

ULTRA Black Spray

Product specification **RS_FP_606724**
Version **2.0**
Material number **1436337**

CerMark ULTRA 12oz. Aerosol

Revision Date **2022/02/24**
Print Date **2023/04/13**
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1. IDENTIFICATION

Product name : **ULTRA Black Spray**
CerMark ULTRA 12oz. Aerosol

Material number : **1436337**

Manufacturer or supplier's details

Company name of supplier : Ferro GmbH

Address : Gutleutstraße 215
Frankfurt am Main Hessen 60327

Telephone : +4969271160

E-mail address : sdb@ferro.com

Telefax : +496927116333

Emergency telephone number

CHEMTREC In-Country : 0800-300-5842
Number

CHEMTREC Global Number : +(1)-703-527-3887 (Call Collect)

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use

2. HAZARDS IDENTIFICATION

GHS Classification

Aerosols : Category 1

Acute toxicity (Oral) : Category 4

Serious eye damage/eye
irritation : Category 2A

Germ cell mutagenicity : Category 1B

Carcinogenicity : Category 2

Reproductive toxicity : Category 1A

Specific target organ toxicity -
single exposure : Category 2 (Kidney Organ, Liver, Heart, respiratory tract,
Central nervous system, Blood)

Specific target organ toxicity -
single exposure : Category 3 (Respiratory tract irritation, Narcotic effects)

Specific target organ toxicity -
repeated exposure : Category 1 (Liver)

SAFETY DATA SHEET

According to JIS Z 7253 (2012)

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Specific target organ toxicity - repeated exposure : Category 2 (Central nervous system, Lungs, Nervous system, respiratory tract)

Acute aquatic toxicity : Category 3

Chronic aquatic toxicity : Category 3

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements :

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H371	May cause damage to organs (Kidney Organ, Liver, Heart, respiratory tract, Central nervous system, Blood).
H372	Causes damage to organs (Liver) through prolonged or repeated exposure.
H373	May cause damage to organs (Central nervous system, Lungs, Nervous system, respiratory tract) through prolonged or repeated exposure.
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.
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 dust/ fume/ gas/

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P264	mist/ vapours/ spray.
P270	Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product.
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:	
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
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 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/ physician.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
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 40 °C/ 104 °F.
Disposal:	
P501	Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Important symptoms and outlines of the emergency assumed : No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : organic solvent, inorganic pigment, inorganic metal-nonmetal compound, silicon/siloxane, silicatic material, metal/metal compound, extremely flammable liquefied gas, hydrocarbon,

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aliphatic

Hazardous components

Chemical Name	CAS-No.	Concentration (%)	ENCS/ISHL number
ethanol	64-17-5	>= 30 - < 40	2-202
Fe-Co-Cr spinel black	68186-97-0	17.2	1-357
butane	106-97-8	>= 10 - < 20	2-4, 9-1697
isobutane	75-28-5	>= 1 - < 10	2-4
Molybdenum(VI) oxide	1313-27-5	6.73	1-479
propane	74-98-6	>= 1 - < 10	2-3
mica	12001-26-2	>= 1 - < 10	
silicon	7440-21-3	>= 1 - < 10	
manganese	7439-96-5	2.32	
2-butoxyethanol	111-76-2	>= 1 - < 10	2-407, 7-97, 2-2424
ethyl acetate	141-78-6	>= 1 - < 10	2-726
boron orthophosphate	13308-51-5	>= 0.1 - < 1	1-72
4-methylpentan-2-one	108-10-1	>= 0.1 - < 1	2-542

4. FIRST AID MEASURES

- General advice : Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause genetic defects.
Suspected of causing cancer.
May damage fertility or the unborn child.
May cause damage to organs.
Causes damage to organs through prolonged or repeated exposure.

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May cause damage to organs through prolonged or repeated exposure.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

7. HANDLING AND STORAGE

Handling

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : For personal protection see section 8.
No special handling advice required.
Smoking, eating and drinking should be prohibited in the application area.
Avoid release to the environment.
- Avoidance of contact : No data available
- Hygiene measures : General industrial hygiene practice.

Storage

- Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with

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the technological safety standards.

