chanhvinh.com

Safety Data Sheet

Section 1. Identification

Product name : **5252M Cleaner**

Product code : 4060087

Product type : Liquid.

Date of issue/Date of revision : February 23 2025.

Manufacturer - Supplier	Telephone no.:	Emergency phone:
Alpha Assembly Solutions Inc. Global Headquarters 140 Centennial Avenue Piscataway, NJ 08854	Toll Free: (800) 367-5460 Main Phone: (908) 791-3000	DOMESTIC NORTH AMERICA 202-464-2554
Macdermid Performance Solution Hong Kong Limited／ Alpha Assembly Solutions 8/F., Paul Y. Centre, 51 Hung To Road, Kwun Tong, Kowloon, Hong Kong	852-31903100	852-31903100 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
MacDermid Performance Solutions Japan K.K. 480-28 Higashitoyoda, Hiratsuka-shi, Kanagawa, Japan	81-463-53-3333	81-463-53-3333 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
Assembly Solutions Korea Co., Ltd 111, Suwolam-gil, Seotan-myeon, Pyeongtaek -si, Gyeonggi-do, Korea	82-31-665-5093 (Ext 2)	82-31-665-5093 (Ext 5) INTERNATIONAL, CALL Carechem 24: +65 3158 1074
Alpha Assembly Solutions (Shanghai) Trading Co., Ltd. 2 floor, 5 Building, No.1151 Lianxi Road, Pudong New Area Shanghai 201204 P.R.China	86-21-63900600	86-532-83889090 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
Alpha Assembly Solutions (Taiwan) Limited No.20, Lane 12, Sec.2, Nan-Shan Rd., Luzhu District, Taoyuan City, 33860 Taiwan	Tel: +886-3-3222721	Tel: +886-3-3222721 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
MacDermid Alpha Electronics Solutions India Private Limited (formerly known as MacDermid Performance Solutions, Cookson India Private Limited) Developed Plot no 16, North Phase, SIDCO Industrial estate, Ambattur, Chennai - 600098, India	Tel: +91-44-6965-2630	Tel: +91-44-6965-2630 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
Alpha Assembly Solutions 14 Tuas Avenue 10 Singapore 639138	65 68611977	65 68611977 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
Alpha Assembly Solutions (Shenzhen) Co., Ltd. Tang Xia Yong Village, Songgang Town Baoan District, Shenzhen, Peoples Republic of China Postal Code: 518105	86 755 2705 1100	86 532 83889090 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
MacDermid Alpha Electronics Solutions 14 Joo Koon Crescent Singapore 629014	65 6430 0700	65 6430 0700 INTERNATIONAL, CALL Carechem 24: +65 3158 1074
Active Components (NZ) Ltd (Distributor) 2/14 Canaveral Drive Rosedale (0632), Auckland New Zealand	Tel: +64 9 443 9500	National Poisons Centre Free Phone: 0800 764 766 (0800 POISON) INTERNATIONAL, CALL Carechem 24: +65 3158 1074
MacDermid Performance Solutions A Division of MacDermid Performance Solutions Singapore Pte. Ltd. 26 Tuas West Road Singapore 638382	65-6861 1773	65-6861 1773 INTERNATIONAL, CALL Carechem 24: +65 3158 1074

Continued on next page

chanhvinh.com

Section 2. Hazard identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (inhalation) - Category 3
SKIN CORROSION/IRRITATION - Category 3
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 1B
CARCINOGENICITY - Category 1B
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes mild skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Toxic if inhaled.
May cause genetic defects.
May cause cancer.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. 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 or attention.

Storage : Store locked up.

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

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
solvent. Isopropyl alcohol (R)-p-mentha-1,8-diene	70-80 10-20 0.1-1.0	- 67-63-0 5989-27-5

Continued on next page

chanhvinh.com

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Toxic if inhaled.

Skin contact : Causes mild skin irritation. Defatting to the skin. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Continued on next page

chanhvinh.com

Section 4. First aid measures

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Continued on next page

chanhvinh.com

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Continued on next page

chanhvinh.com

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
solvent.	**ACGIH TLV (United States, 3/2017). Notes: Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.** TWA: 525 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
Isopropyl alcohol	**ACGIH TLV (United States, 3/2017). Notes: Refers to Appendix A -- Carcinogens. ACGIH 2003 Adoption** STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Continued on next page

chanhvinh.com

Section 8. Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Clear.

