

1. Identification of Substance & Company

Product

| | |
|-----------------------------|---|
| Product name | FT205E-4 |
| Product code | FT205E-4 |
| HSNO approval | HSR002662 |
| Approval description | Surface Coatings and Colourants (Flammable) Group Standard 2020 |
| UN number | 1210 |
| Proper Shipping Name | PRINTING INK |
| DG class | 3 |
| Packaging group | II |
| Hazchem code | 3YE |
| Uses | Printing Ink |

Company Details

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

Emergency Telephone Number: 0800-764 766

2. Hazard Identification

Approval

This product has been approved 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 cat 2 | H225 - Highly flammable liquid and vapour. |
| Aspiration cat 1 | H304 - May be fatal if swallowed and enters airways. |
| skin irritant cat 2 | H315 - Causes skin irritation. |
| Eye irritant cat 2 | H319 - Causes serious eye irritation. |
| skin sensitiser cat 1 | H317 - May cause an allergic skin reaction. |
| STOT SE cat 3 | H336 - May cause drowsiness or dizziness. |
| Chronic aquatic cat 3 | H412 - Harmful to aquatic life with long lasting effects. |

SYMBOLS

DANGER



HSNO Classes

Hazard Statements

| | |
|-------------------|---|
| 3.1B | H225 - Highly flammable liquid and vapour. |
| 6.1E (oral) | H303 - May be harmful if swallowed |
| 6.1E (aspiration) | H304 - May be fatal if swallowed and enters airways. |
| 6.3A | H315 - Causes skin irritation. |
| 6.4A | H319 - Causes serious eye irritation. |
| 6.5B | H317 - May cause an allergic skin reaction. |
| 6.9B (narcotic) | H336 - May cause drowsiness or dizziness. |
| 9.1C | H412 - Harmful to aquatic life with long lasting effects. |

Precautionary Statements

P101 - If medical advice is needed, have product container or label at hand.
 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.
 P264 - Wash hands thoroughly after handling.
 P261 - Avoid breathing vapours
 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.
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
 P331 - Do NOT induce vomiting.
 P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
 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.
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.
 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.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P405 - Store locked up.

3. Composition / Information on Ingredients

| Component | CAS/ Identification | Conc (%) |
|--|---------------------|----------|
| Methyl ethyl ketone | 78-93-3 | 40-50 |
| Isopropanol | 67-63-0 | 10-20 |
| Trimethylolpropane trimethacrylate | 3290-92-4 | 5-10 |
| Titanium dioxide | 13463-67-7 | 5-10 |
| Tetrabutylammonium hexafluorophosphate | 3109-63-5 | 1-5 |
| Nitrocellulose | 9004-70-0 | 1-5 |
| 1-Propanone, 2-hydroxy-2-methyl-1-phenyl | 7473-98-5 | <1 |
| Hydroquinone | 123-31-9 | <1 |
| Triphenyl phosphite | 101-02-0 | <1 |
| Phosphine oxide, bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)- | 145052-34-2 | <1 |

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 poisoned, burned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities

Ready access to running water is required. Accessible eyewash is required.

Exposure
Swallowed

IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Rinse mouth.

Eye contact

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.

Skin contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhaled IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

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 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.

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 10mg/m³ for dusts and mists when limits have not otherwise been established.

| NZ Workplace Exposure Stds | Ingredient | WES-TWA | WES-STEL |
|----------------------------|------------------------------------|------------------------------|-------------------------------|
| | Methyl ethyl ketone | 150ppm, 445mg/m ³ | 300ppm, 890mg/m ³ |
| | Isopropanol | 400ppm, 983mg/m ³ | 500ppm, 1230mg/m ³ |
| | Trimethylolpropane trimethacrylate | data unavailable | data unavailable |
| | Titanium dioxide | 10mg/m ³ | data unavailable |

| | | |
|--|--------------------|------------------|
| Tetrabutylammonium hexafluorophosphate | data unavailable | data unavailable |
| Nitrocellulose | data unavailable | data unavailable |
| 1-Propanone, 2-hydroxy-2-methyl-1-phenyl | data unavailable | data unavailable |
| Hydroquinone | 2mg/m ³ | data unavailable |
| Triphenyl phosphite | data unavailable | 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 air borne 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


Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible.

Skin

If discomfort is felt (e.g., if pre-existing conditions exist, such as dermatitis, cuts or sensitive skin), gloves may be helpful. If you suffer from dermatitis type skin conditions, use gloves. Butyl rubber or nitrile gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use.

Respiratory

A respirator when airborne concentrations approach the WES (section 8). Use an organic vapour cartridge with a particulate (dust/mist) filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

| | |
|---|------------------------------------|
| Appearance | white liquid |
| Odour | solvent |
| pH | no data |
| Vapour pressure | 13.3kPa (25°C) |
| Relative vapour density | >1 |
| Viscosity | no data |
| Boiling point | >75°C |
| Volatile materials | no data |
| Freezing / melting point | <-85°C |
| Solubility | partly soluble in water |
| Partition Coefficient | n-octanol/water: log P(o/w) = 0.26 |
| Specific gravity / density | 0.955 (20°C) |
| Flash point | >-9°C |
| Danger of explosion | no data |
| Auto-ignition temperature | >400°C |
| Upper & lower flammable limits | LEL: 1.8%, UEL: 12.0% |
| Corrosiveness | non corrosive |

10. Stability & Reactivity

| | |
|---|---|
| Stability | Stable |
| Conditions to be avoided | Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination. |
| Incompatible groups | Strong oxidising agents |
| Substance Specific Incompatibility | none known |
| Hazardous decomposition | Oxides of carbon and nitrogen, phosphates. |

products
Hazardous reactions none known

11. Toxicological Information

Summary

If SWALLOWED: if large quantities are swallowed: symptoms include nausea and vomiting. Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.
 IF IN EYES: May cause severe eye irritation.
 IF ON SKIN: repeated or prolonged exposure may cause skin irritation and dermatitis (non-allergic), due to degreasing properties of the product.
 IF INHALED: May high concentrations may cause irritation of the respiratory tract. vapours may cause dizziness and drowsiness. High concentrations may cause central nervous system depression, headaches, dizziness, tiredness and incoordination and in extreme cases loss of consciousness.

