Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

1 Identification

· **Product identifier**

· **Trade name: Residual Solvents Mixture 1 (CRM)**

· **Article number:** 38279
· **Restrictions**
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.
· **Application of the substance / the mixture**
This product is for research use - Not for human or veterinary diagnostic or therapeutic use.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Cayman Chemical Co.
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
USA

· **Information department:** Product safety department
· **Emergency telephone number:**
During normal opening times: +1 (734) 971-3335
US/CANADA: 800-424-9300
Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS08 Health hazard

Germ Cell Mutagenicity 1B	H340 May cause genetic defects.
Carcinogenicity 1A	H350 May cause cancer.
Toxic to Reproduction 1B	H360 May damage fertility or the unborn child.


GHS07

Acute Toxicity - Dermal 4	H312 Harmful in contact with skin.
Acute Toxicity - Inhalation 4	H332 Harmful if inhaled.
Flammable Liquids 4	H227 Combustible liquid.
Aquatic Acute 3	H402 Harmful to aquatic life.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 1)

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
N,N-dimethylacetamide
Dichloromethane
Benzene
Methanol
· **Hazard statements**
H227 Combustible liquid.
H312+H332 Harmful in contact with skin or if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
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 flames and hot surfaces. – No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
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.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 2
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 2
Reactivity = 0

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 2)

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 127-19-5 RTECS: AB 7700000	N,N-dimethylacetamide	89.6%
CAS: 67-56-1 RTECS: PC1400000	Methanol	0.5%
CAS: 75-09-2 RTECS: PA8050000	Dichloromethane	0.5%
CAS: 108-88-3 RTECS: XS 5250000	toluene	0.5%
CAS: 110-54-3 RTECS: MN9275000	Hexane	0.5%
CAS: 142-82-5 RTECS: MI7700000	Heptane	0.5%
CAS: 67-66-3 RTECS: FS9100000	Chloroform	0.1%
CAS: 71-43-2 RTECS: CY1400000	Benzene	0.1%
CAS: 79-01-6	trichloroethylene	0.1%
CAS: 107-06-2 RTECS: KI 0525000	1,2-dichloroethane	0.1%

· **Other ingredients**

CAS: 60-29-7 RTECS: KI 5775000	diethyl ether	0.5%
CAS: 64-17-5 RTECS: KQ6300000	ethanol	0.5%
CAS: 67-63-0 RTECS: NT8050000	Isopropyl alcohol	0.5%
CAS: 67-64-1 RTECS: AL3150000	Acetone	0.5%
CAS: 75-05-8 RTECS: AL7700000	Acetonitrile	0.5%
CAS: 75-83-2 RTECS: EJ 9300000	2,2-dimethylbutane	0.5%
CAS: 78-78-4 RTECS: EK 4430000	isopentane	0.5%
CAS: 79-29-8 RTECS: EJ 9350000	2,3-dimethylbutane	0.5%

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 3)

CAS: 95-47-6 RTECS: ZE 2450000	o-xylene	0.5%
CAS: 96-14-0 RTECS: SA 2995500	3-methylpentane	0.5%
CAS: 106-42-3 RTECS: ZE 2625000	p-xylene	0.5%
CAS: 107-83-5	hexane (containing < 5 % n-hexane (203-777-6))	0.5%
CAS: 108-38-3 RTECS: ZE 2275000	m-xylene	0.5%
CAS: 109-66-0 RTECS: RZ 9450000	pentane	0.5%
CAS: 141-78-6 RTECS: AH5425000	Ethyl Acetate	0.5%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 4)

Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
127-19-5	N,N-dimethylacetamide	30 ppm
60-29-7	diethyl ether	500 ppm
64-17-5	ethanol	1,800 ppm
67-56-1	Methanol	530 ppm
67-63-0	Isopropyl alcohol	400 ppm
67-64-1	Acetone	200 ppm
75-05-8	Acetonitrile	13 ppm
75-09-2	Dichloromethane	200 ppm
75-83-2	2,2-dimethylbutane	1,000 ppm
78-78-4	isopentane	3000* ppm
96-14-0	3-methylpentane	1,000 ppm
107-83-5	hexane (containing < 5 % n-hexane (203-777-6))	1,000 ppm
108-38-3	m-xylene	130 ppm
108-88-3	toluene	67 ppm
109-66-0	pentane	3000* ppm
110-54-3	Hexane	260 ppm
141-78-6	Ethyl Acetate	1,200 ppm
142-82-5	Heptane	500 ppm
67-66-3	Chloroform	2 ppm
71-43-2	Benzene	52 ppm
79-01-6	trichloroethylene	130 ppm
107-06-2	1,2-dichloroethane	50 ppm

· **PAC-2:**		
127-19-5	N,N-dimethylacetamide	67 ppm
60-29-7	diethyl ether	3200* ppm
64-17-5	ethanol	3300* ppm
67-56-1	Methanol	2,100 ppm
67-63-0	Isopropyl alcohol	2000* ppm
67-64-1	Acetone	3200* ppm
75-05-8	Acetonitrile	50 ppm
75-09-2	Dichloromethane	560 ppm
75-83-2	2,2-dimethylbutane	11000** ppm
78-78-4	isopentane	33000*** ppm
96-14-0	3-methylpentane	11000** ppm

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 5)

107-83-5	hexane (containing < 5 % n-hexane (203-777-6))	11000** ppm
108-38-3	m-xylene	920 ppm
108-88-3	toluene	560 ppm
109-66-0	pentane	33000*** ppm
110-54-3	Hexane	2900* ppm
141-78-6	Ethyl Acetate	1,700 ppm
142-82-5	Heptane	830 ppm
67-66-3	Chloroform	64 ppm
71-43-2	Benzene	800 ppm
79-01-6	trichloroethylene	450 ppm
107-06-2	1,2-dichloroethane	200 ppm

· **PAC-3:**

127-19-5	N,N-dimethylacetamide	400 ppm
60-29-7	diethyl ether	19000*** ppm
64-17-5	ethanol	15000* ppm
67-56-1	Methanol	7200* ppm
67-63-0	Isopropyl alcohol	12000** ppm
67-64-1	Acetone	5700* ppm
75-05-8	Acetonitrile	150 ppm
75-09-2	Dichloromethane	6,900 ppm
75-83-2	2,2-dimethylbutane	66000*** ppm
78-78-4	isopentane	200000*** ppm
96-14-0	3-methylpentane	66000*** ppm
107-83-5	hexane (containing < 5 % n-hexane (203-777-6))	66000*** ppm
108-38-3	m-xylene	2500* ppm
108-88-3	toluene	3700* ppm
109-66-0	pentane	200000*** ppm
110-54-3	Hexane	8600** ppm
141-78-6	Ethyl Acetate	10000** ppm
142-82-5	Heptane	5000* ppm
67-66-3	Chloroform	3,200 ppm
71-43-2	Benzene	4000* ppm
79-01-6	trichloroethylene	3,800 ppm
107-06-2	1,2-dichloroethane	300 ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 6)

· **Conditions for safe storage, including any incompatibilities**
· **Storage:** Store in accordance with information listed on the product insert.
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
127-19-5 N,N-dimethylacetamide	
PEL	Long-term value: 35 mg/m³, 10 ppm Skin
REL	Long-term value: 35 mg/m³, 10 ppm Skin
TLV	Long-term value: 10 ppm Skin; BEI, A3
67-56-1 Methanol	
PEL	Long-term value: 260 mg/m³, 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV	Short-term value: 250 ppm Long-term value: 200 ppm Skin; BEI
75-09-2 Dichloromethane	
PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL	See Pocket Guide App. A
TLV	Long-term value: 50 ppm BEI, A3
108-88-3 toluene	
PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m³, 150 ppm Long-term value: 375 mg/m³, 100 ppm
TLV	Long-term value: 20 ppm BEI, OTO, A4
110-54-3 Hexane	
PEL	Long-term value: 1800 mg/m³, 500 ppm
REL	Long-term value: 180 mg/m³, 50 ppm
TLV	Long-term value: 50 ppm Skin; BEI