Materials to avoid : No special restrictions on storage with other products.
No materials to be especially mentioned.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		STEL	1,000 ppm	ACGIH
Fe-Co-Cr spinel black	68186-97-0	OEL-M	0.05 mg/m3 (Cobalt)	JP OEL JSOH
		Further information: Sensitizing evaluation does not necessarily apply to all individual chemicals within the group, Carcinogenic evaluation does not necessarily apply to all individual chemicals within the group, Airway sensitizing agent; Group 1 substances which induce allergic reactions in humans, Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans, Group 2B: possibly carcinogenic to humans		
		OEL-M	0.5 mg/m3 (chromium)	JP OEL JSOH
		Further information: Sensitizing evaluation does not necessarily apply to all individual chemicals within the group, Airway sensitizing agent; Group 2 substances which probably induce allergic reactions in humans., Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans		
		TWA	0.02 mg/m3 (Cobalt)	JP OEL ISHL
		OEL-M (Respirable dust)	1 mg/m3 (Iron)	JP OEL JSOH
		Further information: Class 2 Dust		
		OEL-M (Total dust)	4 mg/m3 (Iron)	JP OEL JSOH
		Further information: Class 2 Dust		
butane	106-97-8	OEL-M	500 ppm 1,200 mg/m3	JP OEL JSOH
		STEL	1,000 ppm	ACGIH
isobutane	75-28-5	OEL-M	500 ppm 1,200 mg/m3	JP OEL JSOH
		STEL	1,000 ppm	ACGIH
Molybdenum(VI) oxide	1313-27-5	TWA (Respirable fraction)	0.5 mg/m3 (Molybdenum)	ACGIH
mica	12001-26-2	OEL-M (Respirable dust)	1 mg/m3	JP OEL JSOH

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Further information: Class 2 Dust				
		OEL-M (Total dust)	4 mg/m3	JP OEL JSOH
Further information: Class 2 Dust				
		TWA (Respirable fraction)	3 mg/m3	ACGIH
manganese	7439-96-5	OEL-M	0.2 mg/m3 (Manganese)	JP OEL JSOH
		TWA	0.05 mg/m3 (Manganese)	JP OEL ISHL
		TWA (Inhalable fraction)	0.1 mg/m3 (Manganese)	ACGIH
		TWA (Respirable fraction)	0.02 mg/m3 (Manganese)	ACGIH
2-butoxyethanol	111-76-2	TWA	25 ppm	JP OEL ISHL
		TWA	20 ppm	ACGIH
ethyl acetate	141-78-6	TWA	200 ppm	JP OEL ISHL
		OEL-M	200 ppm 720 mg/m3	JP OEL JSOH
		TWA	400 ppm	ACGIH
4-methylpentan-2-one	108-10-1	TWA	20 ppm	JP OEL ISHL
		OEL-M	50 ppm 200 mg/m3	JP OEL JSOH
		TWA	20 ppm	ACGIH
		STEL	75 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Target substance	Biological specimen	Sampling time	Permissible concentration	Basis
2-butoxyethanol	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g Creatinine	ACGIH BEI
4-methylpentan-2-one	108-10-1	Methyl isobutyl ketone	Urine	End of shift	1.7 mg/l	JSOH
		methyl isobutyl ketone	Urine	End of shift (As soon as possible after exposure ceases)	1 mg/l	ACGIH BEI

Engineering measures : No data available

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

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Hand protection : For prolonged or repeated contact use protective gloves.
Eye protection : Safety glasses
Skin and body protection : Protective suit
Protective measures : Wear suitable protective equipment.
When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : aerosol
Odour : characteristic
Odour Threshold : No data available
pH : No data available
Melting point/range : No data available
Boiling point/boiling range : No data available
Flash point : -104 °C
Method: calculated
Evaporation rate : No data available
Flammability (solid, gas) : No data available
Burning rate : No data available
Upper explosion limit : 19 %(V)
Lower explosion limit : 1.1 %(V)
Vapour pressure : No data available
Relative vapour density : No data available
Relative density : No data available
Bulk density : No data available
Solubility(ies)
Water solubility : soluble
Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Decomposition temperature : No data available

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Viscosity
Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidizing properties : Not applicable

10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No hazards to be specially mentioned.

Conditions to avoid : No data available

Incompatible materials : No data available

Hazardous decomposition products : No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 1,132 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Components:

ethanol:

Acute oral toxicity : LD50 Oral (Rat): 10,470 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 15,800 mg/kg

Fe-Co-Cr spinel black:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: no
Assessment: The substance or mixture has no acute oral toxicity

butane:

Acute inhalation toxicity : LC50 (Rat, male and female): 658 g/m3

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Exposure time: 4 h
Test atmosphere: gas

Molybdenum(VI) oxide:

Acute oral toxicity : LD50 (Rat, male and female): 4,461 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,840 mg/m3
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Target Organs: Mucous membranes
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: No adverse effect has been observed in acute toxicity tests.