Supporting Data

| | | |
|----------------|---|--|
| Acute | Oral | Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is between 2000 and 5,000 mg/kg. Data considered includes: Methyl ethyl ketone 2737 mg/kg (rat), Isopropanol 3600 mg/kg (mouse), trimethylolpropane trimethacrylate >5000mg/kg (rat), Hydroquinone 42 to 86 mg/kg (cat), Triphenyl phosphite 1330mg/kg (mouse). |
| | Dermal | No evidence of acute dermal toxicity. |
| | Inhaled | No evidence of acute inhalation toxicity. |
| | Eye | The mixture is considered to be an eye irritant. Methyl Ethyl ketone, isopropanol and trimethylolpropane trimethacrylate are considered eye irritants. |
| | Skin | The mixture is considered to be a skin irritant. Methyl Ethyl ketone, isopropanol and trimethylolpropane trimethacrylate are considered skin irritants. |
| Chronic | Sensitisation | The mixture is considered to be a contact sensitizer, because triphenyl phosphite present in greater than 0.1% is known to be a contact sensitizer. |
| | Mutagenicity | No ingredient present at concentrations > 0.1% is considered a mutagen. |
| | Carcinogenicity | No ingredient present at concentrations > 0.1% is considered a carcinogen. |
| | Reproductive / Developmental | No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. |
| | Systemic | Inhalation of vapours may have a narcotic effect (Methyl Ethyl ketone, isopropanol). |
| | Aggravation of existing conditions | Cuts, abrasions. Liver, kidney damage. |

12. Ecological Data

Summary

This mixture is considered harmful in the aquatic environment with long lasting effects. In all cases prevent run-off into sewers, drains and waterways.

Supporting Data

| | |
|------------------------------------|--|
| Aquatic | Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is between 10 mg/L and 100 mg/L and at least one of the components is either bioaccumulative or persistent in the aquatic environment. Hydroquinone 0.044 mg/l (96 hr, Pimephales promelas), 0.130 mg/l (48hr, Daphnia Magna), 0.335 mg/l (72 hr, Selenastrum capricornutum), Triphenyl phosphite 0.7mg/L (96hr, Carassius auratus (goldfish)), 0.36mg/l (48hr, Chironomous thummi (Midge). |
| Bioaccumulation | No data |
| Degradability | No data |
| Soil | No evidence of soil toxicity. |
| Terrestrial vertebrate | This mixture is not considered ecotoxic to terrestrial vertebrates. See acute toxicity. |
| Terrestrial invertebrate | No evidence of toxicity towards terrestrial invertebrates. |
| Biocidal | no data |
| Environmental effect levels | No EELs are available for this mixture or ingredients |

13. Disposal Considerations

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|-------------------------------|--|
| Restrictions | There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents. |
| Disposal method | 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. |
| Contaminated packaging | 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 hazardous substance for transport.

| | | | |
|---------------------|------------------|------------------------------|--------------|
| UN number: | 1210 | Proper shipping name: | PRINTING INK |
| Class(es) | 3 | Packing group: | II |
| Precautions: | Flammable liquid | Hazchem code: | 3YE |

IMDG

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

IATA

| | | | |
|---------------------|------------------|------------------------------|--------------|
| UN number: | 1210 | Proper shipping name: | PRINTING INK |
| Class(es) | 3 | Packing group: | II |
| Precautions: | Flammable liquid | ERG Code | 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 are listed 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. |
| Bundling & 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

| | |
|------------------------|--|
| Approval Code | Approval HSR002662, Surface Coatings and Colourants (Flammable) Group Standard 2020 Controls, EPA. www.epa.govt.nz |
| CAS Number | Unique Chemical Abstracts Service Registry Number |
| EC₅₀ | Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species) |
| EPA | Environmental Protection Authority (New Zealand) |
| GHS | Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations. |
| HAZCHEM Code | Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters |
| HSNO | Hazardous Substances and New Organisms (Act and Regulations) |
| IARC | International Agency for Research on Cancer |
| LEL | Lower Explosive Limit |
| LD₅₀ | Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats). |
| LC₅₀ | Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats) |
| NZIoC | New Zealand Inventory of Chemicals |
| STEL | 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 |
| STOT RE | System Target Organ Toxicity – Repeated Exposure |
| STOT SE | System Target Organ Toxicity – Single Exposure |
| TWA | Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours) |
| UEL | Upper Explosive Limit |
| UN Number | United Nations Number |
| WES | 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

| | |
|--------------------------|---|
| Data | Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID). |
| Controls | EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz |
| WES | The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz . |
| Other References: | Suppliers SDS |

Review

| Date | Reason for review |
|--------------|-----------------------------|
| March 2014 | Not applicable – new SDS |
| October 2021 | Update GHS, group standard. |

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 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 or phone: +64 9 940 30 80.

