

**1. Identification of Substance & Company**

**Product**

<b>Product name</b>	5506-4
<b>Product code</b>	5506-4
<b>HSNO approval</b>	HSR002662
<b>Approval description</b>	Surface Coatings and Colourants (Flammable) Group Standard 2020
<b>UN number</b>	1210
<b>Proper Shipping Name</b>	PRINTING INK
<b>DG class</b>	3
<b>Packaging group</b>	II
<b>Hazchem code</b>	3YE
<b>Uses</b>	Printing Ink

**Company Details**

<b>Company</b>	<b>MITech Limited</b>
<b>Address</b>	60 Cawley Street PO Box 394962 Ellerslie 1547 Auckland New Zealand
<b>Telephone</b>	+64 9 915 5555
<b>Email</b>	askmi@mitech.co.nz
<b>Website</b>	www.mitech.co.nz

**Emergency Telephone Number: 0800-764 766**

**2. Hazard Identification**

**Approval**

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002662, Surface Coatings and Colourants (Flammable) Group Standard 2020). The substance has been classified as hazardous according to the criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

**GHS 7 Classes**

**Hazard Statements**

Flammable liquid category 2	H225 - Highly flammable liquid and vapour.
Skin irritant category 2	H315 - Causes skin irritation.
Eye damage category 1	H318 - Causes serious eye damage.
Skin sensitiser category 1	H317 - May cause an allergic skin reaction.
STOT* repeated exposure category 2	H373 - May cause damage to organs through prolonged or repeated exposure.
STOT* single exposure category 3	H336 - May cause drowsiness or dizziness.
Chronic aquatic category 2	H411 - Toxic to aquatic life with long lasting effects.

\*STOT – System target organ toxicity

**SYMBOLS**

**DANGER**



**Other Classifications**

There are no other Classifications that are known to apply.

**Precautionary Statements**

<b>Prevention</b>	<p>P102 - Keep out of reach of children.  P103 - Read label before use.  P210 - Keep away from ignition sources. No smoking.  P233 - Keep container tightly closed.  P240 - Ground/bond container and receiving equipment.  P241 - Use explosion-proof electrical equipment.  P242 - Use only non-sparking tools.  P243 - Take precautionary measures against static discharge.  P260 - Do not breathe vapours.  P264 - Wash hands thoroughly after handling.  P270 - Do not eat, drink or smoke when using this product.  P271 - Use only outdoors or in a well-ventilated area.  P272 - Contaminated work clothing should not be allowed out of the workplace.  P273 - Avoid release to the environment.  P280 - Wear protective gloves/eye/face protection.</p>
<b>Response</b>	<p>P101 - If medical advice is needed, have product container or label at hand.  P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.  P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.  P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  P363 - Wash contaminated clothing before reuse.  P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  P310 - Immediately call a POISON CENTRE or doctor/physician.  P308+P313 - IF exposed or concerned: Get medical advice/ attention.</p>
<b>Storage</b>	<p>P403+P235 - Store in a well-ventilated place. Keep cool.  P405 - Store locked up.</p>
<b>Disposal</b>	<p>P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.</p>

**3. Composition / Information on Ingredients**

Component	CAS/ Identification	Conc (%)
Methyl ethyl ketone	78-93-3	70-80%
Cyclohexanone	108-94-1	5-10%
Amines, coco alkyl, ethoxylated	61791-14-8	1-5%
7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester	2386-87-0	1-5%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

**4. First Aid**

**General Information**

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service). IF exposed or concerned: Get medical advice/ attention.

**Recommended first aid facilities** Ready access to running water is required. Accessible eyewash is required.

**Exposure**

<b>Swallowed</b>	Do NOT induce vomiting. Give a glass of water to drink. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.
<b>Skin contact</b>	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before re-use.
<b>Inhaled</b>	Generally, inhalation of fumes is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

**Advice to Doctor**

Treat symptomatically

**5. Firefighting Measures**

**Fire and explosion hazards:** Vapours may form an explosive mixture in air which can be ignited by many sources such as pilot lights, open flames, electrical motors, switches and static electricity.

