

Material Safety Data Sheet

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MEGA CHECK PENETRANT

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SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identity (Trade Name As Used On Label); MEGA CHECK PENETRANT

Recommended use of the chemical and restrictions on use; PENETRANT

Manufacturer/Supplier/Distributor Information;

Name; NAMBANG CNA CO., LTD.

Address; / 204, Chupal Sandan 1-gil, Paengseong-eup, Pyeongtaek-si, Gyeonggi-do, 17998 Korea


Emergency phone number; 82 31 651 5911~8

SECTION 2. HAZARDS IDENTIFICATION

Hazard · Risk Classification

Hazard Class	Hazard category
Flammable aerosols	1
Flammable gases	1
Gases under pressure	Liquefied gas
Flammable liquids	2
Toxic to reproduction	2
Aspiration hazard	1
Hazardous to the aquatic environment-Short-term hazard	1
Hazardous to the aquatic environment-Long-term hazard	1

GHS label elements, including precautionary statements

Category	Indication
Symbol	
Signal word	Danger
Hazard · Risk Statement	H222 Extremely flammable aerosol. H229 Pressurized container: may burst if heated. H220 Extremely flammable gas. H280 Contains gas under pressure; may explode if heated. H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H304 May be fatal if swallowed and enters airways.

		H400 Very toxic to aquatic organisms H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P211 Do not spray on an open flame or other ignition source. P233 Keep container tightly closed. P240 Ground/Bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/.../equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P251 Do not pierce or burn, even after use. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.
	Response	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P308+P313 IF exposed or concerned: Get medical advice/attention. P370+P378 In case of fire: Use ... to extinguish. P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381 Eliminate all ignition sources if safe to do so. P391 Collect spillage.
	Storage	P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P410+P403 Protect from sunlight. Store in a well-ventilated place. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
	Disposal	P501 Dispose of contents/container to... in accordance with local/regional/national/international regulations (to be specified).

Other hazards which do not result in classification : No information found

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	OTHER NAME	CAS NUMBER	Content (%)
Solvent naphtha(petroleum), heavy Aromatic	—	64742-94-5	20~30
Toluene	—	108-88-3	1~5
Dioctyl terephthalate	—	6422-86-2	30~40
Red oil	—	1320-06-5	1~5
Propane	—	74-98-6	1~10
Butane	—	106-97-8	25~35

※ CFC FREE

SECTION 4. FIRST AID MEASURES

Eye contact; Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact; Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse. Take off immediately all contaminated clothing.

Inhalation; Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

Ingestion; Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Indication of immediate medical attention and notes for physician; Consult a physician. Show this safety data sheet to the doctor in attendance

SECTION 5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media; Use water spray to keep fire exposed containers cool. If substance does ignite, use CO₂, dry chemical or foam.

Specific hazards arising from the chemical (e.g. nature of any hazardous combustion products); No information found

Special protective equipment and precautions for fire fighters; In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode. Combustion by-products include phosgene and hydrogen chloride gases. Structural firefighters' clothing provides only limited protection to the combustion products of this material.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures; Ensure adequate ventilation. Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled

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material unless wearing appropriate protective clothing. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions and protective procedures; Do not contaminate water.

Methods and materials for containment and cleaning up;

- **Large Spills:** Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use only non-sparking tools.
- **Small Spills:** Wipe up with absorbent material (e.g. cloth, fleece).

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling; Vapors may form explosive mixtures with air. Do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Avoid prolonged exposure. Wash thoroughly after handling. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Use non-sparking tools and explosion-proof equipment.

Conditions for safe storage (including any incompatibilities); Store in cool place. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and open flame. Outside or detached storage preferred. The pressure in sealed containers can increase under the influence of heat. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Keep in an area equipped with sprinklers. Keep out of the reach of children. Keep from contact with oxidizing materials.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters (e.g. occupational exposure limit values, biological limit values);

Toluene; TWA 20 ppm

Engineering controls; A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal protective equipment;

- **Eye / face protection;** Chemical goggles are recommended. Face-shield. Provide eyewash station and safety shower.
- **Skin protection;** Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear protective gloves.
- **Respiratory protection;** Wear positive pressure self-contained breathing apparatus (SCBA). When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

SECTION 9. PHYSICAL / CHEMICAL CHARACTERISTICS

Appearance; Red oil liquid.

