
MATERIAL SAFETY DATA SHEET

SECTION 1. COMPANY IDENTIFICATION

COMPANY IDENTIFICATION

MANUFACTURER'S NAME: Shin-Etsu Chemical Co., Ltd.

ADDRESS: 6-1, 2-Chome, Ohtemachi, Chiyodaku, Tokyo, JAPAN

EMERGENCY TELEPHONE NUMBER:

02-2715-0055 (Shin-Etsu Silicone Taiwan Co., Ltd.)

TELEPHONE NUMBER FOR INFORMATION:

03-3246-5121 (Tokyo, JAPAN)

02-2715-0055 (Shin-Etsu Silicone Taiwan Co., Ltd)

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PRODUCT NAME :

KE-441-R

PRODUCT CLASSIFICATION:

One Component Silicone Rubber Compound

SECTION 2. COMPOSITION

SINGLE OR MIXTURE:

Mixture

CHEMICAL IDENTIFICATION:

Organopolysiloxane mixture

HAZARDOUS COMPONENT(S) / (CAS No.):

Methylethylketoxime (by-product) / (96-29-7) : ca. 1 %

(See Section 8 of this MSDS for Exposure Guideline)

(See Section 11 of this MSDS for Carcinogenicity)

SECTION 3. HAZARDS IDENTIFICATION

HAZARDS CLASSIFICATION:

None (based on IMO)

Combustible Liquids (based on DOT)

FIRE AND EXPLOSION:

Combustible

POTENTIAL HEALTH EFFECT:

INHALATION ; Vapor overexposure may cause drowsiness,
injure blood and liver, and may irritate
eyes, nose and throat.

SKIN contact ; On direct contact uncured product or its

vapor may cause slight irritation to skin.
EYES contact ; On direct contact uncured product or its
vapor may cause slight irritation to eyes.
INGESTION ; No information is available.

SECTION 4. FIRST AID MEASURES

INHALATION ; Remove to fresh air.
SKIN contact ; Immediately remove product from skin with dry
cloth or towel, and wash exposed area with
detergent.
EYES contact ; Immediately flush with plenty of water for at
least 15 minutes and promptly call a
physician.
INGESTION ; Wash out mouth with water provided person is
conscious. Never give anything by mouth to an
unconscious person. Call a physician
immediately.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT(method used):

180 degrees C (Open cup)

62 degrees C Min.(Closed cup)

FLAMMABLE LIMITS:

LOWER: Not measured UPPER: Not measured

EXTINGUISHING MEDIA:

Foam, dry chemical, carbon dioxide or fine water spray

SPECIAL FIRE FIGHTING PROCEDURE:

None

UNUSUAL FIRE AND EXPLOSION HAZARD:

Emits toxic fumes under fire conditions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEP TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Shut off all ignition sources.

Contain the spill or leak.

Scrape up with rag or other material and place in container.

SECTION 7. HANDLING AND STORAGE

PRECAUTION TO BE TAKEN IN HANDLING AND STORING:

Keep container closed when not in use.

Store in a cool place.

Keep away from heat, sparks and flame.

Do not lay the container on its side.

Use only with adequate ventilation.
Avoid prolonged breathing vapor.
Avoid contact with eyes and skin.
Contact lens wearers take appropriate precaution.
Keep out of reach of children.
* * * * * Information about the emptied container * * * * *
Do not re-use this container.
Keep away from heat, sparks and flame.
Do not puncture or cut this container, and do not weld on or
near this container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Vendor guide ; 3ppm(TWA), 10ppm(STEL),
AIHA WEEL* ; 10ppm(TWA)
[Methylethylketoxime]
(*AIHA WEEL = American Industrial Hygiene Association
Workplace Environmental Exposure Level)

RESPIRATORY PROTECTION(specify type):

Use air-supplied breathing apparatus unless local exhaust
ventilation is adequate or decomposed product is within AIHA
guideline.

VENTILATION:

LOCAL EXHAUST: Required
MECHANICAL(general): Adequate ventilation system
SPECIAL: Unknown
OTHER: Pay attention to ventilation such as local exhaust,
mechanical and/or door open for at least 24 hours after
application.

PROTECTIVE GLOVES:

Plastic film or rubber gloves

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Eyewash equipment

WORK/HYGIENIC PRACTICES:

Keep away from heat, sparks and flame.
Avoid prolonged breathing vapor.
Avoid contact with eyes and skin.
Wash hands after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:

Not applicable

VAPOR PRESSURE:

Negligible (25 degrees C)

VAPOR DENSITY(air=1):

>1

SPECIFIC GRAVITY:

1.04 (25 degrees C)

MELTING POINT:

Not applicable

EVAPORATION RATE:

<1 (Butyl Acetate=1)

SOLUBILITY IN WATER:

Not soluble

APPEARANCE(color):

Reddish brown

APPEARANCE(form):

Paste

ODOR:

Oxime odor

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

Stable

CONDITION TO AVOID:

Exposure to air or moisture until ready to use - Causes
curing and methylethylketoxime vapors form gradually.

