



SAFETY DATA SHEET

in accordance with REACH (1907/2006/EC, as amended by 2015/830/EU) 29 CFR 1910.1200 and WHMIS 2015

Revision date: 6 June 2019

Initial date of issue: 17 August 2007

SDS No. 110A-23

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

421 Clear Protective Coating (Aerosol)

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

General duty, impermeable, flexible plastic coating. Protects against air, water, oils, chemicals, corrosion.

1.3. Details of the supplier of the safety data sheet

Company:

A.W. CHESTERTON COMPANY
860 Salem Street
Groveland, MA 01834-1507, USA
Tel. +1 978-469-6446 Fax: +1 978-469-6785
(Mon. - Fri. 8:30 - 5:00 PM EST)
SDS requests: www.chesterton.com
E-mail (SDS questions): ProductMSDSs@chesterton.com
E-mail: customer.service@chesterton.com

Supplier:

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,
Unit 105, Burlington, Ontario L7L 4X8 – Tel. 905-335-5055
EU: Chesterton International GmbH, Am Lenzenfleck 23,
D85737 Ismaning, Germany – Tel. +49-89-996-5460

1.4. Emergency telephone number

24 hours per day, 7 days per week
Call Infotrac: 1-800-535-5053
Outside N. America: +1 352-323-3500 (collect)
NSW Poisons Information Centre (Australia): 13 11 26

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP] / GHS

Aerosol, Category 1, H222, H229
Skin irritation, Category 2, H315
Eye irritation, Category 2, H319
Specific target organ toxicity – single exposure, Category 3, H336
Reproductive toxicity, Category 2, H361d
Specific target organ toxicity – repeated exposure, Category 2, H373 (central nervous system, inhalation)
Hazardous to the aquatic environment, Chronic, Category 3, H412

2.1.2. Classification according to 29 CFR 1910.1200 / WHMIS 2015 / GHS

Flammable aerosol, Category 1, H222
Compressed gas, H280
Skin irritation, Category 2, H315
Eye irritation, Category 2, H319
Specific target organ toxicity – single exposure, Category 3, H336
Reproductive toxicity, Category 2, H361d
Specific target organ toxicity – repeated exposure, Category 2, H373 (central nervous system, inhalation)
Hazardous to the aquatic environment, Chronic, Category 3, H412

2.1.3. Australian statement of hazardous nature

Hazardous according to criteria of Safe Work Australia.

2.1.4. Additional information

For full text of H-statements: see SECTIONS 2.2 and 16.

2.2. Label elements**2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP] / GHS****Hazard pictograms:****Signal word:**

Danger

Hazard statements:

H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to the central nervous system through prolonged or repeated exposure by inhalation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe vapours/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/clothing and eye/face protection.
P308/313	IF exposed or concerned: Get medical advice/attention.
P410/412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Supplemental information:

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
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2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015 / GHS**Hazard pictograms:****Signal word:**

Danger

Hazard statements:

H222	Extremely flammable aerosol.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to the central nervous system through prolonged or repeated exposure by inhalation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P211	Do not spray on an open flame or other ignition source.
	P251	Do not pierce or burn, even after use.
	P260	Do not breathe vapours/spray.
	P264	Wash skin thoroughly after handling.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/clothing and eye/face protection.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P304/340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308/313	IF exposed or concerned: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
	P410/412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
	P501	Dispose of contents/container to an approved waste disposal plant.

Supplemental information: None

2.3. Other hazards

None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients ¹	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification
Toluene	25-30	108-88-3 203-625-9	NA	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361d STOT RE 2, H373 (CNS, inhalation) Aquatic Chronic 3, H412
Butanone (Synonym: Methyl ethyl ketone)	15-25	78-93-3 201-159-0	NA	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Acetone	15-25	67-64-1 200-662-2	NA	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Isobutane*	10-20	75-28-5 200-857-2	NA	Flam. Gas 1, H220 Press. Gas (Comp.), H280 Simple Asphyxiant (US/Can.)
2-Methoxy-1-methylethyl acetate	1-5	108-65-6 203-603-9	NA	Flam. Liq. 3, H226
Propane	1-5	74-98-6 200-827-9	NA	Flam. Gas 1, H220 Press. Gas (Comp.), H280 Simple Asphyxiant (US/Can.)
Methyl methacrylate	<0.1 - 0.2	80-62-6 201-297-1	NA	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335

For full text of H-statements: see SECTION 16.