Odor; Mild hydrocarbon odor

Odour threshold; No information found

Ph; No information found

Melting point/freezing point; No information found

Initial boiling point and boiling range; (Liquid); >111 °C

Flash point; <-105 °C(c.c.)(Propane) / (Liquid); >4 °C

Evaporation rate; No information found

Flammability (solid, gas); No information found

Upper/lower flammability or explosive limits; Propane; 9.5 / 2.1 %

Vapour pressure; No information found

Vapour density; No information found

Specific Gravity (H₂O = 1); 0.91 ± 0.05

Solubility(ies); Insoluble

Partition coefficient; n-octanol/water; No information found

Auto-ignition temperature; No information found

Decomposition temperature; No information found

Viscosity; No information found

Molecular Weight; No information found

SECTION 10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions; Stable under ordinary conditions of use and storage

Conditions to avoid (e.g. static discharge, shock or vibration, etc); Heat, flames and sparks. Incompatible materials.

Incompatibility (Materials to Avoid); Strong oxidizing agents.

Hazardous Decomposition Products; carbon oxide

SECTION 11. TOXICOLOGICAL INFORMATION

– Solvent naphtha(petroleum), heavy Aromatic –

Information on the likely routes of exposure; No information found

Acute toxicity

– Oral; LD50 5000 mg/kg (rat)

– Dermal; LD50 2000 mg/kg (rabbit)

– Inhalation; LC50 0.59 mg/l/4hr (rat)

Skin corrosion/irritation; No information found

Serious eye damage/irritation; No information found

Respiratory or skin sensitization; No information found

Germ cell mutagenicity; No information found

Carcinogenicity; No information found

Reproductive toxicity; No information found

Specific target organ toxicity (single exposure); No information found

Specific target organ toxicity (repeated exposure); No information found

Aspiration hazard; No information found

– Toluene –

Information on the likely routes of exposure; No information found

Acute toxicity

– Oral; LD50 5580 mg / kg Species: Rat (EU Method B.1)

– Dermal; LD50> 5000 mg / kg Species: Rabbit

– Inhalation; Steam LC50> 20 mg / l Species: Rat (OECD TG 403)

Skin corrosion/irritation; May be harmful if absorbed through skin. Causes skin irritation.

Serious eye damage/irritation; May cause eye irritation.

Respiratory or skin sensitization; No information found

Germ cell mutagenicity; No information found

Carcinogenicity; IARC 3, ACGIH A4

Reproductive toxicity; No evidence of reproductive effects. There is some evidence of developmental toxicity (lower body weight at birth and delayed vaginal opening) at toluene exposure concentrations ≥ 1000 ppm, concentrations which are associated with slight maternal toxicity.

Specific target organ toxicity (single exposure); Irritation to the respiratory tract. At levels above 200 ppm,

headache, dizziness, nausea, loss of coordination and/or consciousness. Central nervous system depression may result at levels approaching 10,000ppm. Warning Hazard category 3.

Specific target organ toxicity (repeated exposure); After repeated dose exposure by inhalation, toluene causes a number of adverse effects including neuropsychological effects, auditory dysfunction and effects on colour vision.

Aspiration hazard; kinematic viscosity below 20.5 mm²/s.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic and terrestrial ecotoxicity; No information found

Persistence and degradability; No information found

Bioaccumulative potential; No information found

Mobility in soil; No information found

Other adverse effects; No information found

SECTION 13. DISPOSAL CONSIDERATION

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14. TRANSPORT INFORMATION

Proper Shipping Name; Aerosols

Class No 2.1

UN-NUMBER; 1950

SECTION 15. REGULATORY INFORMATION

Follow all regulation in your country

SECTION 16. OTHER INFORMATION

Issuing date; 1996.06.20

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Revision number and date; 2019.01.14

Others; This information has been faithfully prepared on the basis of various knowledge and information and is not to guarantee the quality of this product. Also, this information can be changed without prior notice in accordance with introduction of new knowledge and test results, etc. For inquiries, please contact us or the place of product purchase.