SAFETY DATA SHEET

1. Product and company identification

Product name : Aerodur LV 2114 Primer 2114P001

MSDS code : 016617

Supplier's details :

Akzo Nobel Coatings K.K.
5F Habiulu Nishi-shimbashi
2-35-2 Nishi-shimbashi, Minato-ku
Tokyo, 105-0003, Japan
TEL：+81-3-6459-0257
FAX：+81-3-6704-5075

Akzo Nobel Coatings, Inc.
1 East Water Street
Waukegan, IL 60085
USA
Tel. 1 847 623 4200
Email: customer.service@akzonobel.com
Email: PSRA_SSH@akzonobel.com

Emergency telephone number : +81-3-5276-5310

Hours of operation : 24 hours

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

Not applicable.

Product type : Liquid.

Date of issue/Date of revision : 2/9/2023

Date of previous issue : 2/9/2023

2. Hazards identification

GHS Classification :

FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Fertility) - Category 1A
TOXIC TO REPRODUCTION (Unborn child) - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (blood system, cardiovascular system, central nervous system (CNS), kidneys, liver and respiratory system) - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), immune system, kidneys and respiratory system) - Category 1
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.9%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.9%

GHS label elements

2. Hazards identification

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs. (blood system, cardiovascular system, central nervous system (CNS), kidneys, liver, respiratory system)
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), immune system, kidneys, respiratory system)
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Call a POISON CENTER or physician. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

ENCS number : Not available.

ISHL number : Not available.

Ingredient name	%	CAS number	ENCS	ISHL
strontium chromate	≥10 - ≤25	7789-06-2	1-288	Not available.
strontium chromate	≥10 - ≤25	7789-06-2	(1)-288	Not available.
magnesium oxide	≥10 - ≤25	1309-48-4	1-465	(1)-465
Oxirane, 2,2'-[(1-methylethylidene)bis(4, 1-phenyleneoxymethylene)]bis-, homopolymer	≥10 - ≤25	25085-99-8	Not available.	Not available.
heptan-2-one	≥10 - ≤25	110-43-0	(2)-542	2-542
heptan-2-one	≤12	110-43-0	(2)-542	2-542
Methyl isobutyl ketone	≤10	-	2-542	2-542
Methyl isobutyl ketone	≤5.9	108-10-1	2-542	2-542
Phenol, polymer with formaldehyde, glycidyl ether	≤10	28064-14-4	Not available.	Not available.
silicon dioxide	≤5.0	7631-86-9	1-548	(1)-548
silicon dioxide	≤5.0	7631-86-9	1-548	(1)-548
titanium dioxide	≤3.0	13463-67-7	1-558	(5)-5525; (1)-558
n-butyl acetate	≤3.0	-	2-731	(2)-731
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	<1.0	25068-38-6	(7)-1283	Not available.
toluene	<1.0	108-88-3	(3)-2	(3)-2
toluene	≤1.0	108-88-3	(3)-2	(3)-2
barium chromate	<1.0	10294-40-3	(1)-81	Not available.
xylene	<1.0	1330-20-7	(3)-3; (3)-60	(3)-3; (3)-60; 3-60
xylene	≤1.0	-	(3)-3; (3)-60	(3)-3; (3)-60; 3-60
butan-1-ol	≤0.30	71-36-3	(2)-3049	(2)-3049

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure.

