / 68 °F)
Viscosity, kinematic	:	Data not available

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Oxid	izing properties	:	Data not available
Surfa	ace tension	:	24.8 mN/m, 20 °C / 68 °F
Cond	ductivity	:	Electrical conductivity: > 10,000 pS/m
Mole	cular weight	:	A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid, This material is not expected to be a static accumulator. 72.11 g/mol
SECTION	I 10. STABILITY AND RE	AC	ΤΙVΙΤΥ
Read	ctivity	:	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Cher	nical stability	:	No hazardous reaction is expected when handled and stored according to provisions
Poss tions	ibility of hazardous reac-	:	Reacts with strong oxidising agents.
Conc	ditions to avoid	:	Avoid heat, sparks, open flames and other ignition sources. Prevent vapour accumulation. In certain circumstances product can ignite due to static elec- tricity.
Incor	mpatible materials	:	Strong oxidising agents.
Haza prod	ardous decomposition ucts	:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergases combustion or thermal or oxidative degree

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on product testing.

dation.

Information on likely routes of exposure

Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity

: LD50 (Rat): > 2000 - <= 5000 mg/kg Remarks: May be harmful if swallowed.

material undergoes combustion or thermal or oxidative degra-

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Acute	inhalation toxicity		⊳ 5000 ppm s: Low toxicity:
Acute	dermal toxicity		abbit): > 5000 mg/kg s: Low toxicity:
Skin	corrosion/irritation		
<u>Produ</u> Rema	u <u>ct:</u> arks: Not irritating to ski		
Serio	us eye damage/eye ir	tation	
Produ	uct:		
Rema	arks: Causes serious ey	e irritation.	
Resp	iratory or skin sensiti	ation	
	u <u>ct:</u> arks: Not a sensitiser. d on available data, the	classification	criteria are not met.
Germ	cell mutagenicity		
<u>Produ</u>	uct:	: Remark	s: Not mutagenic.
Carci	nogenicity		
<u>Produ</u> Rema		Based on ava	ailable data, the classification criteria are not met.
IARC	;	equal to 0.	nent of this product present at levels greater than or 1% is identified as probable, possible or confirmed cinogen by IARC.
OSH	Α		nent of this product present at levels greater than or 1% is on OSHA's list of regulated carcinogens.
NTP			nent of this product present at levels greater than or 1% is identified as a known or anticipated carcinogen
Repro	oductive toxicity		
Produ	uct:		
		: Remark	s: Not a developmental toxicant., Does not impair

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fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: May cause drowsiness and dizziness.

STOT - repeated exposure

Product:

Remarks: Low systemic toxicity on repeated exposure., Repeated exposure may cause skin dryness or cracking.

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Further information

Product:

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment : Informa	ation given is based on product testing.
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Ecotoxicity

Product:

Toxicity to fish (Acute toxici- ty)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to daphnia and other aquatic invertebrates (Acute toxicity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to algae (Acute tox- icity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to fish (Chronic tox- icity)	:	Remarks: Data not available
Toxicity to daphnia and other aquatic invertebrates (Chron-ic toxicity)	:	Remarks: Data not available

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	ity to microorganisms e toxicity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Persi	stence and degradabi	lity	
<u>Produ</u> Biode	<u>uct:</u> gradability	:	Remarks: Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.
Bioad	cumulative potential		
<u>Produ</u> Bioac	u <u>ct:</u> cumulation	:	Remarks: Does not bioaccumulate significantly.
Mobi	lity in soil		
<u>Produ</u> Mobil		:	Remarks: Dissolves in water.
Other	r adverse effects		
<u>Prodi</u> Additi matio	onal ecological infor-	:	Does not have ozone depletion potential.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues :	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal meth- ods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses Waste product should not be allowed to contaminate soil or water.
	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or na- tional requirements and must be complied with.
Contaminated packaging :	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

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SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transp UN/ID/NA number	ortation Classification (49 CFR Parts 171-180) : UN 1193
Proper shipping name	: ETHYL METHYL KETONE
	(METHYL ETHYL KETONE)
Packing group	: 11
Labels	: 3
ERG Code	: 127
Marine pollutant	: no
International Regulations	
IATA-DGR	
UN/ID No.	: UN 1193
Proper shipping name Class	: METHYL ETHYL KETONE : 3
Packing group	: 11
Labels	: 3
IMDG-Code	
UN number	: UN 1193
Proper shipping name	: ETHYL METHYL KETONE
Class	: 3
Packing group	: 11
Labels	: 3
Marine pollutant	: no
Transport in bulk according to	Annex II of MARPOL 73/78 and the IBC Code
Pollution category	: Z
Ship type	: 3; Must be Double Hulled
Product name	: Methyl ethyl ketone
Special precautions for user	
Remarks	: Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.
Additional Information	: This product may be transported under nitrogen blanketing. Nitrogen is an odourless and invisible gas. Exposure to nitro- gen may cause asphyxiation or death. Personnel must ob- serve strict safety precautions when involved with a confined space entry.