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

propane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: gas

silicon:

Acute oral toxicity : LD50 Oral (Rat): 3,160 mg/kg

manganese:

Acute oral toxicity : LD50 Oral (Rat): 9 g/kg

2-butoxyethanol:

Acute oral toxicity : LD50 Oral (Rat, male and female): 1,200 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

ethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): 6,100 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 22.5 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 Dermal (Rabbit): > 18,000 mg/kg

boron orthophosphate:

Acute oral toxicity : LD50 (Rat, female): > 300 mg/kg

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Acute inhalation toxicity : LC50 (Rat, male and female): > 5.31 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

1578 ppm
Method: ISO TC58

4-methylpentan-2-one:

Acute oral toxicity : LD50 Oral (Rat): 2,080 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 3,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

ethanol:

Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: No skin irritation

Fe-Co-Cr spinel black:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: no

Molybdenum(VI) oxide:

Species: Rabbit
Exposure time: 4 h
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

2-butoxyethanol:

Species: Rabbit
Exposure time: 72 h
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: yes

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

ethanol:

Species: Rabbit
Result: Eye irritation
Method: OECD Test Guideline 405

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Fe-Co-Cr spinel black:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: no

Molybdenum(VI) oxide:

Species: Rabbit
Result: Irritating to eyes.
Assessment: Irritating to eyes.

silicon:

Species: Rabbit
Result: Mild eye irritation
Method: Draize Test

2-butoxyethanol:

Result: Eye irritation

ethyl acetate:

Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Product:

Remarks: No data available

Components:

Molybdenum(VI) oxide:
Remarks: No data available

boron orthophosphate:
Remarks: No data available

Germ cell mutagenicity

May cause genetic defects.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

May damage fertility or the unborn child.

STOT Specific Target Organ Toxicity - single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs.

Components:

Molybdenum(VI) oxide:
Assessment: May cause respiratory irritation.

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STOT Specific Target Organ Toxicity - repeated exposure

Causes damage to organs (Liver) through prolonged or repeated exposure.
May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Components:

Molybdenum(VI) oxide:

Remarks: No data available

boron orthophosphate:

Remarks: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Further information

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 22.43 %

Components:

ethanol:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia (water flea)): 9,268 mg/l
Exposure time: 48 h

Molybdenum(VI) oxide:

Toxicity to fish : (Oncorhynchus mykiss (rainbow trout)): 100 mg/l
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

(Pimephales promelas (fathead minnow)): 370 mg/l
Exposure time: 96 h
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): 100 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

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(Daphnia magna (Water flea)): 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

2-butoxyethanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,490 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,800 mg/l
Exposure time: 48 h

ethyl acetate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 220 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 560 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (algae): 3,300 mg/l
Exposure time: 48 h

boron orthophosphate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0.207 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50: > 0.135 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 1.35 mg/l
Exposure time: 72 h
Test Type: static test

M-Factor (Acute aquatic toxicity) : 1

4-methylpentan-2-one:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 496 - 514 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 170 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (algae)): 400 mg/l
Exposure time: 96 h

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Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

ethanol:

Biodegradability : Remarks: No data available

Fe-Co-Cr spinel black:

Biodegradability : Remarks: No data available

butane:

Biodegradability : Remarks: No data available

Molybdenum(VI) oxide:

Biodegradability : Remarks: No data available

propane:

Biodegradability : Remarks: No data available

mica:

Biodegradability : Remarks: No data available

silicon:

Biodegradability : Remarks: No data available

manganese:

Biodegradability : Remarks: No data available

2-butoxyethanol:

Biodegradability : Remarks: No data available

ethyl acetate:

Biodegradability : Remarks: No data available

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

ethanol:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-
octanol/water

: log Pow: -0.349 (24 °C)

Fe-Co-Cr spinel black:

Bioaccumulation : Remarks: No data available

butane:

Bioaccumulation : Remarks: No data available

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Partition coefficient: n-octanol/water : log Pow: 2.745

Molybdenum(VI) oxide:

Bioaccumulation : Remarks: No data available

propane:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : Remarks: No data available

mica:

Bioaccumulation : Remarks: No data available

silicon:

Bioaccumulation : Remarks: No data available

manganese:

Bioaccumulation : Remarks: No data available

2-butoxyethanol:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : log Pow: 0.77 (20 °C)
pH: 7

ethyl acetate:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : log Pow: 0.73 (20 °C)

4-methylpentan-2-one:

Partition coefficient: n-octanol/water : Pow: 1.19

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: No data available

Components:

ethanol:

Distribution among environmental compartments : Remarks: No data available

Fe-Co-Cr spinel black:

