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SAFETY DATA SHEET

ISSUED SEPTEMBER 2014 (VALID 5 YEARS FROM DATE OF ISSUE)

NP FLUX NO CLEAN

SECTION 1 - IDENTIFICATION OF THE MATERIAL

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PRODUCT NAME No Clean Liquid Flux

PRODUCT TYPE No-Clean Flux for Industrial Use

PART NUMBER CT-NC

AVAILABLE SIZES 12ml Dispensing Pen (CT-NC-DP)

> (CT-NC-500ML) 500ML 1L (CT-NC-1L) 5L (CT-NC-5L) 20L (CT-NC-20L)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS#	%	HSIS TWA	HSIS STEL
Propan-2-ol	67-63-0	60-90	400ppm (983mg/m³)	500ppm (1230mg/m³)
Petroleum distillates Naphtha, heavy alkylate	64741-65-7	1-5	N/A	N/A

SECTION 3 - HAZARDS IDENTIFICATION

Hazard Classification: Hazardous Substance, Dangerous Goods.

Risk Phrases: R11 - Highly flammable

R18 – In use, may form flammable/explosive vapour-air mixture

R45 – May cause cancer

R65 – Harmful: May cause lung damage if swallowed.

Safety Phrases: S2 - Keep out of reach of children

S21 - When using do not smoke

S53 – Avoid exposure – obtain special instructions before use

S51 – Use only in well ventilated areas. S24/25 – Avoid contact with skin and eyes.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation. High concentrations of vapours may cause

headache, fatigue, drowsiness and dizziness.

Skin contact: May cause allergic skin reaction. May cause skin irritation. Product has a defatting

effect on skin. Prolonged contact may cause dryness of skin.

Eye contact: Contact with eyes will cause irritation.

SECTION 4 - FIRST AID MEASURES

Inhalation: Remove to fresh air. If symptoms develop and persist, get medical attention. **Skin contact:** Wash with soap and water. Remove contaminated clothing and shoes. Wash

clothing before reuse. Get medical attention if symptoms occur.

Eye contact: Check for and remove any contact lenses. Immediately flush with copious

amounts of water, preferably, lukewarm water for at least 15 minutes, holding

eyelids open all the time. Get medical attention.

Ingestion: Do not induce vomiting. Rinse mouth thoroughly. Loosen any tight clothing. Keep

individual calm.

Obtain medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point: 12°C (Abel)

Autoignition temperature: 425°C (ASTM D-2155)

Flammable/Explosive limits-lower %: 2% Flammable/Explosive limits-upper %: 12%

Extinguishing media: Alcohol resistant foam, dry chemical or carbon dioxide.

Special fire fighting procedures: None Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon. Keep run-off water out of sewers and water sources.

Hazchem Code: 2[Y] E

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Environmental precautions: Extinguish all ignition sources. Ventilate well. Use approved respirator if air

contamination. Is above accepted level. Prevent product from entering drains or

open waters.

Clean-up methods: Soak up with inert absorbent. Store in a partly filled, closed container until

disposal.

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapour and mist.

Wash thoroughly after handling.

Storage: For safe storage, store at or below 38°C (100°F). Keep in a cool, well ventilated

area away from heat, sparks and open flame. Keep container tightly closed until

ready for use.

Incompatible products: Refer to Section 10.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: No specific ventilation requirements noted, but forced ventilation may still be

required if concentrations exceed occupational exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin

contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Colour: Colourless to light yellow.

Odour: Organic solvents.

pH: Not available

Boiling point/range: 82-83°C.

Melting point/range: -88°C

Specific gravity: 0.785 at 20°C. **Vapour density:** 2 at 20°C (air=1)

Evaporation rate: 1.5 (ASTM D-3539, nBuAc=1)

Solubility in water: Completely miscible.

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use.

Hazardous polymerization: Will not occur. **Hazardous decomposition products:** Oxides of carbon.

