Material Safety Data Sheet

PRODUCT NAME PAGE

Mold Release R-2 (1/9)

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identity (Trade Name As Used On Label); Mold Release R-2

Recommended use of the chemical and restrictions on use; Mold Release

Manufacturer Name /Address;

 $NAMBANG\ CNA\ CO.,\ LTD.\ /\ 204,\ Chupal\ Sandan\ 1-gil,\ Paengseong-eup,\ Pyeongtaek-si,\ Kyeonggi-do,$

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Date Prepared; Sep 13, 2010

SECTION 2. HAZARD IDENTIFICATION

Hazard Class

Hazard Class	Hazard category
Flammable aerosols	1
Flammable liquids	2
Skin corrosion/irritation	2
Eye damage/irritation	2
Toxic to reproduction	2
Specific target organ toxicity(Single exposure)	3(Narcotic effects)
Specific target organ toxicity(Repeated exposure)	1
Aspiration hazard	1

GHS label elements, including precautionary statements

Category	Indication	
Symbol		
Signal word	Danger	
Hazard statement	 Extremely flammable aerosol. Highly flammable liquid and vapour. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. 	

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Prevention Prevention Prevention Prevention Prevention Prevention Smoking. Do not spray on an open flame or other ignition. Pressurized container: Do not pierce or burn, end of the content of t		 Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Wash ··· thoroughly after handling. Wear protective gloves. Obtain special instructions before use. Do not handle until all safety precautions have been read and
Precautionary statements	Response	 IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
	Storage	 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed.
	Disposal	- Dispose of contents/container toin accordance with local/regional/national/international regulations (to be specified).

Other hazards which do not result in classification

NFPA Rating Ingredients	Health	Flammability	Reactivity
Lecithin	1	1	0
Hexylhydride	2	3	0
Propane	1	4	0
Butane	1	4	0

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NUMBER	%	Hazardous
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Lecithin	8002-43-5	<5	_
Hexylhydride	110-54-3	<20	_
Propane	74-98-6	10~20	_
Butane	106-97-8	60~70	_

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; IF SWALLOWED: 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 facepiece 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

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Personal precautions; No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions; Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for containment; ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas. Use water spray to reduce vapors or divert vapor cloud drift.

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; Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage; Store in accordance with local regulations. Store in a segregated and approved area. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Airborne Exposure Limits;

Hexylhydride

 $TWA:50 ppm, 180 mg/m^3$

STEL: -

500 ppm (1800 mg/m³) OSHA TWA

50 ppm ACGIH TWA

Butane

1000 ppm (1800 mg/m³) OSHA TWA

1000 ppm ACGIH TWA

Engineering controls; Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protective equipment;

- Eye / face protection; Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles.
- Skin protection; Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat.
- Respiratory protection; Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. PHYSICAL / CHEMICAL CHARACTERISTICS

Appearance; Yellow, transparent liquid

Odor; 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; -105 °C (Propellant)

Evaporation rate; No information found

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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 ($H_2O = 1$); 0.68 \pm 0.05 Relative density; No information found

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, flame, ignition sources, light, moisture, incompatibles.

Incompatability (Materials to Avoid); Oxidizing agent, base, metal, alkali metal, lithium

Hazardous Decomposition Products; carbon oxide

SECTION 11. TOXICOLOGICAL INFORMATION

- Lecithin -

Acute toxicity

- Oral; No information found

- Dermal; No information found

- Inhalation; No information found

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

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

Aspiration hazard; No information found

- Hexylhydride -

Acute toxicity

- Oral; LD50 >5 g/kg (rat)

- Dermal; LD50 >2 g/kg (rabbit)

- Inhalation; LC50 >3367 ppm (rat)

Skin corrosion/irritation; Causes skin irritation.

Serious eye damage/irritation; Risk of corneal clouding.

Respiratory or skin sensitization; No information found

Germ cell mutagenicity; No information found

Carcinogenicity; No information found

Reproductive toxicity; Suspected of damaging fertility.

Specific target organ toxicity (single exposure); May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure); May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard; Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

- Propane -

Acute toxicity

- Oral; No information found

- Dermal; No information found

- Inhalation; LD50 570000 ppm /15min (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

- Butane -

Acute toxicity

- Oral; No information found

- Dermal; No information found

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- Inhalation; LC50 277374 ppm /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

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

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; Aerosol

Class No 2

UN-NUMBER; UN 1950

SECTION 15. REGULATORY INFORMATION

Follow all regulation in your country

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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.