INCOMPATIBILITY(material to avoid):

Water or moisture

HAZARDOUS DECOMPOSITION OR BY-PRODUCT:

Water, moisture, or humid air can cause
methylethylketoxime

Thermal breakdown of this product during fire or very
high heat condition may evolve the following hazardous
decomposition product: Carbon oxides and traces of
incompletely burned carbon compounds. Silicon dioxide.
Nitrogen oxides. Formaldehyde. Metal oxides.

HAZARDOUS POLYMERIZATION:

Will not occur

CONDITION TO AVOID:

None

SECTION 11. TOXICOLOGICAL INFORMATION

SKIN IRRITATION:

No information is available.
See OTHER INFORMATION.

EYE IRRITATION:

No information is available.
See OTHER INFORMATION.

SENSITIZATION:

No information is available.

See OTHER INFORMATION.

ACUTE TOXICITY(LD50):

No information is available.

See OTHER INFORMATION.

ACUTE TOXICITY(LC50):

No information is available.

See OTHER INFORMATION.

SUBACUTE TOXICITY:

No information is available.

See OTHER INFORMATION.

CHRONIC TOXICITY:

No information is available.

See OTHER INFORMATION.

CARCINOGENICITY:

NTP:Not listed, IARC:Not listed, OSHA REGULATED:Not listed

See OTHER INFORMATION.

MUTAGENICITY:

No information is available.

See OTHER INFORMATION.

OTHER INFORMATION:

Additional Information

Methyl Ethyl Ketoxime (MEKO)

Material will generate MEKO on exposure to humid air gradually. Male rodents exposed to MEKO vapor at high concentration throughout their lifetime developed liver cancer. But relevance to humans is uncertain now.

Please read the detail information to MEKO below.

Skin Irritation ;Causes mild irritation.
Can be absorbed through the skin.

Eyes Irritation ;Causes severe irritation.

Acute Oral Tox. ;LD50(rat)= 4ml/kg.

Acute Inhalation Tox.;LC50(rat)= >4.8mg/l/4Hr

Inhalation Tox. ;Shows narcotic action at high concentration.

May produce blood effects.

Skin Sensitization ;Positive(guinea pig)

Neurotoxicity ;High dose can produce transient and reversible change in neurobehavioral function.

No evidence of cumulative neurotoxicity was detected.

Carcinogenicity ;Liver carcinomas were observed in a lifetime inhalation study (ca.2 years) in which mice and rats were exposed.
These carcinomas were statistically

increased in males at MEKO
concentration of 375ppm. Relevance
to humans is uncertain now.

Mutagenicity ;Not considered mutagenic based on
several in vitro and vivo studies.

Other Chronic Study ;Degenerative effects on the
olfactory epithelium of nasal
passages occurred in a concentration
related manner in males and females
of mice and rats at MEKO
concentration of 15, 75 and 375ppm.

Workplace Environmental Exposure Level
;Vendor guide ; 3ppm(TWA), 10ppm(STEL),
AIHA WEEL ; 10ppm(TWA)

SECTION 12. ECOLOGICAL INFORMATION

BIODEGRADATION:

Not applicable

BIOACCUMULATION:

No information is available.

AQUATIC TOXICITY:

No information is available.

OTHER INFORMATION:

None

SECTION 13. DISPOSAL CONSIDERATIONS

Can be land-filled for cured product or burned in a chemical
incinerator equipped with an afterburner and scrubber.

Do not dispose the emptied container unlawfully.

Observe all federal, state, and local laws.

SECTION 14. TRANSPORT INFORMATION

<IMO INFORMATION>

ID No.:

None

CLASSIFICATION AND CLASS:

None

PACKAGING GROUP:

None

PROPER SHIPPING NAME:

None

TECHNICAL SHIPPING NAME:

None

MARINE POLLUTANT:

None

<DOT INFORMATION>

ID No.(49CFR 172.101):

NA 1993

HAZARD CLASS(49CFR 172.101):

Combustible Liquid

PACKING GROUP(49CFR 172.101):

III

PROPER SHIPPING NAME(49CFR 172.101):

Combustible Liquids, N.O.S.

TECHNICAL SHIPPING NAME:

Contains Organosilane

DOT REPORTABLE QUANTITY(49CFR 172.101, APP.) :

HAZARD SUBSTANCE(S) NAME / (CAS No.), CONTENTS AND RQ

Not applicable

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT(TSCA) STATUS:

Listed on the TSCA Inventory.

SUPERFUND AMENDMENTS AND REAUTHORIZAITION ACT OF 1986(SARA)

TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the emergency planning and community Right-To-Know Act of 1986 and 40 CFR 372.

This information must be included in all MSDS's that are copied and distributed for the material.

The toxic chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

** None **

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 Chemical(s) under the statute.

The California Proposition 65 Chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

Toluene/(108-88-3) : <0.1 %

SECTION 16. OTHER INFORMATION

For Industrial Use Only

This materials safety data sheet is offered solely for your information, consideration and investigation.

The data described in this MSDS consist of data on literature, our acquisitional data and analogical inference by data of similar chemical substance or product.

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