

1. Identification

Product identifier	LPS® NoFlash NU
Other means of identification	
Part Number	C04015
Recommended use	An aggressive non-flammable solvent blend for the removal of dirt, moisture, dust, flux and oxides from the internal components of electronic or precision equipment such as circuit boards, and the internal components of electronic devices used in factories and other industrial settings.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	ITW Pro Brands
Address	4647 Hugh Howell Rd. Tucker, GA 30084
Country	(U.S.A.)
	Tel: +1 770-243-8800
In Case of Emergency	1-800-424-9300 1-703-527-3887
Website	www.lpslabs.com
E-mail	lpssds@itwprobrands.com
Supplier	ITW Permatex Canada 1-35 Brownridge Road Halton Hills, ON, L7G 0C6 Canada 1-800-241-8334

2. Hazard(s) identification

Physical hazards	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2 (liver, Central Nervous System)
Environmental hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. May damage fertility or the unborn child. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs (Liver, Central Nervous System) through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Specific treatment (see this label). Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. 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.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
n-Propyl Bromide		106-94-5	60 - 70
Ethane, 1,1,1,2-tetrafluoro-(hfc-134a)		811-97-2	30 - 40
1-Propanol		71-23-8	1 - 5
1,2 Butylene Oxide		106-88-7	< 1
t-Butanol		75-65-0	< 1

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

All concentrations are in percent by weight (kg) unless ingredient is a gas. Gas concentrations are in percent by volume (l).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
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.
Ingestion	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Skin irritation. Defatting of the skin. May cause redness and pain. Exposed individuals may experience eye tearing, redness, and discomfort. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritating to mouth, throat, and stomach.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Alcohol resistant foam. Water spray. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.

General fire hazards

Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Use water spray to reduce vapors or divert vapor cloud drift. Scoop up used absorbent into drums or other appropriate container. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Do not breathe gas. Avoid contact with eyes, skin, and clothing. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only in well-ventilated areas. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Store locked up. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in original tightly closed container. Store in a well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value
1-Propanol (CAS 71-23-8)	TWA	100 ppm
n-Propyl Bromide (CAS 106-94-5)	TWA	0.1 ppm
t-Butanol (CAS 75-65-0)	TWA	100 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
1-Propanol (CAS 71-23-8)	STEL	984 mg/m3
		400 ppm
	TWA	492 mg/m3
t-Butanol (CAS 75-65-0)		200 ppm
	TWA	303 mg/m3
		100 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
1-Propanol (CAS 71-23-8)	TWA	100 ppm
n-Propyl Bromide (CAS 106-94-5)	TWA	10 ppm
t-Butanol (CAS 75-65-0)	TWA	100 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
1-Propanol (CAS 71-23-8)	TWA	100 ppm
n-Propyl Bromide (CAS 106-94-5)	TWA	0.1 ppm
t-Butanol (CAS 75-65-0)	TWA	100 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
1-Propanol (CAS 71-23-8)	TWA	100 ppm
n-Propyl Bromide (CAS 106-94-5)	TWA	10 ppm
t-Butanol (CAS 75-65-0)	TWA	100 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
1-Propanol (CAS 71-23-8)	STEL	614 mg/m3
		250 ppm
	TWA	492 mg/m3
		200 ppm
t-Butanol (CAS 75-65-0)	TWA	303 mg/m3
		100 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - Quebec OELs: Skin designation

1-Propanol (CAS 71-23-8) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Eye wash fountain and emergency showers are recommended.

Skin protection

Hand protection Viton or nitrile rubber gloves are recommended.

Other Wear appropriate chemical resistant clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Chemical respirator with organic vapor cartridge.

Thermal hazards Not applicable.

General hygiene considerations When using, do not eat, drink or smoke. Avoid contact with clothing. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Aerosol.

Color Clear

Odor Strong.

Odor threshold Not established

pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	158 °F (70 °C)
Flash point	< 73.4 °F (< 23.0 °C) Tag Closed Cup
Evaporation rate	6 BuAc
Flammability (solid, gas)	Flammable gas. Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	4 %
Flammability limit - upper (%)	8 %
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	> 100 mm Hg @20°C
Vapor density	~4.3 (air = 1)
Relative density	Not available.
Solubility(ies)	
Solubility (water)	3 - 5 %
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	> 914 °F (> 490 °C)
Decomposition temperature	Not established
Viscosity	Not available.
Other information	
Heat of combustion	12 kJ/g
Percent volatile	100 %
Specific gravity	1.29 - 1.32 @20°C
VOC	70.1 % per US State and Federal Consumer Product Regulations

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Aluminum. Alkali earth metals. Alkaline metals.
Hazardous decomposition products	Carbon oxides. Hydrogen bromide. Hydrogen fluoride.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Irritating to respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms related to the physical, chemical and toxicological characteristics Irritating to eyes, respiratory system and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Behavioral changes. Narcosis. Decrease in motor functions.

