

web: www.mariel.it email: info@mariel.itNEVADA
REFRIGERANTS**A/C FLUSH****Codice: TRFGBB-U****1. IDENTIFICATION OF PREPARATION AND SOCIETY****1.1 Description trade:****A/C FLUSH****Code: TRFGBB-U****1.2 Uses planned:****Industry:** Refrigeration and conditioning**Type of use:** Refrigerant**Application:** Professional**1.3****Society:**web: www.mariel.it email: info@mariel.itNEVADA
REFRIGERANTS**MARIEL S.R.L.**

Via Olubi, 5 - 28013 - GATTICO (NO) - Italy

Telephone: +39 0322 838319**Fax:** +39 0322 838813**e-mail:** laboratorio@mariel.it**1.4 Emergency number: + 39 0322 838319 - 8.30-12.30 / 13.30-17.30****Medical Center (Italy) (24/24 h service)**

Pavia +39 0382 24444 (CAV IRCCS Fondazione Maugeri – Pavia - Italy)

Milano +39 02 66101029 (CAV Ospedale Niguarda Ca' Granda – Milano - Italy)

Bergamo +39 800 883300 (CAV Ospedali Riuniti – Bergamo - Italy)

Firenze +39 055 7947819 (CAV Ospedale Careggi – Firenze - Italy)

Roma +39 06 3054343 (CAV Policlinico Gemelli – Roma - Italy)

Roma +39 06 49978000 (CAV Policlinico Umberto I – Roma - Italy)

Napoli +39 081 7472870 (CAV Ospedale Cardarelli – Napoli - Italy)

2. Hazards Identification**2.1 Substance/Preparation Classification:**

This preparate is dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments. Therefore, this preparate requires a safety data sheet according to the 91/155/EC regulation and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbols: Xn-N

Phrases R: 10-43-51/53-65-66

2.2 Danger Identification:

Because of its chemical-physical features, this product is graded as flammable (flash-point 21 °C or higher and 55 °C or lower).

MAY CAUSE SENSITIZATION BY SKIN CONTACT.

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.

REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.

3. COMPOSITION AND INFORMATION ON INGREDIENTS**3.1 Description:****Name of the chemical substance:** Nevada K 5100, a mixture of hydrocarbons.

15 <= C < 16,5

**(R)-P-MENTHA-1,8-DIENE**

Index No 601-029-00-7

R10 – R38 – R43 – R50/53

Xi - N

EC 5989-27-5**CAS 227-813-5**

8 <= C < 9

METHOXY-1-METHYLETHYL ACETATE

Index No 607-195-00-7

EC 203-603-9



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R10 – R36
Xi

CAS 108-65-6

74 <= C < 78



n-DECANO

R10 – R65 – R66
Xn

CAS 124-18-5

EC 204-686-4

The complete text of -R- phrases is specified in section 16.

4. FIRST AID MEASURES



4. First aid measures

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

SKIN: Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

INHALATION: Remove to open air. If breathing is irregular, seek medical advice.

INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Closed containers exposed to the heat of a fire may lead to pressure rise and explode. For information on environmental and health risks, protection of the respiratory airways, ventilation and individual protective measures, refer to the other sections of this sheet.

Extinguishing measures: CO₂, foam, chemical powder for flammable liquids. Water may not be effective to extinguish the fire, nevertheless it should be used to cool the containers exposed to flames and prevent fires and explosions. For leakage and spillage that have not caught fire, nebulized water may be used to disperse the flammable vapours and protect the people involved in stopping the leakage.

Equipment: wear equipment complete with helmet and face shield and protection of the neck, selfbreathing apparatus at pressure or demand, insulative jacket and trousers, with bands around the arms, legs and waist.

6. ACCIDENTAL RELEASE MEASURES

Do not allow the product to dry in order to avoid risk of combustion. Eliminate all sources of ignition. Cover with inert absorbent material and collect the resulting mass with nonsparking tools.

Use water only to remove the residues in order to avoid spillage of the product in the drainage system. For information regarding environmental and health risks and protective measures, refer to the specific sections of this sheet.

7. HANDLING AND STORAGE

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, naked flames and sparks and other sources of ignition.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Exposure Limits (TLV)

Name	Type	State	TWA/8h mg/m ³ ppm		STEL/15min mg/m ³ ppm		
	OEL	EU	275	50	550	100	Skin
	OEL	IRL		50		100	Skin
	WEL	UK		50		100	Skin



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8.2 Exposure controls

In order to minimize exposure as far as possible, it is strongly recommended to use adequate individual protective measures, such as: masks suitable for the product, goggles, gloves and overall. Do not eat, drink or smoke while handling it. Accurately wash the hands with soap and water before meals and at the end of the work shift.

