alpha

Safety Data Sheet

Safety Data Sheet

Section 1. Identification

Product name : **EF-8000 NO CLEAN FLUX**

Product code : 144028

Product type : Liquid.

Date of issue/Date of revision : May 20 2015.

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Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 5
SKIN CORROSION/IRRITATION - Category 3
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (Narcotic effects) - Category 3

Continued on next page

Section 2. Hazards identification

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
May be harmful if swallowed.
Causes serious eye irritation.
Causes mild skin irritation.
May cause an allergic skin reaction.
May cause drowsiness and dizziness.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation or rash occurs: Get medical 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 attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

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
Isopropyl alcohol	70-80	67-63-0
petroleum solvent naphtha	1-10	-
Glycol Ether	1-10	-
Organic acid	1-10	-
Rosin/Resin	1-10	-
Rosin/Resin	1-10	-

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.

Continued on next page

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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. If necessary, call a poison center or physician. 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 : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

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

Ingestion : May be harmful if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

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

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

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

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. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised 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).

Methods and materials for containment and cleaning up

Continued on next page

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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Isopropyl alcohol	**ACGIH TLV (United States, 4/2014). Notes: Refers to Appendix A -- Carcinogens.** **ACGIH 2003 Adoption** STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours.
petroleum solvent naphtha	**ACGIH TLV (United States, 8/2005).** TWA: 525 mg/m³ 8 hours.

Continued on next page

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Isopropyl alcohol	**TW 勞委會、** 勞工作業環境空氣中有害物容許濃度標準、容 許 濃 度 (Taiwan, 6/2014). STEL: 1228.75 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 983 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
petroleum solvent naphtha	**TW 勞委會、** 勞工作業環境空氣中有害物容許濃度標準、容 許 濃 度 (Taiwan, 6/2014). STEL: 125 ppm 15 minutes. STEL: 500 mg/m³ 15 minutes. TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.

Ingredient name	Exposure limits
Isopropyl alcohol	**GBZ 2.1 (China, 4/2007).** PC-STEL: 700 mg/m³ 15 minutes. PC-TWA: 350 mg/m³ 8 hours.
petroleum solvent naphtha	**ACGIH TLV (United States, 8/2005).** TWA: 525 mg/m³ 8 hours.

Ingredient name	Exposure limits
Isopropyl alcohol	**Ministry of Labor (Republic of Korea, 8/2013).** STEL: 980 mg/m³ 15 minutes. STEL: 400 ppm 15 minutes. TWA: 480 mg/m³ 8 hours. TWA: 200 ppm 8 hours.
petroleum solvent naphtha	**Ministry of Labor (Republic of Korea, 8/2013).** TWA: 1600 mg/m³ 8 hours. TWA: 400 ppm 8 hours.

Ingredient name	Exposure limits
Isopropyl alcohol	**DOSH USECHH (Malaysia, 4/2000).** TWA: 983 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
petroleum solvent naphtha	**ACGIH TLV (United States, 8/2005).** TWA: 525 mg/m³ 8 hours.
Rosin/Resin	**EH40/2005 WELs (United Kingdom (UK), 12/2011). Skin sensitizer.** STEL: 0.15 mg/m³ 15 minutes. Form: Fume TWA: 0.05 mg/m³ 8 hours. Form: Fume

Ingredient name	Exposure limits
Isopropyl alcohol	**Factories Order (PEL) (Singapore, 2/2006).** PEL (short term): 1230 mg/m³ 15 minutes. PEL (short term): 500 ppm 15 minutes. PEL (long term): 983 mg/m³ 8 hours. PEL (long term): 400 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.

Continued on next page

Section 8. Exposure controls/personal protection

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.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Alcohol-like.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: 20.556°C (69°F) [Tag Closed Cup]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : 2 [Air = 1]

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Section 9. Physical and chemical properties

Relative density : 0.8045

Solubility : Insoluble in the following materials: cold water.

VOC 734 g/l

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

Auto-ignition temperature : 399°C (750.2°F)

Decomposition temperature : Not available.