Incompatibility: Strong oxidizers. Strong acids.

Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

SECTION 11 - TOXICOLOGICAL INFORMATION

Product toxicity data:

Petroleum distillates

Propan-2-ol Oral: $LD_{50} > 2,000 \text{ mg/Kg (rat)}$. Skin: $LD_{50} > 2,000 \text{mg/Kg (rabbit)}$

Inhalation LC₅₀:20mg/L/8hr (rat) Rat – Acute Oral LD₅₀: 8000 mg/kg

Rabbit – Acute Dermal LD₅₀: 4000 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

Acute Toxicity Fish: Low Toxicity: LC/EC/IC₅₀ >100mg/L

Aquatic Invertebrates: Low Toxicity: LC/EC/IC₅₀ >1000mg/L Algae: expected to have Low Toxicity: LC/EC/IC₅₀ >1000mg/L

Microorganisms: Low Toxicity: LC/EC/IC₅₀ >1000mg/L

Mobility: Dissolves in water

If product enters soil, it will be highly mobile and may contaminate groundwater

Persistence/degradability: Readily biodegradable meeting the 10 day window criterion.

Oxidises rapidly by photo-chemical reactions in air.

Bioaccumulation: Not expected to bioaccumulate significantly.

SECTION 13 - DISPOSAL CONSIDERATIONS

Recommended method of disposal:

Recover or recycle if possible. Dispose of according to Federal,

State and local governmental regulations.

Container disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks

and fire. Recycle if possible.

SECTION 14 - TRANSPORT INFORMATION

ADG:

Proper shipping name: Isopropanol

UN No.: 1219
Class: 3
Hazchem code: 3[Y] E
Packing group: II

IMDG:

Proper shipping name: Isopropanol Identification No.: UN 1219

Class: 3
Packing group: II
Marine pollutant: No

IATA (country variations may occur):

Proper shipping name: Isopropanol Identification No.: UN 1219

Class: 3
Packing group: II

SECTION 15 - REGULATORY INFORMATION

Poisons Schedule (SUSDP): Not Listed.
AICS: Listed.
DSL: Listed.
INV (CN) Listed.

ENCS (JP) Listed. (2)-207 **ISHL (JP)** Listed. 2-(8)-319

TSCA Listed.

EINECS Listed. 200-661-7 KECI (KR) Listed. KE-29363

PICCS (PH) Listed.

SECTION 16 – OTHER INFORMATION

Abbreviations/Acronyms: ACGIH – American Conference of Government Industrial Hygienists.

ADG - Australian Dangerous Goods.

HSIS - Hazardous Substances Information System. IARC – International Agency for Research on Cancer.

NIOSH – National Institute of Occupational Health and Safety. NOHSC – National Occupational Health and Safety Commission.

PEL – Permissible Exposure Limit. STEL – Short Term Exposure Limit.

SUSDP – Standard for the Uniform Scheduling of Drugs and Poisons.

TLV – Threshold Limit Value. TWA – Time Weighted Average.

DISCLAIMER

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The information provided is based on our best knowledge at the time of issue.

The information contained within this MSDS is believed to be accurate and is given in good faith. However, no warranty is made, either expressed or implied, regarding its accuracy or any liability arising out of the use of the information herein or the product supplied.

When used in other preparations, formulations, or in mixtures, it is necessary to ascertain whether the classifications of the hazards have changed. The attention of the user is drawn to the possibility of creating other hazards when the product is used for purposes other than that for which it was recommended. In such cases, a reassessment may be necessary and should be made by the user.

This safety data sheet should only be used and reproduced in order that the necessary measures are taken relating to the protection of health and safety at work.

It is the responsibility of the handlers to pass on the totality of the information contained within this document to any subsequent person(s) who will come in to contact with, handle or use this product in any way.

They should check the adequacy of the information provided within this MSDS before passing it on to their customers/staff.