



SAFETY DATA SHEET

Issuing Date 30-May-2015

Revision Date 30-May-2015

Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name 320 CLEANER

Other means of identification

Product Code(s) 8000034

UN-No UN1993

Synonyms No information available

MARKEM-IMAJE USA
100 Chastain Center Blvd
Suite 165
Kennesaw, GA 30144 - USA
Phone: 770-421-7700
Fax: 770-421-7702

Recommended use of the chemical and restrictions on use

Recommended Use Cleaner.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

Markem-Imaje
150 Congress St. PO Box 2100
Keene, NH 03431
(603) 352-1130

Emergency telephone number

Chemical Emergency Phone Number Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

Emergency Telephone Number In case of emergency call CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Danger**Hazard statements**

Causes serious eye irritation

May cause drowsiness or dizziness

Highly flammable liquid and vapor

**Color** Colorless**Physical State** Liquid**Odor** Solvent**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Wear eye/face protection

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other information

- May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical Nature of the Preparation** Solvent mixture.

Chemical Name	CAS-No	Weight %
Ethyl acetate	141-78-6	50 - 60
Isopropyl alcohol	67-63-0	50 - 60

4. FIRST AID MEASURES**First aid measures****General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. If symptoms persist, call a physician.

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Immediately flush with plenty of water. Keep eye wide open while rinsing.
Skin Contact	Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.
Ingestion	Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.
Protection of First-aiders	Remove all sources of ignition. Use personal protective equipment.
Most important symptoms and effects, both acute and delayed	
Most Important Symptoms/Effects	No information available
Indication of any immediate medical attention and special treatment needed	
Notes to Physician	Keep victim warm and quiet. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or regular foam. Water spray, fog or regular foam. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk. Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol-resistant foam.
Unsuitable Extinguishing Media	CAUTION: All these products have a very low flash point. Do not use a solid water stream as it may scatter and spread fire.
Specific Hazards Arising from the Chemical	Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Substance may be transported hot. Flammable. Keep product and empty container away from heat and sources of ignition. Risk of ignition.
Protective Equipment and Precautions for Firefighters	Wear self-contained breathing apparatus and protective suit. Fire or intense heat may cause violent rupture of packages. Keep containers and surroundings cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.
Other Information	Water spray may reduce vapor; but may not prevent ignition in closed spaces.
<u>Environmental precautions</u>	
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Beware of vapors accumulating to form explosive concentrations.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
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Methods for Cleaning Up

Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Take precautionary measures against static discharges.

Other Information

Water spray may reduce vapor; but may not prevent ignition in closed spaces

7. HANDLING AND STORAGE

Precautions for safe handling**Handling**

Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities**Storage**

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat and sources of ignition. Keep away from heat. Protect from light.

Incompatible Products

Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl acetate 141-78-6	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 1400 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m ³
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health.

S*: Skin Notation

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v.

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment**Eye/Face Protection**

Tightly fitting safety goggles. Face-shield.

Skin and Body Protection

Antistatic boots. Wear fire/flame resistant/retardant clothing. Impervious gloves. Long sleeved clothing. Chemical resistant apron. Apron.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn

Hygiene Measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.



Glasses



Gloves



Boots



Face Mask

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Color	Colorless.	Odor	Solvent.
Physical State	Liquid	pH	NA
Flash Point	25°F / -4°C	Boiling Point/Range	82°C / 180°F
Autoignition Temperature	Autoignition Temperature 399°C / 750°F	Melting Point/Range	-84°C / -119°F
Flammability Limits in Air		Explosion Limits	Not determined
Upper	12.0		
Lower	2.0		
Specific Gravity	0.85	Solubility	Partly miscible.
Evaporation Rate	Not determined	Vapor Pressure	Not determined
Vapor Density	Not determined	Liquid Density	6.9517182
VOC Content(%)	100	VOC (lb/gal)	7.08645
VOC (g/l)	850.930849147682		

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

Carbon dioxide (CO₂). Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known information
Inhalation	There is no data available for this product
Eye Contact	There is no data available for this product
Skin Contact	There is no data available for this product
Ingestion	There is no data available for this product

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl acetate 141-78-6	= 5620 mg/kg (Rat)	> 18000 mg/kg (Rabbit) > 20 mL/kg (Rabbit)	-
Isopropyl alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h

Information on toxicological effects

Symptoms No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available
Mutagenic Effects No information available
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl acetate 141-78-6	-	No information available	-	-
Isopropyl alcohol 67-63-0	-	Group 1(as Isopropyl alcohol manufacture (strong-acid process)) Group 1 Group 3	-	X(as Isopropyl alcohol manufacture (strong-acid process))

