



# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name or designation of the mixture** LPS® HDX (Aerosol)  
**Registration number** -  
**Synonyms** None.  
**Part Number** 01020, M01020  
**Issue date** 18-October-2016  
**Version number** 01

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** A degreaser designed to remove grease, oil, dirt and other residues from metal and other hard surfaces near ignition sources.  
**Uses advised against** None known.

### 1.3. Details of the supplier of the safety data sheet

**Supplier** AlSCO Ltd  
**Company name** Unit 13 Hillmead Industrial Estate  
**Address** Marshall Road  
Swindon, Wiltshire  
United Kingdom SN5 5FZ  
**Telephone** +44 1793 733 900  
**In Case of Emergency** +001 703-527-3887  
**Manufacturer**  
**Company name** ITW Pro Brands  
**Address** 4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)  
**Website** <http://www.lpslabs.com>  
**e-mail** [lpssds@itwprobrands.com](mailto:lpssds@itwprobrands.com)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

**Classification** R5, Carc. Cat. 2;R45, Xi;R36/38, R67, R52/53

The full text for all R-phrases is displayed in section 16.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Physical hazards

Aerosols	Category 3	H229 - Pressurized container: May burst if heated.
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##### Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Germ cell mutagenicity	Category 2	H341 - Suspected of causing genetic defects.
Carcinogenicity	Category 1B	H350 - May cause cancer.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

##### Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.
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### Hazard summary

**Physical hazards** Heating may cause an explosion.

<b>Health hazards</b>	May cause cancer. May cause heritable genetic damage. Irritating to eyes and skin. Vapours may cause drowsiness and dizziness. Occupational exposure to the substance or mixture may cause adverse health effects.
<b>Environmental hazards</b>	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Specific hazards</b>	Prolonged exposure may cause chronic effects.
<b>Main symptoms</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.

## 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** 1,1,2-trichloroethylene, Carbon dioxide

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H229	Pressurized container: May burst if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.

### Precautionary statements

#### Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing gas.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

#### Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

#### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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**Supplemental label information** None known.

**2.3. Other hazards** None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
1,1,2-trichloroethylene	90 - 100	79-01-6 201-167-4	-	602-027-00-9	
<b>Classification:</b>		<b>DSD:</b> Carc. Cat. 2;R45, Muta. Cat. 3;R68, Xi;R36/38, R67, R52/53			
		<b>CLP:</b> Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H336, Muta. 2;H341, Carc. 1B;H350, Aquatic Chronic 3;H412			
Carbon dioxide	1 - 5	124-38-9 204-696-9	-	-	#
<b>Classification:</b>		<b>DSD:</b> -			
		<b>CLP:</b> -			

## List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

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

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

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.

## SECTION 4: First aid measures

### General information

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.

### 4.1. Description of first aid measures

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

#### Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

#### 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

In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth.

### 4.2. Most important symptoms and effects, both acute and delayed

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.

### 4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

### General fire hazards

Not available.

### 5.1. Extinguishing media

#### Suitable extinguishing media

Not available.

#### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

### 5.3. Advice for firefighters

#### Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Special fire fighting procedures

Containers should be cooled with water to prevent vapor pressure build up.

### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. 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. Use personal protection recommended in Section 8 of the SDS.
<b>For emergency responders</b>	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

**6.2. 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.

**6.3. Methods and material 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.

**6.4. Reference to other sections** Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section 13.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurised 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.

**7.2. 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 away from incompatible materials (see Section 10 of the SDS).

**7.3. Specific end use(s)** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	Ceiling	18000 mg/m <sup>3</sup>
		10000 ppm
	MAK	9000 mg/m <sup>3</sup> 5000 ppm

##### Austria. TRK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	13,2 mg/m <sup>3</sup>
		2,4 ppm
	TWA	3,3 mg/m <sup>3</sup> 0,6 ppm

##### Belgium. Exposure Limit Values.

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	137 mg/m <sup>3</sup>
		25 ppm
	TWA	55 mg/m <sup>3</sup> 10 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54784 mg/m <sup>3</sup>

