

 **NIPPON GOHSEI**
MATERIAL SAFETY DATA SHEET
[SHIKOH UV-NS054]

According to Specification JIS Z 7250 - Z 7252
Effective date 07/09/11

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Product Name: SHIKOH UV-NS054
Company Name: The Nippon Synthetic Chemical Industry Co., Ltd.
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2. HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards	: Flammable liquid	Category 3
Human Health Hazards	: Acute toxicity (Inhalation)	Category 4
	Skin corrosion/irritation	Category 1
	Eye damage/irritation	Category 1
	Skin Sensitization	Category 1
	Toxic to reproduction	Category 2
	Specific target organ toxicity	
	single exposure (Respiratory system)	Category 2
	single exposure (Respiratory tract irritation)	Category 3
	single exposure (Narcotic effect)	Category 3
	Specific target organ toxicity	
	repeated exposure	Category 2
Environmental Hazards	: Acute hazards to the aquatic environment	Category 2
	Chronic hazards to the aquatic environment	Category 3

Hazards not listed in the above are classified as “Not Applicable” or “Classification Not Possible”.
Classification is based on data classified by the Japanese GHS Inter-ministerial Committee in 2006
and information from material suppliers in accordance with the Industrial Safety and Health Law.

GHS Label Elements

Hazard symbols



Signal words : **Danger**

Hazard statements : Flammable liquid and vapour
Harmful if inhaled
Causes severe skin burns and eye damage

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Causes serious eye damage
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child
May cause damage to organs (respiratory system)
May cause respiratory irritation
May cause drowsiness and dizziness
May cause damage to organs respiratory system through prolonged or repeated exposure
May cause damage to organs others through prolonged or repeated exposure
Toxic to aquatic life
Harmful to aquatic life with long lasting effects

Precautionary
statements

: [Prevention]
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/ eye protection/face protection.
Use personal protective equipment as required.

: [Response]
Immediately call a POISON CENTER or doctor/physician.
Call a POISON CENTER or doctor/physician if you feel unwell.
Get medical advice/attention if you feel unwell.
Wash contaminated clothing before reuse.

IF SWALLOWED:
Rinse mouth.
Do NOT induce vomiting.

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IF ON SKIN (or hair):

Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

IF INHALED:

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES:

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned:

Get medical advice/attention.

IF exposed or if you feel unwell:

Call a POISON CENTER or doctor/physician.

In case of fire:

Use water fog, dry chemical, CO₂, or alcohol foam for extinction.

: [Storage]

Store locked up.

Store in a well-ventilated place.

Keep container tightly closed.

Keep cool.

: [Disposal]

Dispose of contents/container in accordance with local/regional/national/international regulation.

Don't put empty used container to fire source, because the gas of the inflammability remains in it.

Other hazards
which do not
result in classification

: Polymerization may occur by direct sunshine or heat.

Polymerization may occur explosively when heated or caught in fire.

Decomposition by heat or combustion emits irritating or toxic gas (CO_x).

This compound contains less than 10% of specific target organ toxicity material (single exposure (liver) (Category 2)).

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	Content
Acrylic copolymer	Nondisclosure	5~35%
Acrylic ester monomer	Nondisclosure	30~60%
n-butyl acrylate	141-32-2	30~40%
Acrylic acid	79-10-7	5~15%

4. FIRST AID MEASURES

INHALATION

Move the exposed person to fresh air at once. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

INGESTION

Do NOT induce vomiting. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical attention.

SKIN CONTACT

Flush skin thoroughly with water. Wash skin with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues.

EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Water spray, fog or mist. Carbon dioxide or dry powder.

SPECIFIC HAZARDS

Fire or high temperatures create: Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrocarbons.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Absorb spill inert material (e.g. vermiculite, sand or earth), then place in suitable container.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid contact with eyes. Container must be kept tightly closed. Provide good ventilation. Wash hands after handling. Avoid inhalation of vapours and contact with skin and eyes. Do not discharge onto the ground or into water courses.

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STORAGE PRECAUTIONS

Keep away from heat, sparks and open flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Provide adequate local exhaust ventilation to maintain worker exposure.

Exposure limit values

n-butyl acrylate : 2 ppm (TLV-TWA) (SEN; A4)
Acrylic acid : 2 ppm (TLV-TWA) (Skin; A4)

