

Material Safety Data Sheet

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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 Name /Address;

NAMBANG CNA CO., LTD. / 204, Chupal Sandan 1-gil, Paengseong-eup, Pyeongtaek-si, Gyeonggi-do, 451-805 KOREA

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SECTION 2. HAZARD IDENTIFICATION

Hazard Class

Hazard Class	Hazard category
Flammable aerosols	1
Flammable gases	1
Gases under pressure	Liquefied gas
Flammable liquids	2
Skin corrosion/irritation	2
Toxic to reproduction	2
Specific target organ toxicity(Single exposure)	2
Specific target organ toxicity(Single exposure)	3(Narcotic effects)
Specific target organ toxicity(Repeated exposure)	2
Aspiration hazard	1
Hazardous to the aquatic environment-Long-term hazard	2

GHS label elements, including precautionary statements

Category	Indication
Symbol	
Signal word	Danger
Hazard statement	H222 Extremely flammable aerosol.

		<p>H220 Extremely flammable gas.</p> <p>H280 Contains gas under pressure; may explode if heated.</p> <p>H225 Highly flammable liquid and vapour.</p> <p>H315 Causes skin irritation.</p> <p>H361 Suspected of damaging fertility or the unborn child.</p> <p>H371 May cause damage to organs.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H373 May cause damage to organs <...> through prolonged or repeated exposure.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H411 Toxic to aquatic life with long lasting effects.</p>
Precautionary statements	Prevention	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>P211 Do not spray on an open flame or other ignition source.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground/Bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.</p> <p>P242 Use only non-sparking tools.</p> <p>P243 Take precautionary measures against static discharge.</p> <p>P251 Do not pierce or burn, even after use.</p> <p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P264 Wash ... thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p>
	Response	<p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...</p> <p>P302+P352 IF ON SKIN: Wash with plenty water/...</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/...</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P312 Call a POISON CENTER/doctor/.../if you feel unwell.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P321 Specific treatment (see ... on this label)</p> <p>P331 Do NOT induce vomiting.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P370+P378 In case of fire: Use ... to extinguish.</p> <p>P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.</p> <p>P381 Eliminate all ignition sources if safe to do so.</p> <p>P391 Collect spillage.</p>

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	Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed. 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

Ingredients	NFPA Rating	Health	Flammability	Reactivity
Aromatic solvent		2	1	0
Toluene		2	3	0
Diocetyl terephthalate		2	1	0
Red oil		1	1	0
Liquefied Petroleum Gas		2	4	0

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NUMBER	%	Hazardous
Aromatic solvent	64742-94-5	20~30	-
Toluene	108-88-3	1~5	-
Diocetyl terephthalate	6422-86-2	30~40	-
Red oil	1320-06-5	<5	-
Liquefied Petroleum Gas	68476-85-7	30~40	-

※ CFC FREE

SECTION 4. FIRST AID PROCEDURES

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.

SECTION 5. FIRE-FIGHTING MEASURES

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

Environmental precautions; Do not contaminate water.

Methods for 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

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.

Storage; 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

Airborne Exposure Limits;

Toluene; TWA : 50 ppm, 188 mg/m³ STEL : 150 ppm, 560 mg/m³

Liquefied Petroleum Gas; 1000 ppm (1800 mg/m³) TWA

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; No information found

Flash point; <-56°C(c.c.)(Liquefied Petroleum Gas)

Evaporation rate; No information found

Flammability (solid, gas); No information found

Upper/lower flammability or explosive limits; No information found

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

STABILITY; Stable under ordinary conditions of use and storage

Hazardous Polymerization; Will not occur.

Conditions to Avoid; Heat, flames and sparks. Incompatible materials.

Incompatibility (Materials to Avoid); Strong oxidizing agents.

Hazardous Decomposition Products; carbon oxide

SECTION 11. TOXICOLOGICAL INFORMATION

– Aromatic solvent –

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 –

Acute toxicity

– **Oral;** LD50 2600 mg/kg (rat)

– **Dermal;** LD50 120000 mg/kg (rat)

– **Inhalation;** LC50 12.5 mg/l 4 hr (rat)

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; No information found

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

Toxicity; 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

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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

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.