**Belgium. Exposure Limit Values.**

Components	Type	Value
	TWA	30000 ppm 9131 mg/m3 5000 ppm

**Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	1000 mg/m3
	TWA	135 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	MAC	550 mg/m3
	STEL	100 ppm 820 mg/m3 150 ppm
Carbon dioxide (CAS 124-38-9)	MAC	9000 mg/m3 5000 ppm

**Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	535 mg/m3 100 ppm

**Czech Republic. OELs. Government Decree 361**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	Ceiling	750 mg/m3
	TWA	250 mg/m3
Carbon dioxide (CAS 124-38-9)	Ceiling	45000 mg/m3
	TWA	9000 mg/m3

**Denmark. Exposure Limit Values**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TLV	55 mg/m3 10 ppm
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m3 5000 ppm

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	140 mg/m3
	TWA	25 ppm 50 mg/m3 10 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm

**Finland. Workplace Exposure Limits**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	50 mg/m3 10 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m3

**Finland. Workplace Exposure Limits**

Components	Type	Value
		5000 ppm

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	VLE	1080 mg/m <sup>3</sup>
	VME	200 ppm 405 mg/m <sup>3</sup> 75 ppm
Carbon dioxide (CAS 124-38-9)	VME	9000 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

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

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

**Greece. OELs (Decree No. 90/1999, as amended)**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	1080 mg/m <sup>3</sup>
	TWA	200 ppm 538 mg/m <sup>3</sup> 100 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m <sup>3</sup>
	TWA	5000 ppm 9000 mg/m <sup>3</sup> 5000 ppm

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	540 mg/m <sup>3</sup>
	TWA	270 mg/m <sup>3</sup>
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m <sup>3</sup>

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	55 mg/m <sup>3</sup>
		10 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m <sup>3</sup> 5000 ppm

**Ireland. Occupational Exposure Limits**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	25 ppm
	TWA	10 ppm
Carbon dioxide (CAS 124-38-9)	STEL	27000 mg/m <sup>3</sup>
	TWA	15000 ppm 9000 mg/m <sup>3</sup> 5000 ppm

**Italy. Occupational Exposure Limits**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	25 ppm
	TWA	10 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	10 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	140 mg/m3
	TWA	25 ppm 50 mg/m3 10 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Netherlands. OELs (binding)**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TLV	50 mg/m3
		10 ppm
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m3
		5000 ppm

**Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	100 mg/m3
	TWA	50 mg/m3
Carbon dioxide (CAS 124-38-9)	STEL	27000 mg/m3
	TWA	9000 mg/m3

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

Components	Type	Value
		5000 ppm

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	100 ppm
	TWA	50 ppm
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	150 mg/m3
	TWA	28 ppm 100 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	18,5 ppm 9000 mg/m3
		5000 ppm

**Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	275 mg/m3
		50 ppm

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	270 mg/m3
		50 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

**Spain. Carcinogens and Mutagens with Limit Values (Table 2)**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	TWA	55 mg/m3
		10 ppm

**Spain. Occupational Exposure Limits**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9150 mg/m3
		5000 ppm

**Sweden. Occupational Exposure Limit Values**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	140 mg/m3
	TWA	25 ppm 50 mg/m3 10 ppm
Carbon dioxide (CAS 124-38-9)	STEL	18000 mg/m3
	TWA	10000 ppm 9000 mg/m3 5000 ppm



**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value
1,1,2-trichloroethylene (CAS 79-01-6)	STEL	273 mg/m <sup>3</sup>
	TWA	50 ppm 110 mg/m <sup>3</sup>
Carbon dioxide (CAS 124-38-9)	TWA	20 ppm 9000 mg/m <sup>3</sup>
		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

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m <sup>3</sup>
		5000 ppm

**Biological limit values****Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	75 mg/g	Trichloroacetic acid	Creatinine in urine	*
	4 mg/l	Trichloroethanol	Blood	*
	0,04 mg/l	Trichloroethylene	Blood	*
	51,92 mmol/mol	Trichloroacetic acid	Creatinine in urine	*
	20,8 nmol/l	Trichloroethylene	End-exhaled air	*
	0,5 ppm	Trichloroethylene	End-exhaled air	*
	26,77 umol/l	Trichloroethanol	Blood	*
	0,3 umol/l	Trichloroethylene	Blood	*

