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Safety Data Sheet

1. Chemical product and company identification

Product name	:	Pesticides standard solution 70

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
Reference No	:	34283
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Physical hazards	Flammable liquids	Category 2
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 2
	Specific target organ toxicity (single exposure)	Category 3 (narcosis)
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation)
	Specific target organ toxicity (repeated exposure)	Category 1 (nervou system, respiratory organs, digestive tract)
	Aspiration hazard	Category 1
Environmental hazards	Aquatic acute	Category 2
	Aquatic chronic	Category 2

Hazard pictograms

Signal word	:	Danger
Hazard statements	:	Highly flammable liquid and vapor May be fatal if swallowed and enters airways Causes skin irritation Causes serious eye irritation May cause respiratory irritation May cause drowsiness or dizziness Suspected of damaging fertility or the unborn child Causes damage to organs (nervou system, respiratory organs, digestive tract) through prolonged or repeated exposure

Toxic to aquatic life
Toxic to aquatic life with long lasting effects

Precautionary statements

Prevention : Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take action to prevent static discharges.
Do not breathe mist/vapors.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response : IF SWALLOWED: Immediately call a POISON CENTER or doctor.
IF ON SKIN: Wash with plenty of water.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER or doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
Do not induce vomiting.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Collect spillage.

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

Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture : Mixture

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Acetone	≥ 55	C3H6O	Listed	200-662-2	67-64-1
Hexane	≥ 43	C6H14	Listed	203-777-6	110-54-3

＊Each 10mg/L in acetone-hexane solution(1:1). XMC, Azaconazole, Acetochlor, Atrazine, Ametryn, Allethrin, Isazofos, Isoxathion, Isoxathion oxon, Isoprothiolane, Iprobenfos, Imazamethabenz-methyl,

Ethion, Ethofumesate, Oxadiazon, Oxadixyl, Oxyfluorfen, Carfentrazone-ethyl, Carbofuran, Quinoxyfen, Quinoclamine, Quintozene, Clomazone, Chlorthal-dimethyl, Chlorpyrifos-methyl, Cyanophos, Diclofop methyl, Dicloran, Diphenamid, Simazine, Dimethametry, Dimepiperate, Tecnazene, Tetrachlorvinphos, Tetradifon, Triadimefon, Triallate, Tribufos, Trifloxystrobin, Napropamide, Nitrothal-isopropyl, Norflurazon, Piperohos, Pyrazophos, Pyridaphenthion, Vinclozolin, Fenamiphos, Fenothiocarb, Phenothrin, Fenbuconazole, Fenpropimorph, Fthalide, Bupirimate, Buprofezin, Flamprop-methyl, Fluacrypyrim, Flutriafol, Flumioxazin, Flumiclorac-pentyl, Propachlor, Propanil, Propargite, Propyzamide, Profenofos, Propoxur, Bromacil, Prometryn, Bromobutide, Bromopropylate, Bromophos-methy, Hexazinone, Benalaxyl, Benoxacor, Benfluralin, Phosphamidon, Phosmet, Metalaxyl, Methidathion, Methoxychlor, (E)-Metominostrobin, (Z)-Metominostrobin, Monocrotophos, Tolfenpyrad.

4. First aid measures

First aid measures

First-aid measures after inhalation	:	Remove the victim to fresh air, and make him blow his nose and gargle.
First-aid measures after skin contact	:	Wash the affected areas under running water.
First-aid measures after eye contact	:	Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
First-aid measures after ingestion	:	The chemical is volatile. Do not induce vomiting because it increases the risk of aspiration into the lungs. Get medical attention immediately. If necessary, rinse mouth with water.
Personal Protection in First Aid and Measures	:	Rescuers should wear proper protective equipment like rubber gloves, goggles.

Most Important Symptoms/Effects

Symptoms/effects	:	If inhaled the vapor, cause hyper secretion of saliva, face flush, cough, dizziness, lethargy, headache, throat ache, unconsciousness, nausea, vomiting, etc.

5. Fire fighting measures

Suitable extinguishing media	:	Dry chemical, CO2, dry sand, or alcohol-resistant foam
Unsuitable extinguishing media	:	Water spray, Foam extinguisher
Firefighting instructions	:	Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area. Fight fire from windward. Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Alcohol-resistant foam extinguisher is effective for a large scale fire.
Personal protection (Emergency response)	:	Wear breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures	:	Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Environmental precautions

Environmental precautions	:	Attention should be given to avoid discharge of spilled product

into rivers and resulting environmental damage. When diluting spill with large amounts of water, discharge of untreated wastewater into the environment must be avoided.

