PROBRANDS

SAFETY DATA SHEET

1. Identification

Product identifier LPS® 3 (Aerosol)

Other means of identification

Part Number C30316

Recommended useA specialized soft-film spray coating designed to prevent rust and corrosion on steel, aluminum

and other metals.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer 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

Not classified.

2. Hazard identification

Physical hazards Flammable aerosols Category 1

Gases under pressure Compressed gas

Health hazards Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

Specific target organ toxicity, single exposure Category 3 narcotic effects

Environmental hazards

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin

irritation. Causes serious eye irritation.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open

flame or other ignition source. Do not pierce or burn, even after use. Wash thoroughly after

handling. Wear protective gloves and eye/face protection.

Response If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If inhaled: Remove

person to fresh air and keep comfortable for breathing. Call a POISON CENTER or

doctor/physician 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 on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. Specific treatment (see this label). If skin irritation occurs: Get medical

advice/attention.

Storage Keep container tightly closed. Store in a well-ventilated place. Store locked up. Protect from

sunlight. Do not expose to temperatures exceeding 50°C/122°F.

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

Other hazards None known.

Supplemental information None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates Petroleum Hydrotreated Light		64742-47-8	50 - 60
1-butoxy-2-propanol		5131-66-8	1 - 10
Acetone		67-64-1	1 - 10
Distillates Petroleum Hydrotreated Heavy		64742-54-7	1 - 10
Carbon Dioxide		124-38-9	1 - 5
Calcium Carbonate		471-34-1	0.1 - 1
Hydrodesulferized Heavy Petroleum Naptha		64742-82-1	0.1 - 1
Petrolatum		8009-03-8	0.1 - 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 unless ingredient is a gas. Gas concentrations are in percent by volume.

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. Oxygen or

artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while

removing contaminated clothing and shoes. Get medical attention if irritation develops and

persists.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

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

General information

symptoms/effects, acute and

delayed

Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Defatting of the skin. Rash. Symptoms of overexposure can include shortness of breath,

drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and

are reversible if exposure is stopped.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take

precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media
Unsuitable extinguishing
media

Powder. Alcohol resistant foam. Water. Water spray. Carbon dioxide (CO2).

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed. Fire may produce irritating, corrosive and/or toxic gases.

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

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. Water runoff can cause environmental damage.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Use water spray to cool unopened containers. 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. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

General fire hazards

Extremely flammable aerosol.

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 personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. 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. The product is immiscible with water and will spread on the water surface. 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. Collect spillage. Use water spray to reduce vapors or divert vapor cloud drift. 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. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

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. All equipment used when handling the product must be grounded. Avoid breathing gas. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122°F. The pressure in sealed containers can increase under the influence of heat. 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 locked up. Use appropriate container to avoid environmental contamination. Keep container tightly closed. Store in a well-ventilated place. Keep container dry. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Keep in an area equipped with sprinklers. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

ACGIH			
Components	Туре	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	TWA	5 mg/m3	Oil mist
US. ACGIH Threshold Limit Values			
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	

US. ACGIH Threshold Limit Value Components	es Type	Value	
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm	
	TWA	5000 ppm	
Canada. Alberta OELs (Occupati			
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	1800 mg/m3	
		750 ppm	
	TWA	1200 mg/m3	
		500 ppm	
Calcium Carbonate (CAS 471-34-1)	TWA	10 mg/m3	
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3	
		30000 ppm	
	TWA	9000 mg/m3	
		5000 ppm	
Canada. British Columbia OELs. Safety Regulation 296/97, as ame		s for Chemical Substances, Occupational Healt	th and
Components	Туре	Value Form	
Acetone (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	
Carbon Dioxide (CAS	STEL	15000 ppm	
124-38-9)	TWA	5000 ppm	
Distillates Petroleum	TWA	200 mg/m3 Non-aerosol.	
Hydrotreated Light (CAS 64742-47-8)		200 mg/me 140m de1000m	
Canada. Manitoba OELs (Reg. 21			
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm	
,	TWA	5000 ppm	
Canada. Ontario OELs. (Control	of Exposure to Biological or C	hemical Agents)	
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm	
	TWA	5000 ppm	
Canada. Quebec OELs. (Ministry Components	of Labor - Regulation respect	ng occupational health and safety) Value Form	
Acetone (CAS 67-64-1)	STEL	2380 mg/m3	
	J	1000 ppm	
	TWA	1190 mg/m3	

Material name: LPS® 3 (Aerosol)
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Components	Туре	Value	Form
		500 ppm	
Calcium Carbonate (CAS 471-34-1)	TWA	10 mg/m3	Total dust.
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3	
		30000 ppm	
	TWA	9000 mg/m3	
		5000 ppm	
Canada. Saskatchewan OELs (Oc	cupational Health and Safety R	egulations, 1996, Table 21)	
Components	Туре	Value	
Acetone (CAS 67-64-1)	15 minute	750 ppm	

Components	Туре	Value	
Acetone (CAS 67-64-1)	15 minute	750 ppm	
	8 hour	500 ppm	
Calcium Carbonate (CAS 471-34-1)	15 minute	20 mg/m3	
	8 hour	10 mg/m3	
Carbon Dioxide (CAS 124-38-9)	15 minute	30000 ppm	
	8 hour	5000 ppm	

Biological limit values

ACGIH Biological Exposure Indices					
Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*	

^{* -} For sampling details, please see the source document.