**Suitable extinguishing substances:** Carbon dioxide, extinguishing powder, foam.

**Unsuitable extinguishing substances:** Unknown.

**Products of combustion:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

**Protective equipment:** Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.

**Hazchem code:** 3YE

**6. Accidental Release Measures**

**Containment** If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to stormwater.

**Emergency procedures** In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).

**Clean-up method** Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

**Disposal** Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.

**Precautions** Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

**7. Storage & Handling**

**Storage** Avoid storage of harmful substances with food. Store locked up and out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Location compliance certificates must be available if storing >100L (containers >5L), 250L (containers ≤5L), 50L (in use). Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, flammability warning and name of contents.

**Handling** Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

**8. Exposure Controls / Personal Protective Equipment**

**Workplace Exposure Standards**

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	Methyl ethyl ketone	150ppm, 445mg/m <sup>3</sup>	300ppm, 890mg/m <sup>3</sup>
	Cyclohexanone	25ppm, 100mg/m <sup>3</sup>	data unavailable

**Engineering Controls**

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe airborne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

**Personal Protective Equipment**

**General**

Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to inadequate. Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken.

**Eyes**



Protect eyes with goggles, safety glasses or full face mask. Avoid wearing contact lenses. Select eye protection in accordance with AS/NZS 1337.

**Skin**



Protective gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling. A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with an organic vapour cartridge. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

**Respiratory**

**WES Additional Information**

Not applicable

**9. Physical & Chemical Properties**

<b>Appearance</b>	black liquid
<b>Odour</b>	solvent
<b>Odour Threshold</b>	no data
<b>pH</b>	no data
<b>Freezing/melting point</b>	<-25°C
<b>Boiling Point</b>	>75°C
<b>Flashpoint</b>	>-9°C
<b>Flammability</b>	flammable liquid
<b>Upper &amp; lower flammable limits</b>	LEL: 1.3%, UEL 11.5%
<b>Vapour pressure</b>	13.3kPa (25°C)
<b>Vapour density</b>	no data
<b>Specific gravity/density</b>	0.89 (20°C)
<b>Solubility</b>	partly soluble in water
<b>Partition coefficient</b>	no data
<b>Auto-ignition temperature</b>	>400°C
<b>Decomposition temperature</b>	no data
<b>Viscosity</b>	no data
<b>Particle Characteristics</b>	no data

## 10. Stability & Reactivity

<b>Stability</b>	Stable
<b>Conditions to be avoided</b>	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
<b>Incompatible groups</b>	Strong oxidising agents
<b>Substance Specific Incompatibility</b>	None known
<b>Hazardous decomposition products</b>	Oxides of carbon.
<b>Hazardous reactions</b>	None known

## 11. Toxicological Information

### Summary

IF SWALLOWED: may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. The mucous membrane may become irritated.

IF IN EYES: may cause serious eye damage.

IF ON SKIN: prolonged or repeated exposure may cause skin irritation. The solvent has a degreasing effect on the skin. Sensitised individuals may experience an allergic skin reaction.

IF INHALED: high concentration of vapours may cause headaches, dizziness, tiredness, nausea and vomiting. May cause irritation of the respiratory tract.

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the mixture is >2000mg/kg. Data considered includes: Methyl ethyl ketone 2737 mg/kg (rat), Cyclohexanone 1400 mg/kg (mouse). This mixture is not considered an aspiration hazard.
	<b>Dermal</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (dermal, rat) for the mixture is >2000 mg/kg. Data considered includes: Cyclohexanone 948 mg/kg (rabbit).
	<b>Inhaled</b>	No evidence of acute inhalation toxicity. May cause dizziness and drowsiness.
<b>Chronic</b>	<b>Eye</b>	The mixture is considered to be eye damage cat 1.
	<b>Skin</b>	The mixture is considered to be a skin irritant.
	<b>Sensitisation</b>	The mixture is considered to be a contact sensitizer, because at least one of the ingredients (7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester) present in greater than 0.1% is known to be a contact sensitizer.
	<b>Mutagenicity</b>	No ingredient present at concentrations > 0.1% is considered a mutagen.
	<b>Carcinogenicity</b>	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	<b>Reproductive / Developmental</b>	No ingredients present at concentrations >0.1% is considered a reproductive/developmental toxicant.
	<b>Systemic</b>	The mixture is considered to be a known or presumed target organ toxicant, The mixture may be irritating to the upper respiratory tract. May cause inflammation of the lining of the nose, throat and lungs. Prolonged inhalation of high concentrations may cause central nervous system depression. May cause adverse liver effects.
	<b>Aggravation of existing conditions</b>	None known.