Viscosity : Not available.

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. Do not allow vapor to accumulate in low or confined areas.

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

Other Hazardous decomposition products : carbon oxides (CO, CO_2)

Section 11. Toxicological information

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal	Rabbit	6290 mg/kg	-
	LD50 Oral	Rat	4.7 g/kg	-
petroleum solvent naphtha	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
Glycol Ether	LD50 Oral	Rat - Female	2600 mg/kg	-
Organic acid	LD50 Oral	Rat	2260 mg/kg	-
Rosin/Resin	LD50 Oral	Mouse	2.2 g/kg	-
	LD50 Oral	Rat	3 g/kg	-
Rosin/Resin	LC50 Inhalation Dusts and mists	Rat	0.585 mg/l	6 hours
	LD50 Dermal	Rabbit	>2500 mg/kg	-
	LD50 Oral	Mouse	>4000 mg/kg	-
	LD50 Oral	Rat	>4000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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	-
Organic acid	Eyes - Severe irritant	Rabbit	-	750 Micrograms	-

Sensitization

Continued on next page

Section 11. Toxicological information

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Isopropyl alcohol	Negative Positive	Positive Negative	Positive Positive	Rat Rat - Female	Oral: 1000 mg/kg Oral: 1242 mg/kg Continuous Fixed dose	- 24 hours per day

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Isopropyl alcohol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
Isopropyl alcohol petroleum solvent naphtha	ASPIRATION HAZARD - Category 2 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

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

Ingestion : May be harmful if swallowed. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Continued on next page

Section 11. Toxicological information

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 : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral Dermal	4047.9 mg/kg 22124 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
Glycol Ether	EC50 315 mg/l	Algae	96 hours
	EC50 >100 mg/l	Daphnia	48 hours
	LC50 564 mg/l	Fish	96 hours
Organic acid	Acute EC50 374200 to 400000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours

Persistence and degradability

Not available.

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Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Isopropyl alcohol	0.05	-	low
Glycol Ether	1.896	-	low
Organic acid	-0.59	-	low
Rosin/Resin	1.9 to 7.7	-	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.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1219	UN1219	UN1219
UN proper shipping name	Isopropanol	Isopropanol	Isopropanol
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Additional information	-	-	-

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.

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Section 15. Regulatory information

Taiwan

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

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, petroleum solvent naphtha, toluene, 1,4-dioxane, ethylene oxide, Aldehyde., Aliphatic aldehyde..

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

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.

China inventory (IECSC) : All components are listed or exempted.

List of Goods banned for Importing

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.

Republic of Korea

A. Regulation according to ISHA

ISHA Article 37 : The following components are listed: Surfactant.

ISHA Article 38 : 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:
Isopropyl alcohol
petroleum solvent naphtha

Exposure Standards established for Harmful Factors : None of the components are listed.

Harmful Factors Subject to Work Environment Measurement : The following components are listed: Isopropyl alcohol

Harmful Factors Subject to Special Health Check-up : The following components are listed: Isopropyl alcohol

Hazardous Substances Subject to Control : The following components are listed: Isopropyl alcohol

B. Regulation according to TCCA

TCCA Toxic chemicals : Not applicable

TCCA Observational chemicals : None of the components are listed.

TCCA Article 32 (Banned) : None of the components are listed.

TCCA Article 32 (Restricted) : The following components are listed: Surfactant.

TCCA Article 17 (TRI) : The following components are listed: 2-Propanol

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Section 15. Regulatory information

Korea inventory : All components are listed or exempted.

Accident Precaution chemicals : None of the components are listed.

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.

Singapore

Singapore - hazardous chemicals under government control

None.

International lists

National inventory

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

United States : All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision : May 20 2015.

Date of previous issue : No previous validation.

Version : 1

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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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Acute Tox. 5, H303	Calculation method
Skin Irrit. 3, H316	Calculation method
Eye Irrit. 2A, H319	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H336	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

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Section 16. Other information

Notice to reader

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.
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