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

**Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	70 µmol/mmol	Trichloroacetic acid	Creatinine in urine	*
	150 µmol/mmol	Trichloroethanol	Creatinine in urine	*
	200 mg/g	Trichloroethanol	Creatinine in urine	*
	100 mg/g	Trichloroacetic acid	Creatinine in urine	*

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

**Finland. HTP-arvot, App 2., Biological Limit Values, (BRA/BGV) , Social Affairs and Ministry of Health**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	120 umol/l	Trichloroacetic acid	Urine	*

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

**France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	300 mg/g	Somme de l'acide trichloroacétique et du trichloroéthanol	Creatinine in urine	*
	100 mg/g	Acide trichloroacétique	Creatinine in urine	*
	4 mg/l	Trichloroéthanol libre	Blood	*

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

**Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	50 mg/g	Trichloroacetic acid	Creatinine in urine	*
	35 µmol/mmol	Trichloroacetic acid	Creatinine in urine	*

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

**Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	15 mg/l	Ácido tricloroacético	Urine	*
	0,5 mg/l	Tricloroetanol, sin hidrólisis	Blood	*

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

**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

Components	Value	Determinant	Specimen	Sampling time
1,1,2-trichloroethylene (CAS 79-01-6)	40 mg/l	Trichloressigsäure	Urine	*

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

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

## 8.2. Exposure controls

**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, such as personal protective equipment

**General information** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

#### Skin protection

**- Hand protection** Wear appropriate chemical resistant gloves.

**- Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

### Hygiene measures

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.

**Environmental exposure controls** Inform appropriate managerial or supervisory personnel of all environmental releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

Physical state	Gas.
Form	Aerosol
Colour	Clear. Colourless.
Odour	Sweet. Spice.
Odour threshold	Not established
pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	87 °C (188,6 °F)
Flash point	Tag closed cup (None)
Evaporation rate	0,3 (Ethyl Ether = 1)
Flammability (solid, gas)	Non flammable gas.

#### Upper/lower flammability or explosive limits

Flammability limit - lower (%)	8 %
Flammability limit - upper (%)	10,5 %
Vapour pressure	58 mm Hg @ 20°C
Vapour density	4,5
Relative density	Not available.

#### Solubility(ies)

Solubility (water)	0,1 %
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	2,4
Auto-ignition temperature	> 420 °C (> 788 °F)
Decomposition temperature	Not established
Viscosity	0,53 cP @ 25° C
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

### 9.2. Other information

Heat of combustion	< 20 kJ/g
Percent volatile	100 %
Specific gravity	1,41 - 1,47 @ 20°C
VOC	97,8 %

## SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Carbon oxides.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

#### Information on likely 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.

<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
<b>Symptoms</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.

### 11.1. Information on toxicological effects

**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/eye irritation</b>	Causes serious eye irritation.	
<b>Respiratory sensitisation</b>	Not a respiratory sensitizer.	
<b>Skin sensitisation</b>	This product is not expected to cause skin sensitisation.	
<b>Germ cell mutagenicity</b>	Suspected of causing genetic defects.	
<b>Slovenia. CMR. Protection of workers from exposure to carcinogen and mutagen agents (ULRS 101/2005, as amended)</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	Mutagenic, Category 2.	
<b>Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	Mutagenic, Category 2.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>ACGIH Carcinogens</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	Suspected human carcinogen. A2	
<b>Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	1 Carcinogenic to humans.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	1 Carcinogenic to humans.	
<b>Slovenia. CMR. Protection of workers from exposure to carcinogen and mutagen agents (ULRS 101/2005, as amended)</b>		
1,1,2-trichloroethylene (CAS 79-01-6)	Carcinogenic, Category 1B.	
<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>Mixture versus substance information</b>	No information available.	
<b>Other information</b>	Symptoms may be delayed.	

