

407C

AUDIO VIDEO HEAD CLEANER

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 407C**Other Means of Identification:** Audio Video Head Cleaner**Related Part #** 407C-Liquid; 407C-125ML, 407C-250ML, 407C-1L

Recommended Use and Restriction on Use

Use: Magnetic tape head cleaner**Uses Advised Against:** Not applicable

Details of Manufacturer or Importer

ManufacturerMG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADAMG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA**☎** +1-800-340-0772**Fax** +1-800-340-0773**E-mail** support@mgchemicals.com**Web** www.mgchemicals.com**☎** +1-905-331-1396**Fax** +1-905-331-2682**E-mail** info@mgchemicals.com**E-MAIL** (Competent Person): sds@mgchemicals.com

Emergency Phone Number




For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA—Call Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**
(Service access code: 335388)**For emergencies involving the transport of dangerous goods;** 24/7 service
CANADA—Call CANUTEC collect at **+1-613-996-6666** or ***666** on cellular phones

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Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

Criteria	Category	Signal Word	Pictograms
Flammable Liquid	2	Danger	Flame
Aspiration Hazard	1	Danger	Health
Reproductive Toxicity	2	Warning	Health
Skin Irritation	2	Warning	Exclamation
Eye Irritation	2	Warning	Exclamation
Specific Target Organ Toxicity Single Exposure	3	Warning	Exclamation
Hazardous to the aquatic environment Chronic	2	None	Environment

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.


Label Elements

Signal Word	DANGER
Pictograms	Hazard Statements
	H225: Highly flammable liquid and vapour
	H304: May be fatal if swallowed and enters airways H361: Suspected of damaging fertility or the unborn child
	H319: Causes serious eye irritation H315: Cause skin irritation H336: May cause dizziness or drowsiness

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Pictograms	Hazard Statements
	H411: Toxic to aquatic life with long lasting effects
Prevention	Precautionary Statements
P210 P201 + P202 P233 P240 P241 P243 P261 + P271 P264 P280 P273	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof equipment. Take action to prevent static discharges. Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Wear protective gloves and eye protection. Avoid release to the environment.
Response	Precautionary Statements
P370 + P378 P308 + P313 P301 + P310, P331 P303 + P361 + P364 + P352 P332 + P313 P304 + P340 P312	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. IF exposed or concerned: Get medical advice or attention. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of water or shower. If skin irritation occurs: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.

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Response	Precautionary Statements
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 attention.
P391	Collect spillage
Storage	Precautionary Statements
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	Precautionary Statements
P501	Dispose of contents in accordance to local, regional, national and international regulations.

Other Hazards

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Defats skin	Repeated exposure may cause skin dryness or cracking.	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	% (weight)
67-63-0	propan-2-ol ^{a)}	50%
107-83-5	methyl-2-pentane	15-25%
96-14-0	methyl-3-pentane	5-10%
79-29-8	dimethyl-2,3-butane	5-10%
75-83-2	dimethyl-2,2-butane	3-7%
110-54-3	n-hexane	1-2%

a) Commonly known as isopropyl alcohol (IPA)

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Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
IF SWALLOWED	P301 + P330, P331, 308 +P313
Immediate Symptoms	<i>abdominal pain, nausea, headaches, dizziness, drowsiness, vomiting</i>
Response	Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting. If exposed or concerned: Get medical advice.
IF ON SKIN (or hair)	P303 + P361 + P352, P332 + P313, P363
Immediate Symptoms	<i>irritation, dry skin, redness</i>
Response	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of water or shower. If skin irritation occurs: Get medical advice or attention. Wash contaminated clothing before reuse.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	<i>cough, shortness of breath, dizziness, drowsiness, headaches</i>
Response	Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTRE or doctor. If exposed or concerned: Get medical advice.
IF IN EYES	P305 + P351 + P338, P336 + P313
Immediate Symptoms	<i>irritation, redness, pain</i>
Response	Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

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Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray to extinguish. Use water spray to cool containers.
Specific Hazards	The vapors are heavier than air and may accumulate in low-lying areas. Vapors may travel long distances and ignite at an ignition source, which can cause a flashback or an explosion. Prevent fire-fighting wash from entering waterway or sewer system.
Combustion Products	Produces carbon oxides (CO, CO ₂).
Fire-Fighter	Wear self-contained breathing apparatus and full firefighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Avoid breathing vapors or mist. Remove or keep away all sources of ignition or extreme heat.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment Methods	Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite).
Cleaning Methods	Collect liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wash spill area with soap and water to remove the last traces of residue. RECOMMENDATION: Use a grounded stainless steel or carbon steel container or a solvent resistant plastic container.
Disposal Methods	Dispose of spill waste according to Section 13.

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Section 7: Handling and Storage

- Prevention** Keep out of reach of children.
- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof equipment.
- Use only outdoors or in a well-ventilated area. Avoid breathing vapors.
- Avoid release to the environment.
- Handling** Wear protective gloves and eye protection.
- Wash hands thoroughly after handling.
- Collect spillage.
- Storage** Keep container tightly closed. Store in a well-ventilated area. Keep cool.
- Store locked up.