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 7)

142-82-5 Heptane	
PEL	Long-term value: 2000 mg/m³, 500 ppm
REL	Long-term value: 350 mg/m³, 85 ppm Ceiling limit value: 1800* mg/m³, 440* ppm *15-min
TLV	Short-term value: 500 ppm Long-term value: 400 ppm
67-66-3 Chloroform	
PEL	Ceiling limit value: 240 mg/m³, 50 ppm
REL	Short-term value: 9.78* mg/m³, 2* ppm *60-min; See Pocket Guide App. A
TLV	Long-term value: 10 ppm A3
71-43-2 Benzene	
PEL	Short-term value: 15* mg/m³, 5* ppm Long-term value: 3* mg/m³, 1* ppm *table Z-2 for exclusions in 29CFR1910.1028(d)
REL	Short-term value: 1 ppm Long-term value: 0.1 ppm See Pocket Guide App. A
TLV	Short-term value: (2.5) NIC-0.1 ppm Long-term value: (0.5) NIC-0.02 ppm Skin; BEI, A1
79-01-6 trichloroethylene	
PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 2 hrs
REL	See Pocket Guide Apps. A and C
TLV	Short-term value: 25 ppm Long-term value: 10 ppm BEI, A2
107-06-2 1,2-dichloroethane	
PEL	Long-term value: 50 ppm Ceiling limit value: 100; 200* ppm *5-min peak in any 3 hrs
REL	Short-term value: 8 mg/m³, 2 ppm Long-term value: 4 mg/m³, 1 ppm See Pocket Guide Apps. A and C
TLV	Long-term value: 10 ppm A4

· **Ingredients with biological limit values:**

127-19-5 N,N-dimethylacetamide	
BEI	30 mg/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: N-Methylacetamide

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 8)

67-56-1 Methanol	
BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
75-09-2 Dichloromethane	
BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)
108-88-3 toluene	
BEI	0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene 0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)
110-54-3 Hexane	
BEI	0.5 mg/L Medium: urine Time: end of shift Parameter: 2.5-Hexanedione without hydrolysis
71-43-2 Benzene	
BEI	25 µg/g creatinine Medium: urine Time: end of shift Parameter Parameter: S-Phenylmercapturic acid (background 500 µg/g creatinine Medium: urine Time: end of shift Parameter: t,t-Muconic acid (background)

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 9)

79-01-6 trichloroethylene	
BEI	15 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Trichloroacetic acid (nonspecific) 0.5 mg/L Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethanol without hydrolysis (nonspecific) - Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative) - Medium: end-exhaled air Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 10)

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **Formulation**	A solution in N,N-Dimethylacetamide
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	165.5 °C (329.9 °F)
· **Flash point:**	66 °C (150.8 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto igniting:**	390 °C (734 °F)
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Not determined.
· **Explosion limits:**	
Lower:	1.7 Vol %
Upper:	11.5 Vol %
· **Vapor pressure at 20 °C (68 °F):**	3.3 hPa (2.5 mm Hg)
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	8.2 %

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 11)

VOC content:	7.70 % 77.0 g/l / 0.64 lb/gal
Solids content:	0.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	20,020 mg/kg (rat)
Dermal	LD50	1,156 mg/kg
Inhalative	LC50/4 h	12 mg/l

127-19-5 N,N-dimethylacetamide		
Oral	LD50	4,930 mg/kg (rat)
Dermal	LD50	2,240 mg/kg (rabbit)

67-56-1 Methanol		
Oral	LD50	100.1 mg/kg (rat) (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Symptoms: Nausea, Vomiting
Dermal	LD50	300.1 mg/kg (rabbit) (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Inhalative	LC50/4 h	3.1 mg/l (rat) (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Symptoms: Irritation symptoms in the respiratory tract.