## 12. Ecological Data

### Summary

This substance is considered to be toxic towards aquatic life with long lasting effects. In all cases prevent run-off into sewers, drains and waterways.

### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is between 1 mg/L and 10 mg/L. Data considered includes: <b>Cyclohexanone</b> 41.2 mg/l (3days, Dicotyledon), <b>7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester</b> LC <sub>50</sub> for freshwater fish: 24 mg/L, EC <sub>50</sub> / LC <sub>50</sub> for freshwater invertebrates: 40 mg/L, EC <sub>50</sub> for freshwater algae 110 mg/L, EC <sub>50</sub> for microorganisms 2 g/.
<b>Bioaccumulation</b>	Not considered to be bioaccumulative.
<b>Degradability</b>	No data
<b>Soil</b>	No evidence for the mixture.

<b>Terrestrial vertebrate</b>	Not considered harmful towards terrestrial vertebrates.
<b>Terrestrial invertebrate</b>	No evidence of toxicity towards terrestrial invertebrates.
<b>Biocidal</b>	no data
<b>Environmental effect levels</b>	No EELs are available for this mixture or ingredients

### 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
<b>Contaminated packaging</b>	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

### 14. Transport Information

**Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007**

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

<b>UN number:</b>	1210	<b>Proper shipping name:</b>	PRINTING INK
<b>Class(es)</b>	3	<b>Packing group:</b>	II
<b>Precautions:</b>	Flammable liquid	<b>Hazchem code:</b>	2YE

**IMDG**

<b>UN number:</b>	1210	<b>Proper shipping name:</b>	PRINTING INK
<b>Class(es)</b>	3	<b>Packing group:</b>	II
<b>Precautions:</b>	Flammable liquid	<b>EmS</b>	F-E, S-D

**IATA**

<b>UN number:</b>	1210	<b>Proper shipping name:</b>	PRINTING INK
<b>Class(es)</b>	3	<b>Packing group:</b>	II
<b>Precautions:</b>	Flammable liquid	<b>ERG Code</b>	3L

### 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002662, Surface Coatings and Colourants (Flammable) Group Standard 2020. All ingredients appear on the NZIoC.

#### Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000L is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Required if > 250L is stored.
Location compliance certificate	Required if > 100L (containers >5L), 250L (containers ≤5L), 50L (in use) is stored.
Flammable zone	Must be established if > 100L (closed containers), 25L (decanting), 5L (open occasionally), 1L (in use), is stored.
Fire extinguisher	If > 250L present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

#### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

**16. Other Information**

**Abbreviations**

<b>Approval Code</b>	Approval HSR002662, Surface Coatings and Colourants (Flammable) Group Standard 2020 Controls, EPA. <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (New Zealand)
<b>GHS</b>	Globally Harmonised System of Classification and Labelling of Chemicals, 7 <sup>th</sup> revised edition, 2017, published by the United Nations.
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL</b>	Lower Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>NZIoC</b>	New Zealand Inventory of Chemicals
<b>STEL</b>	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
<b>STOT RE</b>	System Target Organ Toxicity – Repeated Exposure
<b>STOT SE</b>	System Target Organ Toxicity – Single Exposure
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UEL</b>	Upper Explosive Limit
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

**References**

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
<b>Controls</b>	EPA notices, <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> , Health and Safety at Work (Hazardous Substances) Regulations 2017, <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
<b>WES</b>	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>Other References:</b>	EU ECHA, ingredients SDS's, ChemIDplus

**Review**

<b>Date</b>	<b>Reason for review</b>
December 2023	Not applicable – new SDS (new formulation)

**Disclaimer**

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: +64 21 1040951.