Odor : Alcohol-like.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : 82°C (179.6°F)

Flash point : Closed cup: <23°C (<73.4°F)

Evaporation rate : >1 (butyl acetate = 1)

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Lower: 1.1%
Upper: 12%

Vapor pressure : 4.3 kPa (32.253 mm Hg)

Relative vapor density : Not available.

Relative density : 0.85

Solubility : Not available.

VOC 850 g/l

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : 230°C (446°F)

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatibility with various substances : Reactive or incompatible with the following materials: oxidizing materials and acids.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Continued on next page

chanhvinh.com

Section 10. Stability and reactivity

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
solvent.	LC50 Inhalation Vapor	Rat	>5500 mg/m³	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
Isopropyl alcohol	LD50 Dermal	Rabbit	6290 mg/kg	-
	LD50 Oral	Rat	4.7 g/kg	-
(R)-p-mentha-1,8-diene	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Mouse	5600 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
solvent.	Eyes - Mild irritant	Human	-	100 parts per million	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
(R)-p-mentha-1,8-diene	Skin - Mild irritant	Rabbit	-	24 hours 10 Percent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Isopropyl alcohol	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Continued on next page

chanhvinh.com

Section 11. Toxicological information

Product/ingredient name	Result
solvent.	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Dermal contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Toxic if inhaled.

Skin contact : Causes mild skin irritation. Defatting to the skin. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : May cause genetic defects.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	23420.16 mg/kg
Inhalation (vapors)	3 mg/l

Continued on next page

chanhvinh.com

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute EC50 10100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
(R)-p-mentha-1,8-diene	Acute EC50 421 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 688 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
solvent.	3.16 to 7.06	-	high
Isopropyl alcohol	0.05	-	low
(R)-p-mentha-1,8-diene	4.38	-	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Continued on next page

chanhvinh.com

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1993	UN1993	UN1993
UN proper shipping name	Flammable liquid, n.o.s. mixture	Flammable liquid, n.o.s. mixture	Flammable liquid, n.o.s. mixture
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Additional information	-	-	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

China

SDS complies with the General Rules for Classification and Hazardous Communication of Chemicals GB-13690-2009, GB-30000 series, and GB/T 16438-2008.

List of Goods banned for Importing

None of the components are listed.

Drug Precursors Requiring an Import/Export License

None of the components are listed.

Inventory of Hazardous Chemicals

Ingredient name	Status
2-Propanol	Listed
(+)-Dipentene	Listed

List of Explosive Precursors

None of the components are listed.

List of Goods banned for Exporting

None of the components are listed.

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

Catalogue and classification of drug precursor chemicals

None of the components are listed.

Inventory of Highly Toxic Articles

None of the components are listed.

Continued on next page

chanhvinh.com

Section 15. Regulatory information

Catalogue of Hazardous Chemicals of Priority Management

None of the components are listed.

Catalogue of Occupational Disease Hazard Factors - Dust

None of the components are listed.

Catalogue of Occupational Disease Hazard Factors - Chemical Factors

None of the components are listed.

Other China Regulations

Catalogue of Hazardous Chemicals (2015)
Classification & code of dangerous goods (GB 6944-2012)
Production Safety Law of the People's Republic of China
Law of the People's Republic of China on Prevention and Control of Occupational Diseases
Environmental Protection Law of the People's Republic of China
Regulation on Work Safety Licenses
Classification of transportation packing type of dangerous goods GB/T 15098-2008
General rules for classification and hazardous communication of chemicals GB 13690-2009
List of Dangerous Goods GB12268-2012
Occupational Exposure Limits (OELs) for hazardous chemicals GBZ 2.1-2007
Hazardous Chemicals Safety Management Ordinance China (2013 revised)
Safety data sheet for chemical products: content & order of sections GB/T 16483-2008
Rules for classification and labelling of chemicals GB30000-2013
Guidance on the compilation of safety data sheet for chemical products GB/T 17519-2013

Japan

Fire Service Law

Class	Product name/Property	Hazard category	Precautionary statement	Designated quantity
Category IV	Class I petroleums	II	Flammable - Keep Fire Away	200 L

ISHL

None of the components are listed.