4. First aid measures

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

Short term exposure

Potential delayed effects : Not available.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
strontium chromate	日本産業衛生学会 (Japan, 5/2017). Skin sensitizer. Inhalation sensitizer. OEL-M: 0.05 mg/m³, (as Cr) 8 hours. 労働安全衛生法 (Japan, 4/2017). TWA: 0.05 mg/m³, (as chromium) 8 hours.
strontium chromate	日本産業衛生学会 (Japan, 5/2016). Skin sensitizer. Inhalation sensitizer. OEL-M: 0.05 mg/m³, (as Cr) 8 hours. 労働安全衛生法 (Japan, 9/2015). TWA: 0.05 mg/m³, (as chromium) 8 hours.
Methyl isobutyl ketone	日本産業衛生学会 (Japan, 5/2017). OEL-M: 200 mg/m³ 8 hours. OEL-M: 50 ppm 8 hours. 労働安全衛生法 (Japan, 4/2017). TWA: 20 ppm 8 hours.
Methyl isobutyl ketone	日本産業衛生学会 (Japan, 5/2017). OEL-M: 200 mg/m³ 8 hours. OEL-M: 50 ppm 8 hours. 労働安全衛生法 (Japan, 4/2017). TWA: 20 ppm 8 hours.
titanium dioxide	日本産業衛生学会 (Japan, 5/2016). OEL-M: 0.3 mg/m³, (as Ti) 8 hours.
n-butyl acetate	日本産業衛生学会 (Japan, 5/2017). OEL-M: 475 mg/m³ 8 hours. OEL-M: 100 ppm 8 hours. 労働安全衛生法 (Japan, 4/2017). TWA: 150 ppm 8 hours.
toluene	日本産業衛生学会 (Japan, 5/2016). Absorbed through skin. OEL-M: 188 mg/m³ 8 hours. OEL-M: 50 ppm 8 hours. 労働安全衛生法 (Japan, 9/2015). TWA: 20 ppm 8 hours.
toluene	日本産業衛生学会 (Japan, 5/2016). Absorbed through skin. OEL-M: 188 mg/m³ 8 hours. OEL-M: 50 ppm 8 hours. 労働安全衛生法 (Japan, 9/2015). TWA: 20 ppm 8 hours.
barium chromate	日本産業衛生学会 (Japan, 5/2016). Skin sensitizer. Inhalation sensitizer. OEL-M: 0.05 mg/m³, (as Cr) 8 hours. 労働安全衛生法 (Japan, 9/2015). TWA: 0.05 mg/m³, (as chromium) 8 hours.
xylene	日本産業衛生学会 (Japan, 5/2016). OEL-M: 217 mg/m³ 8 hours. OEL-M: 50 ppm 8 hours. 労働安全衛生法 (Japan, 9/2015). TWA: 50 ppm 8 hours.
xylene	日本産業衛生学会 (Japan, 5/2016). OEL-M: 217 mg/m³ 8 hours. OEL-M: 50 ppm 8 hours.

8. Exposure controls/personal protection

butan-1-ol	労働安全衛生法 (Japan, 9/2015). TWA: 50 ppm 8 hours. 日本産業衛生学会 (Japan, 5/2016). Absorbed through skin. OEL-C: 150 mg/m³ OEL-C: 50 ppm 労働安全衛生法 (Japan, 9/2015). TWA: 25 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Yellow.

Odor : Solvent.

Odor threshold : Not available.

pH : Acidic.

Melting point : Not available.

Boiling point : 117°C (242.6°F)

Flash point : Closed cup: 5°C (41°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Greatest known range: Lower: 1.4% Upper: 7.6% (n-butyl acetate)

Vapor pressure : Not available.

Vapor density : Highest known value: 4 (Air = 1) (n-butyl acetate). Weighted average: 3.77 (Air = 1)

Relative density : 1.549

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): 3.55 cm^2/s (355 cSt)

VOC content : 317 g/l [ISO 11890-2]

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
strontium chromate	LD50 Intratracheal	Rat	16.6 mg/kg	-
strontium chromate	LD50 Oral	Rat	3118 mg/kg	-
heptan-2-one	LD50 Oral	Rat	1600 mg/kg	-
heptan-2-one	LD50 Oral	Rat	1600 mg/kg	-
Methyl isobutyl ketone	LD50 Oral	Rat	2080 mg/kg	-
Methyl isobutyl ketone	LD50 Oral	Rat	2080 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapor	Rat	390 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
toluene	LD50 Oral	Rat	636 mg/kg	-
toluene	LD50 Oral	Rat	636 mg/kg	-
xylene	LD50 Oral	Rat	4300 mg/kg	-
xylene	LD50 Oral	Rat	4300 mg/kg	-
butan-1-ol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
heptan-2-one	Skin - Mild irritant	Rabbit	-	24 hours 14 milligrams	-
heptan-2-one	Skin - Mild irritant	Rabbit	-	24 hours 14 milligrams	-
Methyl isobutyl ketone	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Methyl isobutyl ketone	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
silicon dioxide	Eyes - Mild irritant	Rabbit	-	24 hours 25 milligrams	-
silicon dioxide	Eyes - Mild irritant	Rabbit	-	24 hours 25 milligrams	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
n-butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870	-