* Contains less than 0.1 % w/w 1,3-Butadiene.

¹ Classified according to:

- 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F)
- 1272/2008/EC, GHS, REACH
- WHMIS 2015
- Safe Work Australia

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

Inhalation: Remove to fresh air. If not breathing, administer artificial respiration. Contact physician immediately.

Skin contact: Wash skin with soap and water. Take off contaminated clothing and wash it before reuse. Contact physician.

Eye contact: Flush eyes for at least 15 minutes with large amounts of water. Contact physician.

Ingestion: Do not induce vomiting. Contact physician immediately.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. Avoid contact with the product while providing aid to the victim. Do not breathe vapours. See section 8.2.2 for recommendations on personal protective equipment.

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

Causes skin irritation. Direct eye contact will cause eye irritation. Excessive inhalation of vapors will cause dizziness, headache, nausea, eye and respiratory tract irritation, irregular heartbeats (arrhythmia) and in extreme cases, loss of consciousness. Animal studies have reported hearing loss and adverse fetal developmental effects with excessive exposure to toluene.

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

Treat symptoms. Do not administer adrenaline (epinephrine).

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media**

Suitable extinguishing media: Carbon dioxide, dry chemical, foam or water fog

Unsuitable extinguishing media: Water jets

5.2. Special hazards arising from the substance or mixture

Pressurized containers, when heated, are a potential explosive hazard.

5.3. Advice for firefighters

Cool exposed containers with water. Recommend Firefighters wear self-contained breathing apparatus.

Flammability Classification: NFPA Storage Level III; 16 CFR 1500.3 Extremely flammable aerosol

HAZCHEM Emergency Action Code: 2 Y

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Provide adequate ventilation. Utilize exposure controls and personal protection as specified in Section 8.

6.2. Environmental Precautions

Keep out of sewers, streams and waterways.

6.3. Methods and material for containment and cleaning up

Contain spill to a small area. Keep away from sources of ignition - No smoking. If removal of ignition sources is not possible, then flush material away with water. Pick up with absorbent material (sand, sawdust, clay, etc.) and place in a suitable container for disposal.

6.4. Reference to other sections

Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Shake well before using. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No Smoking. Vapors are heavier than air and will collect in low areas. Vapor accumulations could flash and/or explode if ignited. Avoid skin contact. Utilize exposure controls and personal protection as specified in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C (120°F). Do not pierce or burn, even after use.

7.3. Specific end use(s)

No special precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Occupational exposure limit values**

Ingredients	OSHA PEL ¹		ACGIH TLV ²		UK WEL ³		AUSTRALIA ES ⁴	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Toluene	200	–	20	–	50	191	50	191
	Ceiling: 300				STEL: 100	STEL: 384	STEL: 150	STEL: 574
	Peak: 500 (10 min.)							
Butanone	200	–	200	590	200	600	150	445
	STEL: 300		300	885	STEL: 300	STEL: 899	STEL: 300	STEL: 890
Acetone	1000	2400	250	–	500	1210	500	1185
			STEL: 500		STEL: 1500	STEL: 3620	STEL: 1000	STEL: 2375
Isobutane	–	–	STEL: 1000	–	–	–	–	–
2-Methoxy-1-methylethyl acetate	–	–	–	–	50	274	50	274
					STEL: 100	STEL: 548	STEL: 100	STEL: 548
Propane	1000	1800	*	–	–	–	*	–
Methyl methacrylate	100	410	50	–	50	208	50	208
			STEL: 100		STEL: 100	416	STEL: 100	416

* Simple asphyxiant.