Organic solvents poisoning prevention : Class 2

Substances requiring labelling

Ingredient name	%	Status
solvent. Propyl alcohol	≥80 - ≤90 ≥10 - ≤20	Listed Listed

Chemicals requiring notification

Ingredient name	%	Status
solvent. Propyl alcohol	≥80 - ≤90 ≥10 - ≤20	Listed Listed

Guideline for Preventing Health Hazard by chemical substances (Carcinogenicity)

None of the components are listed.

Mutagen

None of the components are listed.

Dangerous Substances : Inflammable

Chemical Substances Control Law (CSCL)

Isopropyl alcohol; 2-Propanol	10-20	Priority assessment

Continued on next page

chanhvinh.com

Section 15. Regulatory information

Poisonous and Deleterious Substances

None of the components are listed.

Pollutant Release and Transfer Registers (PRTR)

None of the components are listed.

Republic of Korea

A. Regulation according to ISHA

ISHA article 117 (Harmful substances prohibited from manufacture) : None of the components are listed.

ISHA article 118 (Harmful substances requiring permission) : None of the components are listed.

Article 2 of Youth Protection Act on Substances Hazardous to Youth : Not applicable.

Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:
solvent.
Isopropyl alcohol

ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors) : None of the components are listed.

ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement) : None of the components are listed.

ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up) : None of the components are listed.

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : None of the components are listed.

B. Regulation according to Chemicals Control Act

CCA Article 11 (TRI) : None of the components are listed.

Article 18 Prohibited (K-Reach Article 27) : None of the components are listed.

Article 19 Subject to authorization (K-Reach Article 25) : None of the components are listed.

Article 20 Toxic Chemicals (K-Reach Article 20) : Not applicable

Continued on next page

chanhvinh.com

Section 15. Regulatory information

Ingredient name	CAS number	%
None of the components are listed.		

Article 20 Restricted (K-Reach Article 27) : None of the components are listed.

CCA Article 39 (Accident Precaution Chemicals) :

Ingredient name	CAS number	%
None of the components are listed.		

Existing Chemical Substances Subject to Registration :

Ingredient name	CAS number	%
(R)-p-mentha-1,8-diene	5989-27-5	0.1-1

C. Dangerous Materials Safety Management Act : **Class:** Class 4 - Flammable Liquid
Item: 2. Class 1 petroleums - Water-insoluble liquid
Threshold: 200 L
Danger category: II
Signal word: Contact with sources of ignition prohibited

D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Malaysia

Poison Act, Poison List - Schedule 1

Not applicable.

Poison Act, Poison List - Schedule 3

Not applicable.

Singapore

Singapore - hazardous chemicals under government control

None.

Taiwan

SDS complies with the Regulation of Labeling and Hazard Communication of Hazardous Chemicals

TCCSCA List of toxic chemicals

Not applicable.

TCCSCA List of concerned chemicals

Not applicable.

OSHA Enforcement Rules Article 28 : This product contains substances "Specially hazardous to health": Isopropyl alcohol.

List of chemicals reputed to be a "threat of imminent danger" : This product contains substances considered to be a "Threat of imminent danger": Isopropyl alcohol.

OSHA Article 29 : None of the components are listed.

OSHA Article 30 : None of the components are listed.

Regulation Governing Designation and Handling Permission of Controlled Chemicals : Not applicable

Continued on next page

chanhvinh.com

Section 15. Regulatory information

International regulations

Inventory list

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Japan	:	All components are listed or exempted.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
United States	:	All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision	:	2/23/2025
Date of previous issue	:	No previous validation
Version	:	1

Regulatory Affairs Department
enthone.msds@macdermidenthone.com

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (inhalation) - Category 3	Calculation method
SKIN CORROSION/IRRITATION - Category 3	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
GERM CELL MUTAGENICITY - Category 1B	Calculation method
CARCINOGENICITY - Category 1B	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Continued on next page

chanhvinh.com

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

chanhvinh.com