11. Toxicological information

				Micrograms	
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
butan-1-ol	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Eyes - Severe irritant	Rabbit	-	0.005 Mililiters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

11. Toxicological information

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
strontium chromate	Category 1	Not determined	blood system, cardiovascular system, central nervous system (CNS), kidneys, liver and respiratory system
strontium chromate	Category 1	Not determined	blood system, cardiovascular system, central nervous system (CNS), kidneys, liver and respiratory system
magnesium oxide	Category 3	Not applicable.	Respiratory tract irritation
heptan-2-one	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
heptan-2-one	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl isobutyl ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl isobutyl ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
silicon dioxide	Category 3	Not applicable.	Respiratory tract irritation
silicon dioxide	Category 3	Not applicable.	Respiratory tract irritation
n-butyl acetate	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
toluene	Category 1	Not determined	central nervous system (CNS)
	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
toluene	Category 1	Not determined	central nervous system (CNS)
	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
xylene	Category 1	Not determined	central nervous system (CNS), kidneys, liver and respiratory system
	Category 3	Not applicable.	Narcotic effects
xylene	Category 1	Not determined	central nervous

11. Toxicological information

			system (CNS), kidneys, liver and respiratory system
butan-1-ol	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
strontium chromate	Category 1	Not determined	respiratory system
strontium chromate	Category 1	Not determined	respiratory system
Methyl isobutyl ketone	Category 1	Not determined	central nervous system (CNS)
Methyl isobutyl ketone	Category 1	Not determined	central nervous system (CNS)
silicon dioxide	Category 1	Not determined	immune system, kidneys and respiratory system
silicon dioxide	Category 1	Not determined	immune system, kidneys and respiratory system
toluene	Category 1	Not determined	central nervous system (CNS) and kidneys
toluene	Category 1	Not determined	central nervous system (CNS) and kidneys
xylene	Category 1	Not determined	nervous system and respiratory system
xylene	Category 1	Not determined	nervous system and respiratory system
butan-1-ol	Category 1	Not determined	central nervous system (CNS) and hearing organs

Aspiration hazard

Name	Result
toluene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
xylene	ASPIRATION HAZARD - Category 1
xylene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral Inhalation (vapors)	1845.8 mg/kg 53.77 mg/l

11. Toxicological information

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
heptan-2-one	Acute LC50 131000 to 137000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
heptan-2-one	Acute LC50 131000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Methyl isobutyl ketone	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
Methyl isobutyl ketone	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
silicon dioxide	Acute EC50 55.5 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Chronic NOEC 4.6 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
n-butyl acetate	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 62000 µg/l Fresh water	Fish - Danio rerio	96 hours
toluene	Acute EC50 433 ppm Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 500000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
butan-1-ol	Acute EC50 1983000 to 2072000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1910000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Persistence/degradability

Not available.

Bioaccumulative potential

12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
heptan-2-one	2.26	-	low
heptan-2-one	2.26	-	low
Methyl isobutyl ketone	1.9	-	low
Methyl isobutyl ketone	1.9	-	low
n-butyl acetate	2.3	-	low
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low
toluene	2.73	90	low
toluene	2.73	90	low
xylene	3.12	8.1 to 25.9	low
xylene	3.12	8.1 to 25.9	low
butan-1-ol	1	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

Hazardous to the ozone layer : Not applicable.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3 	3 	3 

14. Transport information

Packing group	II	II	II
Environmental hazards	No.	strontium chromate, Oxirane, 2,2'-[(1-methylethylidene)bis(4, 1-phenyleneoxymethylene)]bis-, homopolymer	No.
Additional information	**Viscous substance exemption** This class 3 material can be shipped as Packing Group III in packagings up to 450 L.	F-E, _S-E_ The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Viscous substance exemption** This class 3 material can be shipped as Packing Group III in packagings up to 450 L.	The environmentally hazardous substance mark may appear if required by other transportation regulations. **Viscous substance exemption** This class 3 material can be shipped as Packing Group III in packagings up to 30 L (100 L for cargo aircraft). Transport in accordance with this provision must be noted on the Shipper's Declaration.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory information

Fire Service Law

Category	Substance name/Type	Danger category	Signal word	Designated quantity
Category II Category IV	Material that contains: Metal powder. Class I petroleums	Not available. II	Not available. Flammable - Keep Fire Away	Not available. 200 L

Fire Service Law - Obstructive materials : Listed

Designated combustibles : Not available. **Designated quantity** : Not available.