¹ United States Occupational Health & Safety Administration permissible exposure limits² American Conference of Governmental Industrial Hygienists threshold limit values³ EH40 Workplace exposure limits, Health & Safety Executive⁴ Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants**Biological limit values**

Toluene:

Control parameter	Biological specimen	Sampling Time	Limit value	Basis	Notes
Toluene	Blood	Prior to last shift of workweek	0.02 mg/l	ACGIH	–
Toluene	Urine	End of shift	0.03 mg/l	ACGIH	–
o-Cresol*	Urine	End of shift	0.3 mg/g creatinine	ACGIH	Background

* With hydrolysis

Butanone:

Control parameter	Biological specimen	Sampling Time	Limit value	Basis	Notes
Butanone	Urine	End of shift	2 mg/l	ACGIH	Nonspecific
Butanone	Urine	End of shift	0.07 mmol/l	UK HSE	–

Acetone:

Control parameter	Biological specimen	Sampling Time	Limit value	Basis	Notes
Acetone	Urine	End of shift	25 mg/l	ACGIH	Nonspecific

Derived No Effect Level (DNEL) according to Regulation (EC) No 1907/2006:**Workers**

Substance	Route of exposure	Potential health effects	DNEL
Toluene	Inhalation	Acute effects, systemic	384 mg/m ³
		Chronic effects, systemic	192 mg/m ³
Butanone	Dermal	Chronic effects, systemic	180 mg/kg bw/day
	Inhalation	Chronic effects, systemic	600 mg/m ³
Acetone	Dermal	Chronic effects, systemic	1161 mg/kg bw/day
	Inhalation	Chronic effects, systemic	1210 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No 1907/2006:

Substance	Environmental protection target	PNEC
Toluene	Fresh water	0.68 mg/l
	Sediments	16.39 mg/kg
	Microorganisms in sewage treatment	13.61 mg/l
Butanone	Soil (agricultural)	2.89 mg/kg
	Fresh water	55.8 mg/l
	Sediments	284.7 mg/kg
	Marine water	55.8 mg/l
	Water, intermittent release	55.8 mg/l
	Food chain	1000 mg/kg
	Microorganisms in sewage treatment	709 mg/l
	Soil (agricultural)	22.5 mg/kg

8.2. Exposure controls**8.2.1. Engineering measures**

Provide sufficient explosion-proof ventilation to keep the vapor concentrations below the exposure limits (10 to 15 air changes per hour).

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. In case of insufficient ventilation, utilize an approved organic vapor respirator (e.g., EN filter type A).

Protective gloves: Chemical resistant gloves (e.g. Viton*, Polyvinyl Alcohol). *DuPont's registered trademark.

Toluene:

Contact type	Glove material	Layer thickness	Breakthrough time*
Full	Viton*	0.7 mm	> 480 min.
Splash	Nitrile rubber	0.4 mm	> 10 min.

*Determined according to EN374 standard.

Eye and face protection: Safety goggles.

Other: Impervious clothing as necessary to prevent skin contact.

8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state	low viscosity liquid	Odour	solvent odor
Colour	clear	Odour threshold	not determined
Initial boiling point	56°C (133°F)	Vapour pressure @ 20°C	not determined
Melting point	not determined	% Aromatics by weight	not determined
% Volatile (by volume)	95%	pH	not applicable
Flash point	-4°C (25°F)	Relative density	0.75 kg/l
Method	Closed Cup, product only	Weight per volume	6.25 lbs/gal.
Viscosity	not determined	Coefficient (water/oil)	< 1
Autoignition temperature	not determined	Vapour density (air=1)	> 1
Decomposition temperature	no data available	Rate of evaporation (ether=1)	< 1
Upper/lower flammability or explosive limits	LEL 1.2; UEL 9.9	Solubility in water	insoluble
Flammability (solid, gas)	extremely flammable (propellant)	Oxidising properties	not determined
Explosive properties	not determined		

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

Open flames and red hot surfaces.

10.5. Incompatible materials

Some strong acids/bases and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide and other toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**

Primary route of exposure under normal use: Inhalation, skin and eye contact. Personnel with pre-existing skin disorders are generally aggravated by exposure.

Acute toxicity -**Oral:**

Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Toluene	LD50, rat	5580 mg/kg
Butanone	LD50, rat	> 2600 mg/kg
Acetone	LD50, rat	5800 mg/kg
2-Methoxy-1-methylethyl acetate	LD50, rat	8532 mg/kg

Dermal:

Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Toluene	LD50, rabbit	12124 mg/kg
Butanone	LD50, rabbit	> 8000 mg/kg
Acetone	LD50, rabbit	> 7426 mg/kg
2-Methoxy-1-methylethyl acetate	LD50, rabbit	> 5000 mg/kg

Inhalation:

Based on available data on components, the classification criteria are not met. Excessive inhalation of vapors will cause dizziness, headache, nausea, eye and respiratory tract irritation, irregular heartbeats (arrhythmia) and in extreme cases, loss of consciousness.

