

MATERIAL SAFETY DATA SHEET

[1.PRODUCT AND COMPANY IDENTIFICATION]

PRODUCT NAME : TROENAN
SUPPLIER : Kao Corporation
ADDRESS : 1-3,Bunka 2-chome,Sumida-ku,Tokyo 131-8501 Japan
DIVISION : Global Chemical Business
TELEPHONE NUMBER : 81-3-5630-7700
FAX NUMBER : 81-3-5630-7889
E-MAIL ADDRESS : chemical@kao.co.jp
EMERGENCY TELEPHONE NUMBER : 81-3-5630-7700
RECOMMENDED USE :
AND RESTRICTIONS ON USE :

[2.HAZARDS IDENTIFICATION]

MOST IMPORTANT HAZARDS AND EFFECTS :

GHS CLASSIFICATION

PHYSICAL AND CHEMICAL HAZARDS : Not classified

HEALTH HAZARDS

ACUTE TOXICITY (Oral) : Not classified
ACUTE TOXICITY (Dermal) : Not classified
ACUTE TOXICITY (Inhalation) : Not applicable(Vapours)
SKIN CORROSION / IRRITATION : Category 2
SERIOUS EYE DAMAGE / EYE IRRITATION : Not classified
RESPIRATORY SENSITIZATION : Classification not possible
SKIN SENSITIZATION : Classification not possible
GERM CELL MUTAGENICITY : Classification not possible
CARCINOGENICITY : Classification not possible
REPRODUCTIVE TOXICITY : Classification not possible
SPECIFIC TARGET ORGAN TOXICITY
- SINGLE EXPOSURE : Classification not possible
- REPEATED EXPOSURE : Classification not possible
ASPIRATION HAZARD : Classification not possible

ENVIRONMENTAL HAZARDS

HAZARDOUS TO THE AQUATIC ENVIRONMENT

- ACUTE TOXICITY : Category 3
- CHRONIC TOXICITY : Category 3

GHS LABEL ELEMENTS

PICTOGRAMS OR SYMBOLS :



SIGNAL WORD : Warning
HAZARD STATEMENTS : Causes skin irritation
Harmful to aquatic life
Harmful to aquatic life with long lasting effects
PRECAUTIONARY STATEMENTS
PREVENTION : Avoid release to the environment.
Wash thoroughly after handling.
Wear protective gloves.

- RESPONSE : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If skin irritation occurs, seek medical advice/attention.
Call a POISON CENTER/doctor/physician if you feel unwell.
- STORAGE :
- DISPOSAL : Passed to a licensed waste contractor.
- SAFE HANDLING ADVICE : Refer to MSDS.

[3.COMPOSITION / INFORMATION ON INGREDIENTS]

- SUBSTANCE OR MIXTURE : Substance
- INGREDIENTS AND CONCENTRATION RANGE : 1,3-Dioxane, 5-methyl-2-(1-methylbutyl)-5-propyl-
- CAS RN : 80480-24-6

[4.FIRST-AID MEASURES]

- IN CASE OF INHALATION : Remove to fresh air and keep at rest in a position comfortable for breathing.
- IN CASE OF SKIN CONTACT : Gently wash with plenty of soap and water.
If skin irritation occurs, seek medical advice/attention.
- IN CASE OF EYE CONTACT : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IN CASE OF INGESTION : Call a POISON CENTER or doctor/physician if you feel unwell.

[5.FIRE-FIGHTING MEASURES]

- EXTINGUISHING MEDIA : Powder, alcohol-resistant foam, carbon dioxide, sand
- NOT SUITABLE EXTINGUISHING MEDIA : Do not spray cylindrical water.
- SPECIFIC HAZARDS : No information available
- SPECIFIC METHODS : Keep away from sources of ignition and use appropriate extinguishing media.Fight fire from upwind position if possible.
- PROTECTION OF FIRE FIGHTERS : Use goggles in combination with dust mask, and another protections as appropriate to situation.

[6.ACCIDENTAL RELEASE MEASURES]

- PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURE : Use goggles and protective gloves.
Large spills : Remove person to safety.
Ensure adequate ventilation.
- ENVIRONMENTAL PRECAUTIONS : Avoid release to the environment.
- METHODS FOR CLEANING UP : Small spills: Absorb spills with sand, inert absorbent, waste cloth or sawdust. Then wipe up remainder in waste cloth.
Large spills: Dike spills and dispose of in safe area.
- PREVENTION OF SECONDARY HAZARDS : Keep away from sources of ignition and prepare extinguishing media.

[7.HANDLING AND STORAGE]

- HANDLING
- TECHNICAL MEASURES : Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- PRECAUTIONS : Keep away from source of ignition.
- SAFE HANDLING ADVICE : Use an adequate ventilation.
Wash thoroughly after handling.
Use personal protective equipment as required.

STORAGE

- SUITABLE STORAGE CONDITIONS : Store container tightly closed in well-ventilated place.
Keep away from source of ignition.
- SAFE PACKAGING MATERIALS : No information available

[8.EXPOSURE CONTROLS / PERSONAL PROTECTION]

- ENGINEERING MEASURES : Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Use an adequate ventilation.

