



MATERIAL SAFETY DATA SHEET

Section 1 - IDENTIFICATION

Product name	FLUX 264-5
Other names	Not available
Recommended use/s	Soldering flux for industrial applications in the electronics industry.
Supplier name	Okay Technologies
Address	Unit 4, 3 Pullman Place, Emu Plains, NSW, 2750
Telephone number	02 4735 3126
Fax	02 4735 3746
Emergency telephone number	Australia: Poisons Information Centre 13 1126 International: Infotrac (708) 918-1900

Section 2 - HAZARDS IDENTIFICATION

General hazard statement	Classified as hazardous according to the criteria of NOHSC.
Hazard classification	Harmful. Carc. Cat. 2. Hazardous Substance. Dangerous Goods.
Risk phrase(s)	R11 – Highly flammable R18 – In use, may form flammable/explosive vapour-air mixture R65 – Harmful: May cause lung damage if swallowed.
Safety phrase(s)	S53 – Avoid exposure – obtain special instructions before use S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible)
Routes of entry	Absorbed through skin. Eye contact. Inhalation. Ingestion. Skin contact.
Potential acute health effects	Fumes and/or dusts produced by this product may be hazardous in case of inhalation. This product may be hazardous in case of skin contact (irritant, sensitiser, permeator), of eye contact (irritant), of ingestion.
Potential chronic health effects	

Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Chemical Name	CAS Number	Proportion % w/w
Isopropyl alcohol	2-propanol	67-63-0	60 - 100
Petroleum distillates	Naphtha, heavy alkylate	64741-65-7	1 - 5

Section 4 - FIRST AID MEASURES

Description of necessary measures according to routes of exposure	
Eye contact	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.
Skin contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Hazardous skin contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.
Hazardous inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.



Ingestion DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
No additional information

Hazardous ingestion
Indication of medical attention and special treatment needed including description of most important symptoms, acute and delayed
Aggravated medical conditions caused by exposure None known.

Section 5 - FIREFIGHTING MEASURES

Suitable extinguishing media Small fire: Use DRY chemical powder.
Large fire: Use alcohol foam, water spray or fog.
Flammable liquid, soluble or dispersed in water.

Hazards from combustion products Products are carbon oxides; carbon monoxide and carbon dioxide.

Special protective precautions
Special equipment for fire fighters
Hazchem Code 2[Y]E

Section 6 - ACCIDENTAL RELEASE MEASURES

Emergency procedures Small spill – Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary neutralise the residue with a dilute solution of sodium carbonate.
Large spill – Flammable liquid – Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dyke if needed. Eliminate all sources of ignition. Neutralise the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS with local authorities.

Methods and materials for containment and clean up Dry earth sand or other dry absorbent material. Sodium carbonate.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling Wear suitable protective clothing. Use in a well ventilated area. When using, do not eat, drink or smoke. Avoid contact with skin and eyes. After handling, always wash hands thoroughly with soap and water.

Conditions for safe storage, including any incompatibilities Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.
Highly flammable in presence of open flames and sparks, of heat, of oxidising materials. Flammable in the presence of combustible materials.

Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

National exposure standards Isopropyl alcohol
TWA: 400ppm, 983 mg/m³ from HSIS
STEL: 500ppm, 1230 mg/m³ from HSIS
Petroleum distillates
Not available

Biological limit values
Engineering controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.



Personal protective equipment

HANDLING: gloves, safety glasses.

Personal protection in case of a large spill

GENERAL USE: Use gloves [suitable to the operation], safety glasses or splash goggles; wear appropriate respirator when ventilation is inadequate. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Suggested protective clothing may not be adequate for a specific process. Consult a specialist before handling. Splash goggles. Full suit. Vapour respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (colour, physical form, shape)

Liquid, colourless to light yellow

Odour

Alcohol like

pH

Acidic

Vapour pressure

Weighted average 32.2 mm of Hg @ 20° C

Vapour density

>1 (Air = 1)

Boiling point/range

Boiling point 82.2 °C

Freezing/melting point

Melting point weighted average: -87.81° C

Solubility (specify solvent)

Easily soluble in cold water, hot water.

Specific gravity or density

Partly soluble in methanol, diethyl ether, n-octanol
0.79 to 0.81.

Flashpoint

CLOSED CUP: <10°C (ASTM D-56 (Tagliabue)).

Flammability

Flammable.