ACGIH: (American Conference of Governmental Industrial Hygienists)

No information available

IARC: (International Agency for Research on Cancer)

No information available

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Group 1 - Carcinogenic to Humans

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive Toxicity No information available
Specific target organ systemic toxicity (single exposure) No information available
Specific target organ systemic toxicity (repeated exposure) No information available
Chronic Toxicity Avoid repeated exposure.
Target Organ Effects Eyes, Skin, Respiratory system , Central nervous system (CNS), Respiratory system.
Aspiration hazard No information available

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2806 mg/kg
 ATEmix (dermal) 8118 mg/kg
 ATEmix (inhalation-gas) 99999
 ATEmix (inhalation-dust/mist) 99999
 ATEmix (inhalation-vapor) 99999

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethyl acetate 141-78-6	3300: 48 h Desmodesmus subspicatus mg/L EC50	220 - 250: 96 h Pimephales promelas mg/L LC50 flow-through 352 - 500: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 484: 96 h Oncorhynchus mykiss mg/L LC50 flow-through		560: 48 h Daphnia magna mg/L EC50 Static
Isopropyl alcohol 67-63-0	1000: 72 h Desmodesmus subspicatus mg/L EC50 1000: 96 h Desmodesmus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50		13299: 48 h Daphnia magna mg/L EC50

Persistence and Degradability

No information available

Bioaccumulation

No information available

Chemical Name	Log Pow
Ethyl acetate 141-78-6	0.6
Isopropyl alcohol 67-63-0	0.05

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Waste Disposal Methods**

Dispose of in accordance with local regulations This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261)

14. TRANSPORT INFORMATION**DOT**

UN-No UN1993
 Proper Shipping Name Flammable liquid, n.o.s.
 Hazard Class 3
 Packing Group II
 Description Flammable liquid, n.o.s.(Ethylacetate),3,UN1993,PG II,RQ
 Emergency Response Guide Number 128

IATA

UN-No UN1993
 Hazard Class 3
 Packing Group II
 Description UN1993, Flammable liquid, n.o.s.*(Ethyl acetate,Isopropyl alcohol),3,PG II

IMDG/IMO

14. TRANSPORT INFORMATION

UN-No	UN1993
Hazard Class	3
Packing Group	II
EmS No.	_3-07_
Description	UN1993, Flammable liquid, n.o.s.(Ethyl acetate,Isopropyl alcohol),3,PG II

ADR

UN-No	UN1993
Proper Shipping Name	Flammable liquid, n.o.s
Hazard Class	3
Packing Group	II
Classification Code	F1
Description	UN1993 Flammable liquid, n.o.s.(Ethyl acetate,Isopropyl alcohol),3,II,ADR
ADR/RID-Labels	3

15. REGULATORY INFORMATION**International Inventories**

TSCA Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Isopropyl alcohol	67-63-0	50	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Ethyl acetate	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	Pennsylvania	Illinois	Rhode Island
Ethyl acetate	X	X		
Isopropyl alcohol	X	X		

Chemical Name	New Jersey
Ethyl acetate	X
Isopropyl alcohol	X

International Regulations**Mexico - Grade**

Serious risk, Grade 3

Chemical Name	Carcinogen Status	Exposure Limits
Ethyl acetate		Mexico: TWA 400 ppm Mexico: TWA 1400 mg/m ³
Isopropyl alcohol		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m ³ Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m ³

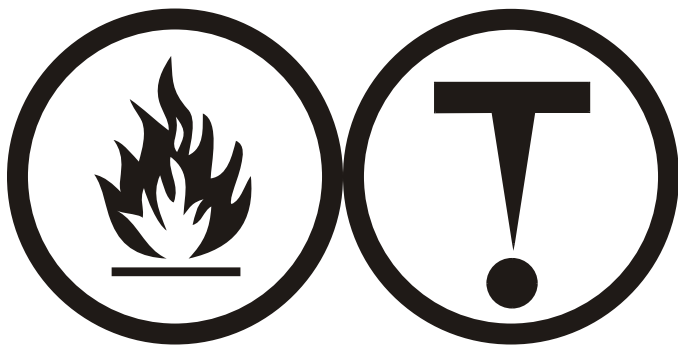
Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class

B2 Flammable liquid

D2A Very toxic materials

**Legend**

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION**NFPA****HMIS**

Personal Protection X

Health Hazard 2

Health Hazard 1

Flammability 3

Flammability 3

Reactivity -

Reactivity 0

Prepared By

Environmental and Safety Department
150 Congress St. PO Box 2100.
Keene, NH 03431
(603) 352-1130

Issuing Date
Revision Note

30-May-2015
No information available

General Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication

End of Safety Data Sheet