Section 8: Exposure Controls/Personal Protection
Substances with Occupational Exposure Limit Values

Chemical Name	Country/Province	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
propan-2-ol	ACGIH	200 ppm (TWA)	400 ppm
	U.S.A. OSHA PEL	400 ppm	Not established
	Canada AB	200 ppm	400 ppm
	Canada BC	200 ppm	400 ppm
	Canada ON	200 ppm	400 ppm
	Canada QC	400 ppm	500 ppm
methyl-2-pentane	ACGIH	500 ppm	Not established
	U.S.A. OSHA PEL	500 ppm	Not established
	Canada AB	500 ppm	1 000
	Canada BC	200 ppm	Not established
	Canada ON	500 ppm	1 000
	Canada QC	500 ppm	1 000

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Chemical Name	Country/Province	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
methyl-3-pentane	ACGIH	500 ppm	Not established
	U.S.A. OSHA PEL	500 ppm	Not established
	Canada AB	500 ppm	1 000 ppm
	Canada BC	200 ppm	Not established
	Canada ON	500 ppm	1 000 ppm
	Canada QC	500 ppm	1 000 ppm
dimethyl-2,3-pentane	ACGIH	500 ppm	Not established
	U.S.A. OSHA PEL	500 ppm	Not established
	Canada AB	500 ppm	1 000 ppm
	Canada BC	200 ppm	Not established
	Canada ON	500 ppm	1 000 ppm
	Canada QC	500 ppm	1 000 ppm
dimethyl-2,2-pentane	ACGIH	500 ppm	Not established
	U.S.A. OSHA PEL	500 ppm	Not established
	Canada AB	500 ppm	1 000 ppm
	Canada BC	200 ppm	Not established
	Canada ON	500 ppm	1 000 ppm
	Canada QC	500 ppm	1 000 ppm
n-hexane	ACGIH	50 ppm	Not established
	U.S.A. OSHA PEL	50 ppm	Not established
	Canada AB	50 ppm	Not established
	Canada BC	20 ppm	Not established
	Canada ON	50 ppm	Not established
	Canada QC	50 ppm	Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS database² and from suppliers' SDSs were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

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Engineering Controls

Ventilation Keep airborne concentrations below the occupational exposure limits (OEL).

Personal Protective Equipment

Eye protection Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Ensure that glasses have side shields for lateral protection.

Skin Protection For likely contacts, use of protective butyl rubber or other chemically resistant gloves.

For incidental contacts, use nitrile or other chemically resistant gloves.

Respiratory Protection For over-exposures up to 10 x OEL of mist, vapors, or spray, wear respirator such as a half-mask respirator with organic vapor cartridges.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

RECOMMENDATION: Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

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Section 9: Physical and Chemical Properties

Physical State	Liquid	Lower Flammability Limit ^{a)}	1%
Appearance	Colorless	Upper Flammability Limit ^{a)}	8%
Odor	Alcohol, mild hydrocarbon	Vapor Pressure @20 °C ^{a)}	13.6 kPa [102 mmHg]
Odor Threshold	Not available	Vapor Density	>2.1 (Air = 1)
pH	Not available	Relative Density @25 °C	0.72
Freezing/Melting Point	-90 °C [-130 °F]	Solubility in Water	Partially soluble
Initial Boiling Point ^{b)}	≥49 °C [≥121 °F]	Partition Coefficient n-octanol/water	Not available
Flash Point ^{b)}	-29 °C [-20 °F]	Auto-ignition Temperature ^{c)}	≥234 °C [≥453 °F]
Evaporation Rate	>0.8 (ButAc = 1)	Decomposition Temperature	Not available
Flammability	Highly Flammable	Viscosity @25 °C	<1 mm ² /s

a) Values calculated using Raoult's Law and Le Chatelier principle for solvent components.

b) The values for the boiling point and closed cup flash point are based on the isohexane components.

c) The auto-ignition value is based on n-hexane.

Section 10: Stability and Reactivity

Reactivity	Reacts exothermically with amines.
Chemical Stability	Chemically stable at normal temperatures and pressures.
Conditions to Avoid	Avoid open flames, ignition sources, temperatures above 50 °C [122 °F], and incompatible substances.
Incompatibilities	Strong oxidizing agents, strong acids, strong bases, powdered aluminum at ≥49 °C [≥120 °F]
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

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Section 11: Toxicological Information
Summary of Effects and Symptoms by Routes of Exposure

Eyes	Causes serious eye irritation, tearing, redness or pain.
Skin	Causes skin irritation.
Inhalation	May cause nose, throat and lung irritation. Overexposure may lead to visual impairment and central nervous system effects such as dizziness, drowsiness, or weakness.
Ingestion	Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. See inhalation symptoms.
Chronic	Prolonged or repeated exposure may defat skin and cause skin dryness and cracking, and local redness and discomfort. Ingestion or inhalation of material, mist, or vapor during pregnancy increases the chances fetal death and developmental defects.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
isopropyl alcohol	3 600 mg/kg Rat	12 800 mg/kg Rabbit	16 000 ppm 8 h Rat
methyl-2-pentane	Not available	Not available	3 125 ppm 4 h Rat ^{a)}
methyl-3-pentane	Not available	Not available	Not available
dimethyl-2,3-butane	Not available	Not available	Not available
dimethyl-2,2-butane	Not available	Not available	Not available
n-hexane	15 480 mg/kg Rat	>1.3 g/kg Rabbit ^{a)}	627 000 ppm 3 min Rat