Upper and lower flammable limits

The greatest known range is: Lower 2%, Upper 12% (isopropanol)

Ignition temperature

Not available.

Viscosity

Not available.

Ionicity (in water)

Not available.

Dispersion properties

See solubility in water, methanol, diethyl ether, n-octanol.

Evaporation rate

Weighted average: 0.1 compared to butyl acetate.

Water/Oil Dist. Coeff.

The product is more soluble in water.

Section 10 - STABILITY AND REACTIVITY

Chemical stability

The product is stable.

Conditions of instability

Flammable under fire conditions.

Conditions to avoid

High temperatures, open flames and sparks

Incompatible materials

Reactive with oxidising agents, acids.

Slightly reactive with reducing agents, alkalis, moisture.

Non reactive with organic materials.

Hazardous decomposition products

Carbon dioxide and carbon monoxide. When heated to decomposition it emits acrid smoke and fumes.

Hazardous reactions

Vapour and air form an explosive mixture.

Hazardous polymerisation

No.

Section 11 - TOXICOLOGICAL INFORMATION

Health effects from likely routes of exposure

Toxicity to animals

Isopropyl alcohol

Rat- Oral LD₅₀: 5045 mg/kg

Rat - 8 hour Inhalation LC₅₀: 16000 ppm

Rabbit - Skin LD₅₀ 12.8mg/kg

Petroleum distillates

Rat - Acute Oral LD₅₀: 8000 mg/kg

Rabbit - Acute Dermal LD₅₀: 4000 mg/kg



Chronic effects on humans

Carcinogenic effects: [Mixture]: Classified 3 (Not classifiable for human) by IARC, A4 (Not classifiable for human or animal) by ACGIH. Carc. Cat. 2 by NOHSC.

Developmental toxicity: PROVEN for Isopropyl alcohol

Mutagenic effects: Not available.

Teratogenic effects: Not available.

The product may be toxic to upper respiratory tract, skin, eyes, the reproductive system.

The product is not toxic to blood, kidneys, lungs, mucous membranes.

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to toxic material may produce general deterioration of health by an accumulation in one of many human organs.

Other toxic effects on humans

Fumes and/or dusts produced by this product may be hazardous in case of inhalation. This product may be hazardous in case of skin contact (irritant, sensitiser, permeator), of eye contact (irritant), of ingestion. Non corrosive for skin. Human: isopropyl alcohol is excreted in maternal milk.

Special remarks on chronic effects on humans

Special remarks on other toxic effects on humans

INHALATION: Inhalation may irritate the respiratory tract. Exposure can cause nausea, headache and vomiting.

INGESTION: Ingestion causes burns to the mouth, pharynx and gastrointestinal tract; nausea, vomiting, shortness of breath, abdominal pain, collapses and possible death.

SKIN: Prolonged and repeated contact may cause irritation, dermatitis and defatting of the skin.

EYES: May cause watering of eyes and inflammation of conjunctiva and painful burns.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Not available

Persistence and degradability

Products of biodegradation

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the products of biodegradation

The products of degradation are less toxic.

Mobility

Not available

Environmental fate

Not available

Bioaccumulative potential

Not available

Section 13 - DISPOSAL CONSIDERATIONS

**Disposal methods and containers
Special precautions for landfill or incineration**

Recycle if possible. Consult your local or regional authorities.

Section 14 - TRANSPORT INFORMATION

Dangerous Goods Classification

Class 3: Flammable Liquid

UN Number

1993

UN Proper Shipping Name

FLAMMABLE LIQUID NOS. (Isopropanol, petroleum distillates)

Class and subsidiary risk

Class 3

Packing Group

II

Special precautions for user

Hazchem Code

3[Y]E

IMDG Classification

IMDG Class 3.1 Flammable Liquid (Low flash point)

IATA Classification

IATA Class 3: Flammable Liquid

Section 15 - REGULATORY INFORMATION

The regulatory status of a material (including its ingredients) under relevant Australian health, safety and environmental legislation

Additional national and/or international regulatory information



Classifications

WHMIS (Canada) WHMIS CLASS B-2: Flammable liquid with a flash point lower than 37.8 °C. WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC)

SUSDP Poison Schedule

Ingredients not listed

Section 16 - OTHER INFORMATION

Date of preparation or last revision of this MSDS 11 June 2009

Key/legend to abbreviations and acronyms used in the MSDS

Literature references

Sources for data

United States MSDS for Flux 264-5 dated 08/02/01

Notice to reader

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End of MSDS

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