Exposure guidelines

Canada - British Columbia OELs: Skin designation

Distillates Petroleum Hydrotreated Light

(CAS 64742-47-8)

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. Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin protection

Hand protection Chemical resistant gloves are recommended.

Avoid contact with clothing. Wear suitable protective clothing. Chemical resistant gloves. Other

No personal respiratory protective equipment normally required. Use a positive-pressure Respiratory protection

air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate

protection.

Thermal hazards Not applicable.

General hygiene considerations

When using do not smoke. When using, do not eat, drink or smoke. 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 Cloudy. Liquid.

Physical state Gas. **Form** Aerosol. Brown. Color

Odor Mild. Cherry.
Odor threshold Not available.
pH Not applicable
Melting point/freezing point Not available.

Initial boiling point and boiling

range

Flash point 64.4 °F (18.0 °C) Tag Closed Cup

Not available.

Evaporation rate 151 (Ethyl Ether) Flammability (solid, gas) Flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower

0.6 %

6%

(%)

Flammability limit - upper

(%)

Explosive limit - lower (%)

Explosive limit - upper (%)

Vapor pressure

Vapor density

Not available.

Not available.

Not available.

Not available.

Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature446 °F (230 °C)Decomposition temperatureNot available.ViscosityNot available.

Other information

 Density
 7.28 lb/gal

 Percent volatile
 63 - 82 %

 Specific gravity
 0.87

VOC 62.8 % per U.S. 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. Hazardous polymerization does not

occui

Conditions to avoid Heat, flames and sparks. Aerosol containers are unstable at temperatures above 50°C. Avoid

temperatures exceeding the flash point.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide,

water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

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.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
1-butoxy-2-propanol (CAS	5131-66-8)	
<u>Acute</u>		
Dermal		
LD50	Rabbit	1400 mg/kg, 24 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Acetone (CAS 67-64-1)		
<u>Acute</u>		
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Calcium Carbonate (CAS 4	1 71-34-1)	
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Distillates Petroleum Hydro	otreated Heavy (CAS 64742-54-7)	
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 3.9 mg/l, 4 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Distillates Petroleum Hydro	otreated Light (CAS 64742-47-8)	
<u>Acute</u>	,	
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
Vapor		
LC50	Rat	> 4.5 mg/l, 4 Hours
		> 0.1 mg/l, 8 Hours
Oral		•
LD50	Rat	> 5000 mg/kg
Hydrodesulferized Heavy P	Petroleum Naptha (CAS 64742-82-1)	0 0
Acute	(2.15 0.1.	
<u>Dermal</u>		
LD50	Rabbit	> 1900 mg/kg, 24 Hours
Oral		3 3 ,
LD50	Rat	4800 mg/kg
Petrolatum (CAS 8009-03-		- 5 5
Acute	- ,	
<u>Acute</u> Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
2000	i idi	> 0000 mg/Ng

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

Calcium Carbonate (CAS 471-34-1) Irritant

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

Acetone (CAS 67-64-1) A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Acetone (CAS 67-64-1)

Not classifiable as a human carcinogen.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

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Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not likely, due to the form of the product.

Chronic effects Prolonged inhalation may be harmful.

Further information None known.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Components		Species	Test Results
Acetone (CAS 67-64-	1)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Calcium Carbonate (C	AS 471-34-1)		
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia at	ffinis) > 56000 mg/l, 96 hours
Distillates Petroleum H	Hydrotreated Light	(CAS 64742-47-8)	
Aquatic			
Fish	LC50	Rainbow trout, donaldson trout	2.9 mg/l, 96 hours

Persistence and degradability

Bioaccumulative potential

Not inherently biodegradable.

No data available for this product.

Partition coefficient n-octanol / water (log Kow)

Acetone -0.24

Mobility in soilNot available.Other adverse effectsNone known.

13. Disposal considerations

Disposal instructionsCollect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents

(Oncorhynchus mykiss)

under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of

T--- D----

contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F

D003: Waste Reactive material

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

UN1950 **UN number**

UN proper shipping name Aerosols, flammable

Transport hazard class(es)

Class 2.1 Subsidiary risk

Packing group Not available.

Environmental hazards

Special precautions for user Not available.

IATA

UN number UN1950

Aerosols, flammable **UN proper shipping name**

Transport hazard class(es)

Class 2.1 Subsidiary risk 2.1 Label(s)

Packing group Not available.

Environmental hazards

Special precautions for user Not available.

Other information

Passenger and cargo

aircraft

Cargo aircraft only Allowed with restrictions.

Allowed with restrictions.

IMDG

UN number UN1950

UN proper shipping name Aerosols, flammable

Transport hazard class(es)

Class 2.1 Subsidiary risk Label(s)

Not available. Packing group

Environmental hazards

Marine pollutant No

Not available. **EmS** Special precautions for user Not available. Transport in bulk according to Not available.

Annex II of MARPOL 73/78 and

the IBC Code

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

Acetone (CAS 67-64-1)

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Carbon Dioxide (CAS 124-38-9)

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

Acetone (CAS 67-64-1)

Precursor Control Regulations

Acetone (CAS 67-64-1) Class B

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.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Carbon Dioxide (CAS 124-38-9) Listed.

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)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No

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

Toxic Substances Control Act (TSCA) Inventory

16. Other information

 Issue date
 06-16-2016

 Revision date
 02-12-2019

Version # 08

United States & Puerto Rico

Further information HMIS® is a registered trade and service mark of the NPCA.

Material name: LPS® 3 (Aerosol) SDS CANADA

Yes

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).

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.