Substance	Test	Result
Isobutane	LC50, mouse, 1 h	52 mg/l
Propane	LC50, rat, 4 h	658 mg/l
Toluene	LC50, rat, 4 hours	28.1 mg/l (vapor)
Butanone	LC50, rat, 8 hours	23.5 mg/l
Acetone	LC50, rat, 4 hours	> 20 mg/l
2-Methoxy-1-methylethyl acetate	LC50, rat, 6 hours	23.8 mg/l

Skin corrosion/irritation:

Causes skin irritation.

Substance	Test	Result
Toluene	Skin irritation, rabbit	Moderate irritation
Butanone	Skin irritation, rabbit	Slightly irritating
Acetone	Skin irritation, rabbit	Moderate irritation

Serious eye damage/irritation:

Causes serious eye irritation.

Substance	Test	Result
Toluene	Eye irritation, rabbit	Mild irritation
Butanone	Eye irritation, rabbit	Irritating
Acetone	Eye irritation, rat, rabbit	Irritating

Respiratory or skin sensitisation:

Not expected to cause skin sensitization.

Germ cell mutagenicity:

Butanone, Acetone: based on available data, the classification criteria are not met. Toluene: not expected to be a germ cell mutagen.

Carcinogenicity:

This product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or the European Chemicals Agency (ECHA).

Reproductive toxicity:

Animal studies have reported adverse fetal developmental effects with excessive exposure to toluene.

STOT – single exposure:

May cause drowsiness or dizziness.

STOT – repeated exposure:

Animal studies have reported hearing loss with excessive exposure to toluene. Repeated excessive exposure to 2-Methoxy-1-Methylethyl Acetate may cause respiratory irritation, liver and kidney effects, and prolonged contact with large amounts can cause drowsiness. This is unlikely as 2-Methoxy-1-Methylethyl Acetate is present in a 1-5% concentration.

Aspiration hazard:

Not classified as an aspiration toxicant due to the aerosol spray pattern.

Other information:

None

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

12.1. Toxicity

Toluene: NOEC, Daphnia magna, 21 days = 1 mg/l; NOEC, Ceriodaphnia dubia, 7 days = 0.74 mg/l; 96 h LC50 (fish) = 5.5 mg/l, toxic to aquatic organisms on an acute basis.

12.2. Persistence and degradability

Butanone, 2-Methoxy-1-methylethyl acetate, Acetone, Toluene: readily biodegradable. Hazardous ingredients: will degrade in air. Toluene: ready biodegradability (water), 20 days = 86%.

12.3. Bioaccumulative potential

Hazardous ingredients: low potential for bioaccumulation. Toluene: Octanol/water partition coefficient (log Kow) = 2.73; BCF = 8.3.

12.4. Mobility in soil

Liquid. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Butanone, 2-Methoxy-1-methylethyl acetate, Acetone: expected to have very high mobility in soils. Toluene: expected to have moderate mobility in soil.

12.5. Results of PBT and vPvB assessment

Not available

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Incinerate absorbed material with a properly licensed facility. Full or partially full containers may be incinerated or the contents may be recovered by an appropriate facility. Check local, state and national/federal regulations and comply with the most stringent requirement. This product is classified as a hazardous waste according to 2008/98/EC.

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

ADG/ADR/RID/ADN/IMDG/ICAO:	UN1950
TDG:	UN1950
US DOT:	UN1950

14.2. UN proper shipping name

ICAO:	Aerosols, Flammable
ADG/IMDG:	Aerosols
ADR/RID/ADN:	Aerosols, <i>flammable</i>
TDG:	Aerosols, <i>flammable</i>
US DOT:	Aerosols, <i>flammable</i>

14.3. Transport hazard class(es)

ADG/ADR/RID/ADN/IMDG/ICAO:	2.1
TDG:	2.1
US DOT:	2.1

14.4. Packing group

ADG/ADR/RID/ADN/IMDG/ICAO:	NOT APPLICABLE
TDG:	NOT APPLICABLE
US DOT:	NOT APPLICABLE

14.5. Environmental hazards

NO ENVIRONMENTAL HAZARDS

14.6. Special precautions for user

NO SPECIAL PRECAUTIONS FOR USER

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

NOT APPLICABLE

14.8. Other information

US DOT: Shipped as Limited Quantity in packaging having a rated capacity gross weight of 66 lb. or less (49 CFR 173.306(a),(3),(i)).
ERG NO. 126