Methods and Equipment for Containment and Cleaning up

For containment	:	Absorb spill with inert material (e.g, diatomaceous earth, sand) and flush spillage area with copious amounts of water.
Prevention Measures for Secondary Accidents	:	Remove nearby sources of ignition and prepare extinguishing media.

7. Handling and storage

Handling

Technical measures	:	Wear proper protective equipment to avoid contact with skin or inhalation of vapor. Fire is strictly prohibited. Ventilate well at working places. Prevent build-up of electrostatic charges (e.g. by grounding).
Precautions for safe handling	:	Use with an enclosed system or a local exhaust ventilation. Use in well-ventilated areas. Do not allow contact with oxidizing substances.

Storage

Storage conditions	:	Store in a freezer and tightly closed (below -20℃).
Material used in packaging/containers	:	Glass, fluorine resin, stainless steel. Do not use vinyl chloride resin, acrylic resin, polystyrene etc.

8. Exposure controls / Personal protection equipment

Acetone	
ACGIH TWA	250 ppm
ACGIH STEL	500 ppm
Hexane	
ACGIH TWA	50 ppm
Remark (ACGIH)	Skin

Appropriate engineering controls	:	Use with an enclosed system or a local exhaust ventilation.

Protective equipment

Respiratory protection	:	If necessary, wear gas mask for organic solvents or airline respirator.
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles
Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Liquid
Color	:	Colorless.
Odor	:	Characteristic
pH	:	No data available
Melting point	:	No data available

Freezing point	:	No data available
Boiling point	:	56.12 - 68.7 ° C
Flash point	:	-22 - -17.8 ° C (C.C.)
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	Flammable
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	No data available
Relative gas density	:	No data available
Solubility	:	Water: Insoluble.
Partition coefficient n-octanol/water (log Pow)	:	No data available
Explosive limits (vol %)	:	No data available
Viscosity, kinematic	:	No data available
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	May react with oxidizing substances.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under normal conditions of use.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Carbon monoxide, nitrogen oxides, sulfur oxides, phosphorus oxide, chlorine, hydrogen chloride, fluorine, hydrogen fluoride, bromine, hydrogen bromide.

11. Toxicological information

Acute toxicity (oral)	:	No classification ATEmix>2000mg/kg
Acute toxicity (dermal)	:	No classification ＊45.5% of the mixture consists of ingredients of unknown toxicity. ATEmix>2000mg/kg
Acute toxicity (inhalation)	:	No classification (gas) No classification (vapor) ATEmix>20000ppm Classification not possible (dust, mist)
Skin corrosion/irritation	:	Causes skin irritation Hexane : Slight irritation of rabbit skin was observed after semi-occlusive application for 24-hour. For humans, after occlusive application to the skin for 1 to 5-hour, erythema was observed. After 5-hour, formation of blisters was observed. The application of 1.5 mL to the skin of the forearm caused a stabbing and burning sensation and transient erythema. Based on these data, the substance was classified into category 2.
Serious eye damage/irritation	:	Causes serious eye irritation Hexane : Based on a result of "slight irritation" after application of 0.1 mL to the eyes in a rabbit test, the substance was classified into category 2A.

Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	No classification Acetone : Acetone is negative in vivo micronucleus examination. Hexane : There are negative results in a mouse dominant lethal test by inhalation exposure (in vivo heritable germ cell mutagenicity test), a mouse erythrocyte micronucleus test by inhalation exposure and a rat and mouse bone marrow chromosomal aberration tests by inhalation exposure (in vivo somatic cell mutagenicity test). The content of other components is below the cut-off value.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Suspected of damaging fertility or the unborn child Acetone : Acetone is describe that it has no effect on abortion by the epidemiologic investigation. But high concentration exposure of acetone for rats (11000ppm (20mg/L)), caused weak developmental toxicity that is decrease in embryonic weight, high concentration exposure of acetone for mice (6600ppm (15.6mg/L)), caused decrease in embryonic weight, later embryo absorption rate. From the above, it was classified into category 2. Hexane : In a two-generation reproductive test by inhalation exposure to rats, there were no effects on parental sexual function and fertility in either generation (F0 or F1). Inhalation exposure of pregnant rats to 500 - 1500 ppm during gestation resulted in increased resorptions rates. Following inhalation exposure to rats on days 6 - 17 of gestation, the number of live fetuses per litter was significantly reduced at the 5,000 ppm dose level, with a significant concentration dependent trend. These effects were observed at dose levels in which a reduced body weight gain was observed in maternal animals. Based on the data, the substance was classified into category 2.
STOT-single exposure	:	May cause drowsiness or dizziness May cause respiratory irritation Acetone : Based on the descriptions of acetone that irritation in the human throat is caused by 12000ppm exposure, that irritation is caused in the nasal cavity, throat and trachea by 1190 and 2400mg/m3/6h exposure to humans, and that irritation was caused in the throat by 1000ppm/4h exposure. Thus, it was classified into category 3 (respiratory tract irritation). From the description that a man who swallowed 200mL of the substance progressed to coma (recovery of consciousness after 12 hours), and a worker who was exposed vapor of 12000ppm suffered from headache, dizziness, weakness of legs, unconsciousness, it was classified into category 3 (narcosis). Hexane : Dizziness in an inhalation test with human volunteers and sleepiness in exposed workers are reported. In inhalation tests in rats and mice, ataxia, loss of coordination, sedation and narcosis were observed. Based on these results, the substance was classified into category 3 (narcosis). In addition, based on a report that irritation (or possibility of irritation) of the throat or upper respiratory tract occurred in humans after inhalation exposure and a report that inhalation in mice resulted in irritation of the respiratory tract, the substance was classified into category 3 (respiratory tract irritation).

STOT-repeated exposure	:	Causes damage to organs (nervou system, respiratory organs, digestive tract) through prolonged or repeated exposure Acetone : In humans, there is the description that inflammation was observed in respiratory, stomach and duodenum with dizziness, weakness as the effects of occupational exposure, in worker who was inhalation exposure to 700 ppm of this substance, 3 hours/day for 7 to 15 years. Based on the above mention, it was classified into category 1(central nervous system, respiratory organs, digestive tract). Hexane : There are numerous case reports of polyneuropathy, peripheral neuropathy and polyneuritis caused by occupational exposure to the substance. In many epidemiological tests of humans exposed to the substance, a relationship between exposure and the adverse effects was reported. Based on the results of human case reports and epidemiological tests, the substance was classified into category 1 (nervous system). Based on the content, this product was classified into category 1 (nervous system, respiratory organs, digestive tract).
Aspiration hazard	:	May be fatal if swallowed and enters airways Hexane : Since the substance is a hydrocarbon with a kinematic viscosity of 20.5 mm2/s or less at 40 degC, the substance was classified into category 1.

12. Ecological information

Ecotoxicity

Aquatic acute	:	Toxic to aquatic life Daphnia magna EC50=0.056ppb/48h (as ethion) Penaeus duorarum LC50=0.000028mg/L/48h (as chlorpyrifos-methyl)
Aquatic chronic	:	Toxic to aquatic life with long lasting effects

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecological waste information	:	Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal. The incinerator should be suitable for burning organic halogen compounds. Alkaline solution should be used for cleaning liquid of the scrubber.
Contaminated container and packaging	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG)	:	1993
Proper Shipping Name (IMDG)	:	FLAMMABLE LIQUID, N.O.S.
Packing group (IMDG)	:	II
Transport hazard class(es) (IMDG)	:	3

Air transport(IATA)

UN-No. (IATA)	:	1993
Proper Shipping Name (IATA)	:	Flammable liquid, n.o.s.
Packing group (IATA)	:	II
Transport hazard class(es) (IATA)	:	3
Marine pollutant	:	Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollutant category	:	Y
MFAG-No	:	128

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : Solvents Handbook, T, Asahara el, Kodansha Scientific Ltd. (1976) .
Handbook of dangeroous and hazardous chemicals, Japan Industrial Safety & Health Association. (2000-2001) .
Dangerous Properties of Industrial Materials,6th ed. N.I.Sax Van Nostrand Reinhold Company (1984) .
Handbook of Dangerous Substances Springer-Verlag Tokyo (1991) .
Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022) .
NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.