75-09-2 Dichloromethane		
Oral	LDLO	357 mg/kg (hmn)
	LD50	1,600 mg/kg (rat)

(Contd. on page 13)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 12)

	TDLO	1,429 µL/kg (man)
Inhalative	LC50/4 h	88 mg/l (rat)
	Intraperitoneal LD50	916 mg/kg (rat)
	Subcutaneous LD50	6,460 mg/kg (mouse)
108-88-3 toluene		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/l (mouse)
110-54-3 Hexane		
Oral	LD50	15,840 mg/kg (rat)
Inhalative	LC50/4 h	48,000 mg/m³ (rat)
	TCLO	5,400 mg/m³/10m (hmn)
Irritation of eyes	Irritation	10 mg (rabbit) mild
	Interperitoneal LDLO	9,100 mg/kg (rat)
	Data	10 mg (rabbit) mild
142-82-5 Heptane		
Inhalative	LC50/4 h	48,000 mg/m³ (rat)
	TCLO	1,000 mg/m³/6m (hmn)
	LC50	103 g/m³/4h (rat)
67-66-3 Chloroform		
Oral	LDLO	2,514 mg/kg (man)
	LD50	300 mg/kg (rat)
Dermal	LD50	>20 g/kg (rabbit)
	LD50	75 mg/kg (rat)
Inhalative	LC50	47,702 mg/m³/4h (rat)
	TCLO	5,000 mg/m³/7m (hmn)
Irritation of skin	Irritation	10 mg/24h (rabbit) mild
Irritation of eyes	Irritation	20 mg/24h (rabbit) moderate
	Intraperitoneal LD50	623 mg/kg (mouse)
71-43-2 Benzene		
Oral	LDLO	50 mg/kg (man)
	LD50	930 mg/kg (rat)
Dermal	LD50	48 mg/kg (mouse)
Inhalative	LCLO	2 pph/5M (hmn)
	LC50/4 h	9,980 mg/l (mouse)
	Intraperitoneal LD50	1,100 µg/kg (rat)
	Intraperitoneal LD50	340 mg/kg (mouse)
	Subcutaneous LDLO	5 mg/kg (rat)
79-01-6 trichloroethylene		
Oral	LD50	2,402 mg/kg (mouse)
Dermal	LD50	8,450 mg/kg (mouse)

(Contd. on page 14)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 13)

107-06-2 1,2-dichloroethane		
Oral	LD50	670 mg/kg (rat)
Dermal	LD50	2,800 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
The product can cause inheritable damage.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
127-19-5	N,N-dimethylacetamide	2B
64-17-5	ethanol	1
67-63-0	Isopropyl alcohol	3
75-09-2	Dichloromethane	2A
95-47-6	o-xylene	3
106-42-3	p-xylene	3
108-38-3	m-xylene	3
108-88-3	toluene	3
67-66-3	Chloroform	2B
71-43-2	Benzene	1
79-01-6	trichloroethylene	1
107-06-2	1,2-dichloroethane	2B

· **NTP (National Toxicology Program)**		
75-09-2	Dichloromethane	R
67-66-3	Chloroform	R
71-43-2	Benzene	K
79-01-6	trichloroethylene	K
107-06-2	1,2-dichloroethane	R

· **OSHA-Ca (Occupational Safety & Health Administration)**	
75-09-2	Dichloromethane
71-43-2	Benzene

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Harmful to fish

(Contd. on page 15)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 14)

· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Harmful to aquatic organisms
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT**	NA1993
· **IMDG, IATA**	not regulated
· **UN proper shipping name**	
· **DOT**	COMBUSTIBLE LIQUID, N.O.S
· **IMDG, IATA**	not regulated
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	3 Combustible liquids
· **Label**	3
· **ADN/R Class:**	not regulated
· **Packing group**	
· **DOT**	III
· **IMDG, IATA**	not regulated
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

