



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>LPS® HDX (Aerosol)</b>
<b>Other means of identification</b>	
<b>Part Number</b>	01020, M01020
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Recommended use</b>	A degreaser designed to remove grease, oil, dirt and other residues from metal and other hard surfaces near ignition sources.
<b>Restrictions on use</b>	Not available.
<b>Details of manufacturer or importer</b>	
<b>Manufacturer</b>	
<b>Supplier Name</b>	MRO Chem Pty Ltd.
<b>Address</b>	Level 19, 644 Chapel Street South Yarra, Victoria 3141, Australia Tel: +03 9823 6273
<b>In Case of Emergency</b>	+04 3448 1129
<b>Manufacturer</b>	
<b>Company name</b>	ITW Pro Brands
<b>Address</b>	4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)
<b>Website</b>	<a href="http://www.lpslabs.com">http://www.lpslabs.com</a>
<b>E-mail</b>	lpssds@itwprobrands.com

## 2. Hazard(s) identification

### Classification of the hazardous chemical

<b>Physical hazards</b>	Gases under pressure	Compressed gas
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
<b>Environmental hazards</b>	Hazardous to the aquatic environment, long-term hazard	Category 3

### Label elements, including precautionary statements

#### Hazard symbol(s)



Gas cylinder

Health hazard

Exclamation mark

#### Signal word

Danger

#### Hazard statement(s)

Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. Suspected of causing genetic defects. May cause cancer. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects.

#### Precautionary statement(s)

##### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves. Use personal protective equipment as required.

<b>Response</b>	IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Other hazards which do not result in classification</b>	None known.
<b>Supplemental information</b>	None known.

### 3. Composition/information on ingredients

#### Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
1,1,2-trichloroethylene	79-01-6	90 - 100
Carbon Dioxide	124-38-9	1 - 5

### 4. First-aid measures

#### Description of necessary first aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
<b>Personal protection for first-aid responders</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
<b>Symptoms caused by exposure</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
<b>Medical attention and special treatment</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### 5. Fire-fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for fire fighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. 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.

**Hazchem code** 2Y E

**General fire hazards** Contents under pressure. Pressurized container may explode when exposed to heat or flame.

**Specific methods** Cool containers exposed to flames with water until well after the fire is out.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Emergency personnel need self-contained breathing 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. For personal protection, see section 8 of the SDS.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Methods and materials for containment and cleaning up** Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

## 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. Ground and bond containers when transferring material. Do not re-use empty containers. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store locked up. Contents under pressure. 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 a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls and personal protection

**Control parameters** Follow standard monitoring procedures.

### Occupational exposure limits

#### Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	216 mg/m <sup>3</sup>
	TWA	40 ppm 54 mg/m <sup>3</sup> 10 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m <sup>3</sup>
	TWA	30000 ppm 22500 mg/m <sup>3</sup> 12500 ppm

#### Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	216 mg/m <sup>3</sup>
		40 ppm

**Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)**

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	TWA	54 mg/m <sup>3</sup>
		10 ppm
	STEL	54000 mg/m <sup>3</sup>
	TWA	30000 ppm
		22500 mg/m <sup>3</sup>
		12500 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	25 ppm
Carbon Dioxide (CAS 124-38-9)	TWA	10 ppm
	STEL	30000 ppm
	TWA	5000 ppm

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	820 mg/m <sup>3</sup>
	TWA	150 ppm
		550 mg/m <sup>3</sup>
Carbon Dioxide (CAS 124-38-9)	STEL	100 ppm
		27400 mg/m <sup>3</sup>
	TWA	15000 ppm
		9150 mg/m <sup>3</sup>
		5000 ppm

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	TWA	9100 mg/m <sup>3</sup>
		5000 ppm

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
1,1,2-trichloroethylene (CAS 79-01-6)	15 mg/l	Trichloroacetic acid	Urine	*
	0.5 mg/l	Trichloroethanol, without hydrolysis	Blood	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

**Australia OELs: Skin designation**

1,1,2-trichloroethylene (CAS 79-01-6)

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. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, for example personal protective equipment (PPE)**

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	Observe any medical surveillance requirements. When using do not smoke. 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

<b>Physical state</b>	Gas.
<b>Form</b>	Aerosol.
<b>Color</b>	Clear. Colorless.
<b>Odor</b>	Sweet. Spice.
<b>Odor threshold</b>	Not established
<b>pH</b>	Not applicable
<b>Melting point/freezing point</b>	Not established
<b>Initial boiling point and boiling range</b>	188.6 °F (87 °C)
<b>Flash point</b>	Tag Closed Cup (None)
<b>Evaporation rate</b>	0.3 (Ethyl Ether = 1)
<b>Flammability (solid, gas)</b>	Non flammable gas.

### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	8 %
<b>Flammability limit - upper (%)</b>	10.5 %
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	58 mm Hg @ 20°C
<b>Vapor density</b>	4.5
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	0.1 %
<b>Partition coefficient (n-octanol/water)</b>	2.4
<b>Auto-ignition temperature</b>	> 788 °F (> 420 °C)
<b>Decomposition temperature</b>	Not established
<b>Viscosity</b>	0.53 cP @ 25° C

### Other physical and chemical parameters

<b>Explosive properties</b>	Not explosive.
<b>Heat of combustion</b>	< 20 kJ/g
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	100 %
<b>Specific gravity</b>	1.41 - 1.47 @ 20°C
<b>VOC</b>	97.8 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Heat. Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** Carbon oxides.

## 11. Toxicological information

### Information on possible routes of exposure

**Inhalation** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.

**Skin contact** Causes skin irritation.

**Eye contact** Causes serious eye irritation.

**Ingestion** Expected to be a low ingestion hazard.

**Symptoms related to exposure** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Acute toxicity** Narcotic effects.

Components	Species	Test Results
1,1,2-trichloroethylene (CAS 79-01-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	20 ml/kg
<b>Inhalation</b>		
LC50	Rat	12500 ppm, 4 Hours
<b>Oral</b>		
LD50	Rat	4920 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/irritation</b>	Causes serious eye irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	Suspected of causing genetic defects.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>ACGIH Carcinogens</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	A2 Suspected human carcinogen.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	1 Carcinogenic to humans.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness and dizziness.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	
<b>Other information</b>	Symptoms may be delayed.	

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Components	Species	Test Results
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1,1,2-trichloroethylene (CAS 79-01-6)

**Aquatic**

Fish	LC50	Flagfish ( <i>Jordanella floridae</i> )	3.1 mg/l, 96 hours
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**Persistence and degradability** Not inherently biodegradable.

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

LPS® HDX (Aerosol)	2.4
1,1,2-trichloroethylene	2.61

**Mobility in soil** No data available for this product.

**Other adverse effects** None known.

**13. Disposal considerations**

**Disposal methods** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. 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 contents/container in accordance with local/regional/national/international regulations.

**Residual waste** 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).

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

**14. Transport information**

**ADG**

<b>UN number</b>	1950
<b>UN proper shipping name</b>	AEROSOLS
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	6.1 (PGIII)
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No
<b>Hazchem code</b>	2YE
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**RID**

<b>UN number</b>	1950
<b>UN proper shipping name</b>	AEROSOLS, asphyxiant
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	6.1 (PGIII)
<b>Label(s)</b>	2.2
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IATA**

<b>UN number</b>	1950
<b>UN proper shipping name</b>	Aerosols, non-flammable
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	6.1 (PGIII)
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No
<b>ERG Code</b>	2L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### Other information

**Passenger and cargo aircraft** Allowed with restrictions.

**Cargo aircraft only** Allowed with restrictions.

### IMDG

**UN number** 1950

**UN proper shipping name** AEROSOLS

**Transport hazard class(es)**

**Class** 2.2

**Subsidiary risk** 6.1 (PGIII)

**Packing group** Not applicable.

**Environmental hazards**

**Marine pollutant** No

**EmS** F-D, S-U

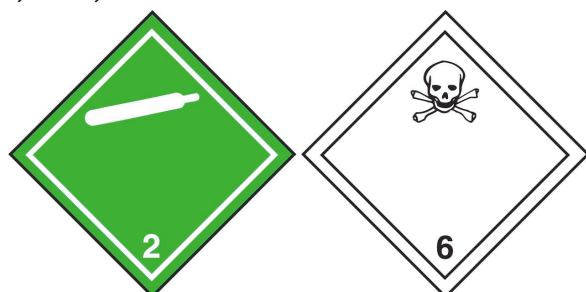
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

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

### ADG



### IATA; IMDG; RID



### General information

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

## 15. Regulatory information

### Safety, health and environmental regulations

#### National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

#### Australia Medicines & Poisons Appendix E

TRICHLOROETHYLENE (CAS 79-01-6)

#### Australia Medicines & Poisons Appendix F

TRICHLOROETHYLENE (CAS 79-01-6)

#### Australia Medicines & Poisons Schedule 4

TRICHLOROETHYLENE (CAS 79-01-6)

#### Australia Medicines & Poisons Schedule 6

TRICHLOROETHYLENE (CAS 79-01-6)



**Australia National Pollutant Inventory (NPI): Threshold quantity**

1,1,2-trichloroethylene (CAS 79-01-6) 10 TONNES/YR Threshold Category: 1

**High Volume Industrial Chemicals (HVIC)**

Carbon Dioxide (CAS 124-38-9) 100000 - 999999 TONNES See the regulation for additional information.

**Importation of Ozone Depleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)**

Not listed.

**National Pollutant Inventory (NPI) substance reporting list**

Not listed.

**Prohibited Carcinogenic Substances**

Not regulated.

**Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)**

Not listed.

**Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)**

Not listed.

**Restricted Carcinogenic Substances**

Not regulated.

**International regulations****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)	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
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** 10-18-2016

**Disclaimer**

ITW Pro Brands cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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**

This document has undergone significant changes and should be reviewed in its entirety.