Note: Toxicity data from the RTECS² and ECHA databases were consulted. The data from supplier SDSs were also consulted.

a) Supplier SDS

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Other Toxicological Effects

Skin Corrosion/Irritation	Causes skin irritation
Serious Eye Damage/Irritation	Causes serious eye irritation.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.
Carcinogenicity (risk of cancer)	Not classified or listed as a carcinogen by IARC, NTP, ACGIH, or CA Prop 65.
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	The n-hexane component causes harm to fertility according to animal studies.
Teratogenicity (risk of fetus malformation)	The n-hexane component causes harm to fetus according to animal studies.
STOT-Single Exposure	Inhalation of hexane isomers and propan-2-ol may affect the central nervous system causing drowsiness or dizziness.
STOT-Repeated Exposure	Based on available data, the classification criteria are not met.
Aspiration Hazard	Mixture is a class 1 aspiration hazard. It contains over 50% class 1 aspiration hazard components and has a mixture viscosity of <math><20.5 \text{ mm}^2/\text{s}</math> at 40 °C.

Section 12: Ecological Information

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (<http://echa.europa.eu>), and other reliable sources.

Isoalkanes are chronic category 2 aquatic toxicant based on similar mixtures of isoalkanes C6-C7 with <math><5\%</math> n-hexane that have a LC50 96 h of 11.4 mg/L for rainbow trout (*Oncorhynchus mykiss*), and an EL50 48 h of 3.0 mg/L water flea (*Daphnia magna*).

Mixtures of isoalkanes C6-C7 with <math><5\%</math> n-hexane suggest an EC50 >2 mg/L for fish using a QSAR model. For water flea (*Daphnia magna*) a NOELR 21 days of 1 mg/L and an EL50 of 1.6 mg/L.

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Based on available data, propan-2-ol does not meet the environmental toxicant classification with LC50 and EC50 >100 mg/L.

- Propan-2-ol has a minimal LC50 96 h of 9 640 mg/L for Pimephales promelas (fathead minnow); an EC50 24 h of 5 102 mg/L Daphnia magna (water flea); and an EC50 72 h of 2 000 mg/L Desmodesmus subspicatus (green algae).

Acute Ecotoxicity

See chronic ecotoxicity

Chronic Ecotoxicity

Category 2

Toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect Spillage.

Biodegradability

Not available

Other Effects

Volatile Organic Content (VOC) = 100% [720 g/L]

Section 13: Disposal Information

Dispose of contents in accordance with all local, regional, national, and international regulations.

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Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations); **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Sizes 1 L and under
407C-250ML, 407C-1L

Limited Quantity



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 0.5 L and under

407C-250ML

Limited Quantity

Max Net Qty/Pkg =
1 L



Sizes greater than 0.5 L up to
5 L (passenger), 60 L (cargo)

407C-1L

UN number: UN1993

Shipping Name: Flammable

Liquid, N.O.S
(isopropyl alcohol, hexanes)

Class: 3

Packing Group: II

Marine Pollutant: Yes



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Sea

Refer to IMDG regulations.

Sizes 1 L and under

407C-250ML, 407C-1L

Limited Quantity



Sizes greater than 1 L

UN number: UN1993

Shipping Name: Flammable Liquid, N.O.S
(isopropyl alcohol, hexanes)

Class: 3

Packing Group: II

Marine Pollutant: Yes

Note: Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

Section 15: Regulatory Information

Canada

Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

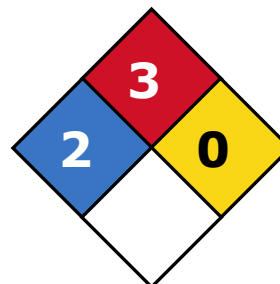
USA

Other Classifications

HMIS® RATING

HEALTH:	*	2
FLAMMABILITY:		3
PHYSICAL HAZARD:		0
PERSONAL PROTECTION:		

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

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This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product contains n-hexane which is listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains propan-2-ol (CAS# 67-63-0) which is subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

This product contains n-hexane (CAS# 110-54-3; reportable quantity = 5 000 lb), which is subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, USA).

This product contains n-hexane, which is listed as reproductively toxic.

Europe**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment and is therefore not governed by this regulation.

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Section 16: Other Information

SDS Prepared by	MG Chemicals' Regulatory Department
Date of Creation	28 May 2020
Supersedes	26 February 2020
Reason for Changes:	Added new part number.

Reference

- 1) ACGIH 2017 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2017).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content
Wt	Weight

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407C**AUDIO VIDEO HEAD CLEANER****Technical Queries**

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

Email: support@mgchemicals.com

Mailing Addresses

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