LIMIT VALUES

- ACGIH (TLV) : Not established
- OSHA (PEL) : Not established

PERSONAL PROTECTIVE EQUIPMENT

- RESPIRATORY PROTECTION : Use as appropriate to situation.
- HAND PROTECTION : Rubber gloves
- EYE PROTECTION : Safety glasses
- SKIN AND BODY PROTECTION : Full-body suit
- HYGIENE MEASURES : No information available

[9.PHYSICAL AND CHEMICAL PROPERTIES]

PHYSICAL STATES

- FORM : Liquid
- COLOUR : Colorless clear
- ODOUR : Characteristic odour
- pH : Not applicable

SPECIFIC TEMPERATURES / TEMPERATURE RANGES
AT WHICH CHANGES IN PHYSICAL STATE OCCUR

- BOILING POINT : No information available
- MELTING POINT : No information available
- FLASH POINT : 116 °C (240.8 °F) (CLEVELAND open cup method)

FLAMMABILITY OR EXPLOSIVE PROPERTIES

- FLAMMABILITY OR EXPLOSIVE LIMITS : UPPER LIMIT : No information available LOWER LIMIT : No information available
- VAPOUR PRESSURE : No information available
- VAPOUR DENSITY : No information available
- DENSITY (SPECIFIC GRAVITY) : 0.889 g/mL (25 °C) (77 °F)
- SOLUBILITY
- WATER SOLUBILITY : Poor
- SOLVENT SOLUBILITY : Soluble in ethyl alcohol
- PARTITION COEFFICIENT: n-OCTANOL / WATER (log Pow) : No information available
- AUTO-IGNITION TEMPERATURE : No information available
- DECOMPOSITION TEMPERATURE : No information available
- ODOUR THRESHOLD : No information available
- EVAPORATION RATE : No information available
- FLAMMABILITY (SOLID,GAS) : No information available
- VISCOSITY : No information available
- OTHER DATA : No information available

[10.STABILITY AND REACTIVITY]

- CHEMICAL STABILITY : Stable in general.

POSSIBILITY OF HAZARDOUS REACTIONS : Stable in general.
CONDITIONS TO AVOID : No information available
INCOMPATIBLE MATERIALS : No information available
HAZARDOUS DECOMPOSITION PRODUCTS : Carbon dioxide
OTHERS : No information available

[11.TOXICOLOGICAL INFORMATION]

ACUTE TOXICITY

Oral

INFORMATION ON PRODUCT : Rat, LD50 : > 2000 mg/kg

Dermal

INFORMATION ON PRODUCT : No information available

Inhalation

INFORMATION ON PRODUCT : No information available

SKIN CORROSION / IRRITATION

INFORMATION ON PRODUCT : Hazardous in case of skin contact (irritant).

SERIOUS EYE DAMAGE / IRRITATION

INFORMATION ON PRODUCT : Non-irritating to the eyes.

RESPIRATORY OR SKIN SENSITIZATION

RESPIRATORY

INFORMATION ON PRODUCT : No information available

SKIN

INFORMATION ON PRODUCT : No information available

MUTAGENICITY (GERM CELL MUTAGENICITY)

INFORMATION ON PRODUCT : Non-mutagenic for bacteria

CARCINOGENICITY

INFORMATION ON PRODUCT : No information available

IARC : Not listed

NTP : Not listed

EU : Not listed

OSHA : Not listed

REPRODUCTIVE TOXICITY

INFORMATION ON PRODUCT : No information available

SPECIFIC TARGET ORGAN TOXICITY

- SINGLE EXPOSURE

INFORMATION ON PRODUCT : No information available

- REPEATED EXPOSURE

INFORMATION ON PRODUCT : No information available

ASPIRATION HAZARD

INFORMATION ON PRODUCT : No information available

OTHER INFORMATION

: No information available

[12.ECOLOGICAL INFORMATION]

ECOTOXICITY : Brachydanio rerio (zebra fish), 96h, LC50 : 10 to 100 mg/L

PERSISTENCE / DEGRADABILITY : No information available

MOBILITY IN SOIL : No information available

BIOACCUMULATIVE POTENTIAL : No information available

OTHER ADVERSE EFFECTS : No information available

[13.DISPOSAL CONSIDERATIONS]

Review "HANDLING AND STORAGE (Section 7)".
Passed to a licensed waste contractor.

Dispose of waste in accordance with local,state and federal regulations.

[14.TRANSPORT INFORMATION]

Follow all regulations in your country or region

INTERNATIONAL REGULATIONS

UN CLASS / UN NUMBER : Not applicable
SPECIAL PRECAUTIONS FOR USER : Review "ACCIDENTAL RELEASE MEASURES (Section 6)".
Review "HANDLING AND STORAGE (Section 7)".
Ensure containers without breakage or leakage.
Ensure containers tightly fixed.
Follow all regulations in your country or region.
Keep away from source of ignition.

[15.REGULATORY INFORMATION]

Follow all regulations in your country or region.

INVENTORIES	: ENCS(Japan)	Limited
	TSCA(USA)	Yes
	EINECS(EU)	Yes
	AICS(Australia)	Yes
	DSL(Canada)	No(NDSL)
	ECL(Korea)	Yes
	PICCS(Philippines)	Yes
	IECSC(China)	Yes

KAO Corporation is not able to check up the regulatory information in regard to the substances in your country or region,therefore,we request this matter would be filled by your responsibility.

[16.OTHER INFORMATION]

REFERENCE : -Safety data sheet for chemical products - Part 1: Content and order of sections(ISO 11014-1)
-International Chemical Safety Cards(ICSC) (Compiler's Guide)(1994)

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