9. TYPICAL PHYSICAL PROPERTIES:

- State	: liquid
- Appearance and colour	: colorless limpid
- Odour	: Characteristic
- pH	: N.A.
- Boiling Point	: N.A.
- Flash point	: 51°C
- Lower explosive limit	: 0,6 % (v/v)
- Upper explosive limit	: 7 % (v/v)
- Vapour pressure	: N.A.
- Distillation range	: 143-173 °C
- Specific gravity	: 0,755-0,765 g/cc a 20°C
- VOC (Directive 1999/13/EC)	: 100,00 %
- VOC (volatile carbon)	: 82,36 %

10. STABILITY AND REACTIVITY

The product is stable in normal conditions of use and storage. When heated or in the event of a fire, carbonoxides may be released and vapours which are dangerous to health.

The vapours may also form explosive mixtures with the air.

1-methoxy-2-propylacetate: it is stable but in presence of air, it can gradually form peroxides which explode due to the rise in temperature. It can react violently with oxidizing agents and strong acids and alkaline metals.

Avoid copper, aluminium and their alloys when storing.

Store under inert atmosphere, repaired from humidity because it easily hydrolyses.

11. TOXICOLOGICAL INFORMATION

Upon contact with skin, this product causes sensitization (dermatitis).

Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent.

Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurves, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas.

Erythemas, edemas and exudative phenomena prevail during the acute phase.

Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

The introduction of even small quantities of this liquid into the respiratory system in case of ingestion or vomit may cause bronchopneumonia and pulmonary edema.

This product may have a degreasing action on the skin, producing dryness and chapped skin after repeated exposure.

1-methoxy-2-propanol and corresponding acetate: the main route of entry is the skin, whereas the respiratory route is less important owing to the low vapour tension of the product.

Concentrations above 100 ppm cause irritation of the eyes, nose and oropharynx.

The recommended limit of exposure is 100 ppm for 8 hours.

At 1000 ppm disturbance in the equilibrium and severe irritation of the eyes is observed. (For further details refer to INRS, Fiche toxicologique, nr. 221).

Clinical and biological examinations carried out on exposed volunteers revealed no anomalies.

Acetate produces greater skin and ocular irritation on direct contact.

No chronic effects have been reported in man.

In vitro genotoxicity tests on animals resulted to be negative.

No significant effects were observed in studies on animal reproduction.

The following experimental data confirm that the substance is not even harmful: oral LD50 in the rat = 7900 mg/kg, inhalation CL50 in the rat 4 hours = 55.2 mg/l (Fiche toxicologique nr. 221).

2-METHOXY-1-METHYLETHYL ACETATE: oral LD50 (mg/kg) > 5000 (RAT) ; dermal LD50 (mg/kg) > 5000 (RAT)

12. ECOLOGICAL INFORMATION:

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it may even have negative



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effects on the aquatic environment.

13. DISPOSAL INFORMATION Consider the possibility of burning the product in a suitable incinerator. Acid or basic products must always be neutralized before undergoing any treatment, including biological treatment whenever feasible. If the waste is solid, it can be disposed of in a landfill.

14. TRANSPORT INFORMATION:

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations.

These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID
UN 1950 Aerosol

Carriage by sea (shipping):

IMO
UN 1950 Aerosol

15. REGULATORY INFORMATION

15.1 deprevious low :



Xn,N Xn Harmful, N Dangerous for the environment

Il prodotto è etichettato NOCIVO e PERICOLOSO PER L'AMBIENTE conforme alle Direttive 67/548/CEE~2004/73/CE e 1999/45/CE~2006/8/CE

- R10 FLAMMABLE.
- R43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.
- R51/53 TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
- R65 HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
- R66 REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.
- S13 KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.
- S24 AVOID CONTACT WITH SKIN.
- S29 DO NOT EMPTY INTO DRAINS.
- S37 WEAR SUITABLE GLOVES.
- S61 AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEETS.
- S62 IF SWALLOWED, DO NOT INDUCE VOMITING: SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.

Contains:

(R)-P-MENTHA-1,8-DIENE
n-DECANO

Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments.

Workers exposed to this chemical agent must undergo health checks according to regulation 98/24/EC.

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H400 – Very toxic to aquatic life.
H413 – May cause long-term adverse effects in the aquatic environment.
H221 – Flammable.
H305 – May cause long-term adverse effects in the aquatic environment.
EUH 066 – Harmful: may cause lung damage if swallowed Repeated exposure may cause skin dryness or cracking.
H320 – Causes eye irritation.
H315 – Causes skin irritation.
H316 – Causes mild skin irritation.

16. OTHER INFORMATION

Text of -R- phrases quoted in section 2 of the sheet.

R 10 FLAMMABLE.

R 36 IRRITATING TO EYES.

R 38 IRRITATING TO SKIN.

R 43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.

R 50/53 VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

R 65 HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.

R 66 REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments;
2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
4. The Merck Index. - 10th Edition;

Version 1: Version 2:

31/03/2009 04/06/2012

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