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SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Methyl ethyl ketone	78-93-3	5000	5000
Methyl ethyl ketone	78-93-3	5000	5000 (D035)
Methyl ethyl ketone	78-93-3	100	100 (F005)

*: This material is classified as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Flammable (gases, aerosols, liquids, or solids) Serious eye damage or eye irritation Specific target organ toxicity (single or repeated exposure)
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Pennsylvania Right To Know

Methyl ethyl ketone

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

California List of Hazardous Substances

Methyl ethyl ketone

Other regulations:

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

AICS	:	Listed

DSL Listed :

78-93-3

78-93-3

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

MEK (Methyl Ethyl Ketone)

Version 16.0	Revision Date: 04/26/2018			Print Date: 01/29/2019 Date of last issue: 09/03/2015
IECSC	>	:	Listed	
KECI		:	Listed	
PICCS	8	:	Listed	
EINEC	S	:	Listed	
TSCA		:	Listed	
TCSI		:	Listed	

SECTION 16. OTHER INFORMATION

Further information

NFPA Rating (Health, Fire, Reac- 1, 3, 0 tivity)

Full text of other abbreviations

ACGIH ACGIH BEI	:	USA. ACGIH Threshold Limit Values (TLV) ACGIH - Biological Exposure Indices (BEI)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim- its for Air Contaminants
	÷	8-hour, time-weighted average
ACGIH / STEL OSHA Z-1 / TWA	÷	Short-term exposure limit 8-hour time weighted average
Abbreviations and Acronyms		The standard abbreviations and acronyms used in this docu- ment can be looked up in reference literature (e.g. scientific
		dictionaries) and/or websites.
		ACGIH = American Conference of Governmental Industrial Hygienists
		ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road
		AICS = Australian Inventory of Chemical Substances
		ASTM = American Society for Testing and Materials
		BEL = Biological exposure limits
		BTEX = Benzene, Toluene, Ethylbenzene, Xylenes CAS = Chemical Abstracts Service
		CEFIC = European Chemical Industry Council
		CLP = Classification Packaging and Labelling
		COC = Cleveland Open-Cup
		DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level
		DNEL = Derived No Effect Level
		DSL = Canada Domestic Substance List
		EC = European Commission
		EC50 = Effective Concentration fifty ECETOC = European Center on Ecotoxicology and Toxicolo-
		gy Of Chemicals

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

MEK (Methyl Ethyl Ketone)

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	ECHA = European Chemicals Agency EINECS = The European Inventory of Existing Commercial Chemical Substances EL50 = Effective Loading fifty ENCS = Japanese Existing and New Chemical Substances Inventory EWC = European Waste Code GHS = Globally Harmonised System of Classification and Labelling of Chemicals IARC = International Agency for Research on Cancer IATA = International Maritime Dangerous Goods INV = Chinese Chemicals Inventory IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables KECI = Korea Existing Chemicals Inventory LC50 = Lethal Concentration fifty LD50 = Lethal Dose fifty per cent. LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading LL50 = Lethal Loading fifty MARPOL = International Convention for the Prevention of Pollution From Ships NOEC/NOEL = No Observed Effect Concentration / No Ob- served Effect Level OE_HPV = Occupational Exposure - High Production Volume PBT = Persistent, Bioaccumulative and Toxic PICCS = Philippine Inventory of Chemicals and Chemical Substances PNEC = Predicted No Effect Concentration REACH = Registration Evaluation And Authorisation Of Chemicals RID = Regulations Relating to International Carriage of Dan- gerous Goods by Rail SKIN_DES = Skin Designation STEL = Short term exposure limit TRA = Targeted Risk Assessment TSCA = US Toxic Substances Control Act TWA = Time-Weighted Average vPvB = very Persistent and very Bioaccumulative

A vertical bar (|) in the left margin indicates an amendment from the previous version. Due to a change in detail in Section 15, this document has been released as a significant change.

Sources of key data used to compile the Safety Data Sheet : The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

SAFETY DATA SHEET According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 MEK (Methyl Ethyl Ketone)

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: 04/26/2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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