PROTECTIVE EQUIPMENT

Hand protection : Use suitable protective gloves if risk of skin contact.
Eye protection : Wear approved safety goggles.
Skin and body protection : Wear protective clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Slightly yellowish clear viscous liquid
ODOUR	Characteristic Chemical.
PH	not available
Melting point / Freezing point	n-butyl acrylate : -64.6°C (Freezing point) Acrylic acid : 14°C (Freezing point)
Initial boiling point / boiling range	n-butyl acrylate : 146-148°C (boiling point) Acrylic acid : 141°C (boiling point)
Flash point	n-butyl acrylate : 36.5°C Acrylic acid : 54°C
Evaporation rate	not available
Upper/lower flammability or explosive limit	n-butyl acrylate : upper 9.9 vol%, lower 1.2 vol% Acrylic acid : upper 8.0 vol%, lower 2.4 vol%
Vapor pressure	n-butyl acrylate : 530 Pa (20°C) Acrylic acid : 413 Pa (20°C)
Vapor density	n-butyl acrylate : 4.42 (air = 1) Acrylic acid : 2.5 (air = 1)
Relative density	Mixture : Specific gravity 1.00~1.20
Solubility	Immiscible with water. Soluble in organic solvents.
Partition coefficient: n-octanol / water	n-butyl acrylate : log Pow = 2.36 Acrylic acid : log Pow = 0.36
Auto-ignition temperature	n-butyl acrylate : 267°C Acrylic acid : 360°C
Decomposition temperature	not available
Viscosity	around 1,800 mPa·s (25°C)

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10. STABILITY AND REACTIVITY

STABILITY

Stable under the prescribed storage conditions.

CONDITIONS TO AVOID

Avoid contact with strong oxidizers, heat, UV-rays.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral

Acrylic acid : (rat) LD₅₀ = 900 mg/kg – Category 4

Endermatic

Acrylic acid : (rabbit) LD₅₀ = 430 mg/kg – Category 3

Inhale (vapor)

n-butyl acrylate : (rat) LC₅₀ = 10.6 mg/L – Category 3

Acrylic acid : (rat) LC₅₀ = 3.6 mg/L – Category 3

Inhale (mist)

Acrylic acid : (rat) LC₅₀ = 2.8 mg/L – Category 4

SKIN CORROSION/IRRITATION

n-butyl acrylate : (rabbit) Causes moderate intensity erythema and edema. (SIDS (2002))
– Category 2

Acrylic acid : (rabbit) Indicate skin corrosivity. (EHC 191 (1997), EU-RAR No.28 (2002))
– Category 1A

SERIOUS EYE DAMAGE/EYE IRRITATION

n-butyl acrylate : (rabbit) Causes eye irritant and moderate to serious insult.
(ECETOC JACC 27 (1994), SIDS (2002))
– Category 2A-2B

Acrylic acid : Indicate irreversible eye damage. (EHC 191 (1997), EU-RAR No.28 (2002))
– Category 1

RESPIRATORY SENSITIZATION/SKIN SENSITIZATION

n-butyl acrylate : Causes the allergic contact dermatitis.
(SIDS (2002), DFGOT vol 5 (1993), IARC71 (1999),
ECETOC JACC 27 (1994))
– Category 1 (SKIN SENSITIZATION)

TOXIC REPRODUCTION

n-butyl acrylate : (rat) Causes the embryonic lethal, decrease of viable fetus,
and of children's weight.
(SIDS (2002), ECETOC JACC (1994)) – Category 2

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SPECIFIC TARGET ORGAN TOXICITY FOLLOWING SINGLE EXPOSURE

- n-butyl acrylate : (rat) Causes irritating effect to respiratory apparatus. (SIDS (2002))
– Category 3 (Respiratory tract irritation)
- Acrylic acid : Causes disorder to liver and respiratory system. (EU-RAR No.28 (2002))
– Category 1 (Respiratory system)
– Category 2 (Liver)

SPECIFIC TARGET ORGAN TOXICITY FOLLOWING REPEATED EXPOSURE

- Acrylic acid : Causes disorder to respiratory system. (CERI HAZARD Data 96–27 (1997))
– Category 1 (Respiratory system)

12. ECOLOGICAL INFORMATION

ACUTE HAZARDS TO THE AQUATIC ENVIRONMENT

- n-butyl acrylate : (alga) ErC₅₀ = 1.7 mg/L (72 hours)
(Ecological effect test/Japan environmental ministry 1998)
– Category 3
- Acrylic acid : (alga) ErC₅₀ = 0.13 mg/L (72 hours) (EHC 191 (1997))
– Category 1

13. DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority. Waste is suitable for incineration.

14. TRANSPORT INFORMATION

DOT proper shipping name: Flammable liquid

Hazard class: Class 8 (corrosive material) Subsidiary risk: Class 3 (flammable liquid)

Identification number: UN 2920 (CORROSIVE LIQUID, FLAMMABLE, N.O.S.)

Packing group: II

Specific transportation safety measures and conditions:

Confirm that there is no leakage on packaging and load the material by enforcing the prevention measure against load collapse, so as not to cause inversion, fall, and damage.

15. REGULATORY INFORMATION

This safety data sheet complies with specification JIS Z 7250 - Z 7252.

Follow all relevant regulations in your country.

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16. OTHER INFORMATION

Notes:

This information contained herein may be revised based on new findings and test results.

The information contained herein is prepared based on the available data and information at present, but no guarantee of accuracy in the information and safety is made.

All information contained herein is intended for normal handling. Therefore, in case of special handling, users are requested to newly practice appropriate safety measures for application and usage before handling.

All chemical products may have unknown hazards, therefore, meticulous cautions are required for handling. Users are requested to set the safe use conditions on their own responsibility.

MSDS Status: 2011/09/07 (ver. 2.0)

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.