IMDG: EmS. F-D, S-U, Shipped as Limited Quantity

ADR: Classification code 5F, Tunnel restriction code (E), Shipped as Limited Quantity

ADG HAZCHEM CODE: N/A **HIN:** (1)

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU regulations****Authorisations under Title VII:** Not applicable**Restrictions under Title VIII:** None

Other EU regulations: Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers
 Directive 94/33/EC on the protection of young people at work.
 Directive 92/85/EEC on the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.
 Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances (hazard category P3a, Flammable Aerosols; qualifying quantities: 150 t (net), 500 t (net)).

15.1.2. National regulations**US EPA SARA TITLE III****312 Hazards:**

Flammable aerosol
 Compressed gas
 Skin irritation
 Eye irritation
 Specific target organ toxicity – single exposure
 Reproductive toxicity
 Specific target organ toxicity – repeated exposure

313 Chemicals:

Toluene	108-88-3	25-30%
Methyl ethyl ketone	78-93-3	15-25%

TSCA: All chemical components are listed in the TSCA inventory.

Other national regulations: National implementation of the EC Directive referred to in section 15.1.1.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms: ADG: Australian Dangerous Goods Code
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE: Acute Toxicity Estimate
 BCF: Bioconcentration Factor
 cATpE: Converted Acute Toxicity point Estimate
 CLP: Classification Labelling Packaging Regulation (1272/2008/EC)
 ES: Exposure Standard
 GHS: Globally Harmonized System
 ICAO: International Civil Aviation Organization
 IMDG: International Maritime Dangerous Goods
 LC50: Lethal Concentration to 50 % of a test population
 LD50: Lethal Dose to 50% of a test population
 LOEL: Lowest Observed Effect Level
 N/A: Not Applicable
 NA: Not Available
 NOEC: No Observed Effect Concentration
 NOEL: No Observed Effect Level
 OECD: Organization for Economic Co-operation and Development
 PBT: Persistent, Bioaccumulative and Toxic substance
 (Q)SAR: Quantitative Structure-Activity Relationship
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)
 REL: Recommended Exposure Limit
 RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
 SDS: Safety Data Sheet
 STEL: Short Term Exposure Limit
 STOT RE: Specific Target Organ Toxicity, Repeated Exposure
 STOT SE: Specific Target Organ Toxicity, Single Exposure
 TDG: Transportation of Dangerous Goods (Canada)
 TWA: Time Weighted Average
 US DOT: United States Department of Transportation
 vPvB: very Persistent and very Bioaccumulative substance
 WEL: Workplace Exposure Limit
 WHMIS: Workplace Hazardous Materials Information System
 Other abbreviations and acronyms can be looked up at www.wikipedia.org.

Key literature references and sources for data: Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)
 Chemical Classification and Information Database (CCID)
 European Chemicals Agency (ECHA) - Information on Chemicals
 Hazardous Chemical Information System (HCIS)
 National Institute of Technology and Evaluation (NITE)
 Swedish Chemicals Agency (KEMI)
 U.S. National Library of Medicine Toxicology Data Network (TOXNET)

Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 [CLP]:

Classification	Classification procedure
Aerosol 1, H222, H229	On basis of components
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	Bridging principle "Dilution"
Repr. 2, H361d	Calculation method
STOT RE 2, H373L	Calculation method

Relevant H-statements: EUH066: Repeated exposure may cause skin dryness or cracking.
 H220: Extremely flammable gas.
 H225: Highly flammable liquid and vapour.
 H226: Flammable liquid and vapour.
 H280: Contains gas under pressure; may explode if heated.
 H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H335: May cause respiratory irritation.
 H336: May cause drowsiness or dizziness.
 H361d: Suspected of damaging the unborn child.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Flame, gas cylinder (non-CLP labelling) exclamation mark, health hazard

Further information: None

Date of last revision: 6 June 2019

Changes to the SDS in this revision: Sections 3, 8.1, 16.

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose. The user must make their own determination as to suitability.