Information on toxicological effects

Acute toxicity Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
1,2 Butylene Oxide (CAS 106-88-7)		
Acute		
Dermal		
LD50	Rabbit	1500 - 2950 mg/kg, 24 Hours
1-Propanol (CAS 71-23-8)		
Acute		
Dermal		
LD50	Rabbit	4032 mg/kg, 24 Hours
Oral		
LD50	Rat	1870 mg/kg
n-Propyl Bromide (CAS 106-94-5)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 2000 mg/kg
t-Butanol (CAS 75-65-0)		
Acute		
Oral		
LD50	Rat	3.5 g/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Canada - Alberta OELs: Irritant		
1-Propanol (CAS 71-23-8)	Irritant	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.	
ACGIH Carcinogens		
1-Propanol (CAS 71-23-8)	A4 Not classifiable as a human carcinogen.	
n-Propyl Bromide (CAS 106-94-5)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
t-Butanol (CAS 75-65-0)	A4 Not classifiable as a human carcinogen.	
Canada - Manitoba OELs: carcinogenicity		
1-Propanol (CAS 71-23-8)	Not classifiable as a human carcinogen.	
n-Propyl Bromide (CAS 106-94-5)	Confirmed animal carcinogen with unknown relevance to humans.	
t-Butanol (CAS 75-65-0)	Not classifiable as a human carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
1,2 Butylene Oxide (CAS 106-88-7)	2B Possibly carcinogenic to humans.	
n-Propyl Bromide (CAS 106-94-5)	2B Possibly carcinogenic to humans.	
US. National Toxicology Program (NTP) Report on Carcinogens		
n-Propyl Bromide (CAS 106-94-5)	Reasonably Anticipated to be a Human Carcinogen.	
Reproductive toxicity	May damage fertility or the unborn child.	
Specific target organ toxicity - single exposure	May cause respiratory irritation. May cause drowsiness or dizziness.	
Specific target organ toxicity - repeated exposure	May cause damage to organs (Liver, Central Nervous System) through prolonged or repeated exposure.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	May cause damage to organs through prolonged or repeated exposure.	

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
1-Propanol (CAS 71-23-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	3339 - 3977 mg/l, 48 hours
Fish	LC50	Bleak (Alburnus alburnus)	3000 - 4000 mg/l, 96 hours
n-Propyl Bromide (CAS 106-94-5)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	67.3 mg/l, 96 hours
t-Butanol (CAS 75-65-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4607 - 6577 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	6130 - 6700 mg/l, 96 hours

Persistence and degradability Not inherently biodegradable.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

LPS® NoFlash NU	> 1
1-Propanol	0.25
Ethane, 1,1,1,2-tetrafluoro-(hfc-134a)	1.06
n-Propyl Bromide	2.1
t-Butanol	0.35

Mobility in soil Readily absorbed into soil.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code Not regulated.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, non-flammable
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not available.
Environmental hazards	No.
Special precautions for user	Not available.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not available.
Environmental hazards	No.

ERG Code 2L
Special precautions for user Not available.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, non-flammable
Transport hazard class(es)
Class 2.2
Subsidiary risk -
Label(s) 2.2
Packing group Not available.

Environmental hazards

Marine pollutant No.

EmS F-D, S-U

Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

IATA; IMDG; TDG



15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

Canada. Excluded VOCs. Guidelines for Volatile Organic Compounds in Consumer Products. CEPA 1999. Environment Canada, as amended

Ethane, 1,1,1,2-tetrafluoro-(hfc-134a) (CAS 811-97-2)

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Ethane, 1,1,1,2-tetrafluoro-(hfc-134a) (CAS 811-97-2)

Precursor Control Regulations

Not regulated.

International regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Pregnant women should not work with the product, if there is the least risk of exposure.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	05-26-2016
Revision date	02-13-2018
Version #	03
Further information	HMIS® is a registered trade and service mark of the NPCA.

References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)
Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)
Korea. Prohibited Chemical Substances (TCCL Article 11)
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)
Korea. Restricted Chemical Substances (TCCL Article 11)
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List
Korea. Toxic Chemicals (TCCL Article 10)
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits
GOST 30333-2007 - Chemical production safety passport. General requirements
JIS Z 7252:2009 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"
JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)
Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012

Disclaimer

This safety data sheet was prepared in accordance with JIS Z 7253:2012. Additional information is given in the Material Safety Data Sheet. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

GHS: Qualifiers