## SECTION 12: Ecological information

**12.1. Toxicity** Harmful to aquatic life with long lasting effects. Based on available data, the classification criteria are not met for hazardous to the aquatic environment, acute hazard.

Components	Species	Test results
1,1,2-trichloroethylene (CAS 79-01-6)		
<b>Aquatic</b>		
Fish	LC50	Flagfish (Jordanella floridae) 3,1 mg/l, 96 hours

**12.2. Persistence and degradability** Not inherently biodegradable.

### 12.3. Bioaccumulative potential

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

LPS® HDX (Aerosol)	2,4
1,1,2-trichloroethylene	2,61

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** No data available.

**12.5. Results of PBT** Not available.

**and vPvB  
assessment**

**12.6. Other adverse effects** None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**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.

**EU waste code** The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Disposal methods/information** 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.

**Special precautions** Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN1950
<b>14.2. UN proper shipping name</b>	AEROSOLS, asphyxiant
<b>14.3. Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	6.1(PGIII)
<b>Label(s)</b>	2.2
<b>Hazard No. (ADR)</b>	Not available.
<b>Tunnel restriction code</b>	E
<b>14.4. Packing group</b>	Not applicable.
<b>14.5. Environmental hazards</b>	No
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### RID

<b>14.1. UN number</b>	UN1950
<b>14.2. UN proper shipping name</b>	AEROSOLS, asphyxiant
<b>14.3. Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	6.1(PGIII)
<b>Label(s)</b>	2.2
<b>14.4. Packing group</b>	Not applicable.
<b>14.5. Environmental hazards</b>	No
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### ADN

<b>14.1. UN number</b>	UN1950
<b>14.2. UN proper shipping name</b>	Aerosols, [asphyxiant]
<b>14.3. Transport hazard class(es)</b>	
<b>Class</b>	2.2
<b>Subsidiary risk</b>	6.1(PGIII)
<b>Label(s)</b>	2.2
<b>14.4. Packing group</b>	Not applicable.
<b>14.5. Environmental hazards</b>	No

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

#### IATA

**14.1. UN number** UN1950  
**14.2. UN proper shipping name** Aerosols, non-flammable

#### 14.3. Transport hazard class(es)

**Class** 2.2  
**Subsidiary risk** 6.1 (PGIII)

**14.4. Packing group** Not applicable.

**14.5. Environmental hazards** No

**ERG Code** 2L

**14.6. Special precautions for user** 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

**14.1. UN number** UN1950  
**14.2. UN proper shipping name** AEROSOLS

#### 14.3. Transport hazard class(es)

**Class** 2.2  
**Subsidiary risk** 6.1 (PGIII)

**14.4. Packing group** Not applicable.

#### 14.5. Environmental hazards

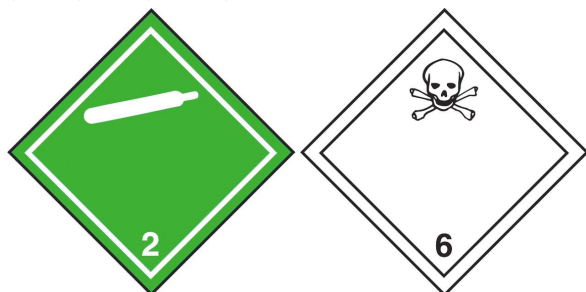
**Marine pollutant** No

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

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

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

**ADN; ADR; IATA; IMDG; RID**



## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

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

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

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

**Authorisations**

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

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

**Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

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

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

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

**Other EU regulations**

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

**Other regulations**

Pregnant women should not work with the product, if there is the least risk of exposure. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

**National regulations**

Follow national regulation for work with chemical agents. 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, as amended.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**

Not available.

**References**

Not available.

**Information on evaluation method leading to the classification of mixture**

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

R36/38 Irritating to eyes and skin.  
R45 May cause cancer.  
R46 May cause heritable genetic damage.  
R5 Heating may cause an explosion.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R67 Vapours may cause drowsiness and dizziness.  
R68 Possible risk of irreversible effects.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H412 Harmful to aquatic life with long lasting effects.

**Revision information**

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

**Training information**

Follow training instructions when handling this material.

**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.