(Contd. on page 16)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 15)

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L

· **IATA**

· **Remarks:**	When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
· **UN "Model Regulation":**	not regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

67-66-3	Chloroform

· **Section 313 (Specific toxic chemical listings):**

67-56-1	Methanol
67-63-0	Isopropyl alcohol
75-05-8	Acetonitrile
75-09-2	Dichloromethane
95-47-6	o-xylene
106-42-3	p-xylene
108-38-3	m-xylene
108-88-3	toluene
110-54-3	Hexane
67-66-3	Chloroform
71-43-2	Benzene
79-01-6	trichloroethylene
107-06-2	1,2-dichloroethane

· **TSCA (Toxic Substances Control Act):**
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

67-56-1	Methanol
75-05-8	Acetonitrile
75-09-2	Dichloromethane
95-47-6	o-xylene
106-42-3	p-xylene
108-38-3	m-xylene

(Contd. on page 17)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 16)

108-88-3	toluene
110-54-3	Hexane
67-66-3	Chloroform
71-43-2	Benzene
79-01-6	trichloroethylene
107-06-2	1,2-dichloroethane

· **Proposition 65**

· **Chemicals known to cause cancer:**	
127-19-5	N,N-dimethylacetamide
75-09-2	Dichloromethane
67-66-3	Chloroform
71-43-2	Benzene
79-01-6	trichloroethylene
107-06-2	1,2-dichloroethane

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**	
127-19-5	N,N-dimethylacetamide
110-54-3	Hexane
71-43-2	Benzene
79-01-6	trichloroethylene

· **Chemicals known to cause developmental toxicity:**	
127-19-5	N,N-dimethylacetamide
64-17-5	ethanol
67-56-1	Methanol
108-88-3	toluene
67-66-3	Chloroform
71-43-2	Benzene
79-01-6	trichloroethylene

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**		
67-64-1	Acetone	I
75-05-8	Acetonitrile	CBD, D
75-09-2	Dichloromethane	L
95-47-6	o-xylene	I
106-42-3	p-xylene	I
108-38-3	m-xylene	I
108-88-3	toluene	II
110-54-3	Hexane	II
142-82-5	Heptane	D
67-66-3	Chloroform	B2, L, NL
71-43-2	Benzene	A, K/L
79-01-6	trichloroethylene	CaH

(Contd. on page 18)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 17)

107-06-2	1,2-dichloroethane	B2

· **TLV (Threshold Limit Value)**

127-19-5	N,N-dimethylacetamide	A4
64-17-5	ethanol	A3
67-63-0	Isopropyl alcohol	A4
67-64-1	Acetone	A4
75-05-8	Acetonitrile	A4
75-09-2	Dichloromethane	A3
95-47-6	o-xylene	A4
106-42-3	p-xylene	A4
108-38-3	m-xylene	A4
108-88-3	toluene	A4
67-66-3	Chloroform	A3
71-43-2	Benzene	A1
79-01-6	trichloroethylene	A2
107-06-2	1,2-dichloroethane	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

75-09-2	Dichloromethane
67-66-3	Chloroform
71-43-2	Benzene
79-01-6	trichloroethylene
107-06-2	1,2-dichloroethane

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· **Department issuing SDS:** Environment protection department.
· **Contact:** -
· **Date of preparation / last revision** 04/27/2023
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

(Contd. on page 19)

Safety Data Sheet
acc. to OSHA HCS

Printing date 04/27/2023 Revision date 04/27/2023

Trade name: Residual Solvents Mixture 1 (CRM)

(Contd. from page 18)

HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flammable Liquids 4: Flammable liquids – Category 4
Acute Toxicity - Dermal 4: Acute toxicity – Category 4
Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B
Carcinogenicity 1A: Carcinogenicity – Category 1A
Toxic to Reproduction 1B: Reproductive toxicity – Category 1B
Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3