Distribution among environmental compartments : Remarks: No data available

butane:

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ULTRA Black Spray

Product specification **RS_FP_606724**
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Distribution among environmental compartments : Remarks: No data available

Molybdenum(VI) oxide:

Distribution among environmental compartments : Remarks: No data available

propane:

Distribution among environmental compartments : Remarks: No data available

mica:

Distribution among environmental compartments : Remarks: No data available

silicon:

Distribution among environmental compartments : Remarks: No data available

manganese:

Distribution among environmental compartments : Remarks: No data available

2-butoxyethanol:

Distribution among environmental compartments : Remarks: No data available

ethyl acetate:

Distribution among environmental compartments : Remarks: No data available

Hazardous to the ozone layer

Not applicable

Other adverse effects

Product:

Additional ecological information : No data available
There is no data available for this product.

Components:

Molybdenum(VI) oxide:

Additional ecological information : No data available
There is no data available for this product.

Components:

boron orthophosphate:

Additional ecological information : No data available
There is no data available for this product.

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13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

IATA-DGR

- UN number : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203
Packing instruction (LQ) : Y203

IMDG-Code

- UN number : UN 1950
Proper shipping name : AEROSOLS
- Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

Refer to section 15 for specific national regulation.

15. REGULATORY INFORMATION

Related Regulations

Fire Service Law

Group 4, Type 1 petroleum, Water soluble liquid, (400 litre), (Remained chemical in a spray can after degassing falls under this group)

Chemical Substance Control Law

Priority Assessment Chemical Substance

Chemical Name	Number
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2-Butoxyethanol	109
Methyl isobutyl ketone	116

Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacture

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Substances Prevented From Impairment of Health

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical Name	Number	Concentration (%)
Ethanol	61	≥ 30 - < 40
Cobalt and its compounds	172	≥ 10 - < 20
Chromium and its compounds	142	≥ 10 - < 20
Iron oxide	192	
Molybdenum and its compounds	603	≥ 1 - < 10
Manganese and its inorganic compounds	550	≥ 1 - < 10
Ethylene glycol mono-n-butyl ether	79	≥ 1 - < 10
Ethyl acetate	177	≥ 1 - < 10
Butane	482	≥ 10 - < 20

Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

Chemical Name	Number
Cobalt and its inorganic compounds	9-4
Ethylene glycol mono-n-butyl ether	3-5
ethyl acetate	9-9

Ordinance on Prevention of Hazards Due to Specified Chemical Substances - Group 2 Substance

Chemical Name
Cobalt and its inorganic compounds
manganese
manganese and compounds

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Ordinance on Prevention of Lead Poisoning

Not applicable

Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

Ordinance on Prevention of Organic Solvent Poisoning

Not applicable

Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Combustible gas

Poisonous and Deleterious Substances Control Law

Not applicable

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Class I Designated Chemical Substances

Chemical Name	Number	Concentration (%)
Cobalt and its compounds / Measured as Cobalt	132	17
Chromium and chromium(III) compounds / Measured as Chromium	87	17
Molybdenum and its compounds / Measured as Molybdenum	453	6.7
Manganese and its compounds / Measured as Manganese	412	4.6

International Chemical Weapons Convention (CWC) : Neither banned nor restricted
Schedules of Toxic Chemicals and Precursors

Explosive Control Law

Not applicable

Vessel Safety Law

Gases (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

Aviation Law

Gases (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Noxious liquid substance(Category Z)

Pack transportation : Not classified as marine pollutant

Waste Disposal and Public Cleansing Law

Not applicable

The components of this product are reported in the following inventories:

EINECS (European Union) : On the inventory, or in compliance with the inventory

SWISS (Switzerland) : On the inventory, or in compliance with the inventory

TSCA (United States) : On TSCA Inventory

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DSL/NDSL (Canada)	: This product contains components listed on the Canadian NDSL. All other components are on the Canadian DSL.
AICS (Australia)	: Not in compliance with the inventory
NZioC (New Zealand)	: Not in compliance with the inventory
ENCS (Japan)	: On the inventory, or in compliance with the inventory
ISHL (Japan)	: Not in compliance with the inventory
KECI (Korea)	: On the inventory, or in compliance with the inventory
PICCS (Philippines)	: Not in compliance with the inventory
IECSC (China)	: On the inventory, or in compliance with the inventory
TCSI (Taiwan)	: On the inventory, or in compliance with the inventory
CICR (Turkey)	: Not in compliance with the inventory
INSQ (Mexico)	: Not in compliance with the inventory

16. OTHER INFORMATION

Date format : yyyy/mm/dd

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.

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