Maritime Safety Law

Notification Regulating Transportation of Dangerous Materials by Sea

None of the components are listed.

Container class

None of the components are listed.

ISHL

Use of specified chemical substances

Ingredient name	%	Status	Reference number
strontium chromate	≥10 - ≤25	Group-2 Substances under Supervision	11

15. Regulatory information

Label requirements

Ingredient name	%	Status	Reference number
strontium chromate	≥10 - ≤25	Listed	142
heptan-2-one	≥10 - ≤25	Listed	586
silicon dioxide	≤5.0	Listed	312
Methyl isobutyl ketone	≤10	Listed	569
titanium dioxide	≤3.0	Listed	191
n-butyl acetate	≤3.0	Listed	181
toluene	≤1.0	Listed	407
xylene	<1.0	Listed	136
xylene	≤1.0	Listed	136

Chemicals requiring notification

Ingredient name	%	Status	Reference number
strontium chromate	≥10 - ≤25	Listed	142
heptan-2-one	≥10 - ≤25	Listed	586
silicon dioxide	≤5.0	Listed	312
Methyl isobutyl ketone	≤10	Listed	569
titanium dioxide	≤3.0	Listed	191
n-butyl acetate	≤3.0	Listed	181
toluene	≤1.0	Listed	407
xylene	<1.0	Listed	136
butan-1-ol	≤0.30	Listed	477
xylene	≤1.0	Listed	136

Carcinogen

None of the components are listed.

Mutagen

None of the components are listed.

Corrosive liquid : Not listed

ISHL Appendix 1 : Flammable liquid Class 3

Lead regulation : Not listed

Prevention of Tetraalkyl Lead Poisoning : Not listed

Harmful Substances Subject to Obtaining Permission for Manufacturing : Not listed

Harmful Substances, Prohibited for Manufacturing : Not listed

Dangerous Substances : Not listed

Organic solvents poisoning prevention : Class 2

Chemical Substances Control Law (CSCL)

15. Regulatory information

Ingredient name	%	Status	Reference number
Methyl isobutyl ketone	≤10	Priority assessment	116
toluene	≤1.0	Priority assessment	46
Formaldehyde, solution	<0.10	Priority assessment	25
Ethylbenzene	≤0.10	Priority assessment	50
xylene	<1.0	Priority assessment	125
butan-1-ol	≤0.30	Priority assessment	124
xylene	≤1.0	Priority assessment	125
1,4-dihydroxybenzene	≤0.038	Priority assessment	203

Poisonous and Deleterious Substances

Ingredient name	%	Status	Reference number
strontium chromate	≥10 - ≤25	Deleterious	26

Pollutant Release and Transfer Registers (PRTR)

Ingredient name	%	Status	Reference number
strontium chromate	≥10 - ≤25	Specified Class 1	88

JSOH Carcinogen : Group 1

Law Concerning Prevention of Pollution of the Ocean and Maritime Disaster : Not available.

Road law : Not available.

List of Specially Controlled Industrial Waste : Listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

16. Other information

History

Date of printing : 2/9/2023

Date of issue/Date of revision : 2/9/2023

Date of previous issue : 2/9/2023

Version : 3.01

Key to abbreviations :

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN CORROSION - Category 1	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
RESPIRATORY SENSITIZATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 1A	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 1A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (blood system, cardiovascular system, central nervous system (CNS), kidneys, liver and respiratory system) - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), immune system, kidneys and respiratory system) - Category 1	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

AkzoNobel Aerospace Coatings, Rijksstraatweg 31 2171 AJ Sassenheim. http://www.akzonobel.com/aerospace