

## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>OYA® PERMANENT COLOR</b>
1.2	Chemical Name:	NA
1.3	Synonyms:	NA
1.4	Trade Names:	OYA® Permanent Color
1.5	Product Uses & Restrictions:	Professional or Cosmetic Use Only
1.6	Distributor's Name:	Helias LLC
1.7	Distributor's Address:	17030 Ventura Blvd, Suite 200, Los Angeles, CA 91316 USA
1.8	Emergency Phone:	<b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-3887</b>
1.9	Business Phone / Fax:	+1 (310) 437-4480 / +1 (310) 437-4481

## 2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	<p>Prepared in accordance with UN Globally Harmonized standards. Intended to comply with OSHA 29 CFR 1910.1200, Canadian WHMIS and Australian Work Health and Safety standards. This product is classified as a hazardous substance BUT NOT as dangerous goods according to the classification criteria of WHSR and ADG Code (Australia).</p> <p><b>WARNING! CAUSES SERIOUS EYE IRRITATION.</b></p> <p>Classification: Eye Irrit. 2A</p>	
2.2	Label Elements:	<p><u>Hazard Statements</u> (H): H319 – Causes serious eye irritation.</p> <p><u>Precautionary Statements</u> (P): P264 – Wash thoroughly after handling. P280 – Wear protective gloves and eye/face protection. P305+P351+P338 – IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice/attention. P405 – Store locked up. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).</p>	
2.3	Other Warnings:	<p>This product is designed and intended for use by a licensed cosmetologist/professional hairdresser only, and carries no warranty, expressed or implied, if used by others. Preliminary patch testing is recommended. Tattoos, including black and temporary henna, may increase the risk of allergy, If a severe allergic reaction should occur, immediately seek medical attention. This product must not be used for dyeing the eyelashes or eyebrows; to do so may cause blindness.</p> <p><b>KEEP OUT OF REACH OF CHILDREN.</b></p>	

## 3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					TLV	STEL	ppm			PEL	STEL	IDLH		
AQUA (WATER/EAU)	7732-18-5	ZC0110000	231-791-2	40-100	NA	NA	NF	NF	NF	NA	NA	NA		
CETEARYL ALCOHOL	8005-44-5	NA	267-008-6	NA	NA	NA	NF	NF	NF	NA	NA	NA		
AMMONIUM HYDROXIDE	1336-21-6	BQ9625000	215-647-6	0.1-0.5	25	35	25	50	NF	25	NA	NA	25 NIOSH	
ISOPROPYL PALMITATE	142-91-6	RT4900000	205-571-1	NA	NA	NA	NF	NF	NF	NA	NA	NA		
	Skin Irrit. 2; Eye Irrit. 2A; H315, H319													
PROPYLENE GLYCOL	57-55-6	TY2000000	200-338-0	NA	NA	NA	150	474	NF	NA	NA	NA		
	Skin Irrit. 3; Eye Irrit. 2; H316, H320													
OLETH-10	9004-98-2	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
CETEARETH-20	68439-49-6	NA	500-212-8	NA	NA	NA	NF	NF	NF	NA	NA	NA		
POLYSORBATE 60	9005-67-8	WG2934000	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
BEHENTRIMONIUM CHLORIDE	17301-53-0	NA	241-237-0	NA	NA	NA	NF	NF	NF	NA	NA	NA		
PEG-75 LANOLIN	67648-38-4	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
SODIUM LAURETH SULFATE	9004-82-4	WB7499000	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
	Acute Tox. 4, Eye Irrit. 2; H302, H319													
PEG-100 STEARATE	9004-99-3	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
CETETH-20	9004-95-9	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
CAMELLIA SINENSIS (GREEN TEA) LEAF EXTRACT	84650-60-2	NA	283-519-7	NA	NA	NA	NF	NF	NF	NA	NA	NA		
MACROCYSTIS PYRIFERA (KELP) EXTRACT	347174-92-9	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
SODIUM SULFITE	7757-83-7	NA	231-824-4	NA	NA	NA	NF	NF	NF	NA	NA	NA		



# SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, EU Standards

SDS Revision: 2.1

SDS Revision Date: 3/20/2021

### 3. COMPONENTS & COMPONENTS INFORMATION – cont'd

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
ERYTHORBIC ACID	89-65-6	NA	201-928-0	NA	NA	NA	NF	NF	NF	NA	NA	NA		
DISODIUM EDTA	6381-92-6	AH4410000	205-358-3	NA	NA	NA	NF	NF	NF	NA	NA	NA		
SODIUM HYDROXIDE	1310-73-2	WB4900000	215-185-5	NA	2	NA	2	NF	NF	2	NA	10		
FRAGRANCE (PARFUM)	NA	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
<b>MAY ALSO CONTAIN:</b>														
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE	155601-30-2	NA	429-300-3	NA	NA	NA	NF	NF	NF	NA	NA	NA		
2,4-DIAMINOPHENOXYETHANOL HCL	70643-19-5	NA	266-357-1	NA	NA	NA	NF	NF	NA	NF	NF	NF		
2-AMINO-3-HYDROXYPYRIDINE	16867-03-1	NA	240-886-8	NA	NA	NA	NF	NF	NA	NF	NF	NF		
2-AMINO-4-HYDROXYETHYLAMINOANISOLE SULFATE	83763-48-8	NA	280-734-8	NA	NA	NA	NF	NF	NF	NA	NA	NA		
2-AMINO-6-CHLORO-4-NITROPHENOL	6358-09-4	NA	228-762-1	NA	NA	NA	NF	NF	NF	NA	NA	NA		
2-METHYL-5-HYDROXYETHYLAMINOPHENOL	55302-96-0	NA	259-583-7	NA	NA	NA	NF	NF	NF	NA	NA	NA		
2-METHYLRESORCINOL	608-25-3	VH2009500	210-155-8	NA	NA	NA	NF	NF	NF	NA	NA	NA		
4-AMINO-2-HYDROXYTOLUENE	2835-95-2	SJ6090000	220-618-6	NA	NA	NA	NF	NF	NF	NA	NA	NA		
4-AMINO-3-NITROPHENOL	610-81-1	NA	210-236-8	NA	NA	NA	NF	NF	NF	NA	NA	NA		
4-AMINO-M-CRESOL	2835-99-6	GO6826000	220-621-2	NA	NA	NA	NF	NF	NA	NF	NF	NF		
4-CHLORORESORCINOL	95-88-5	VH0450000	202-462-1	NA	NA	NA	NF	NF	NF	NA	NA	NA		
4-HYDROXYPROPYLAMINO-3-NITROPHENOL	92952-81-3	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
5-AMINO-6-CHLORO-O-CRESOL	84540-50-1	NA	283-144-9	NA	NA	NA	NF	NF	NF	NA	NA	NA		
DISPERSE VIOLET 1	128-95-0	NA	204-922-6	NA	NA	NA	NF	NF	NF	NA	NA	NA		
HC BLUE 2	526194-45-6	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA		
HC RED 3	2871-01-4	NA	220-701-7	NA	NA	NA	NF	NF	NF	NA	NA	NA		
HC YELLOW 2	4926-55-0	NA	2252-555-8	NA	NA	NA	NF	NF	NF	NA	NA	NA		
m-AMINOPHENOL	591-27-5	NA	209-711-2	NA	NA	NA	NF	NF	NF	NA	NA	NA		
RESORCINOL	108-46-3	VG9625000	203-585-2	NA	NA	NA	NF	NF	NF	NA	NA	NA		
TOLUENE-2,5-DIAMINE SULFATE	615-50-9	NA	210-431-8	NA	NA	NA	NF	NF	NF	NA	NA	NA		

### 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b> If ingested, DO NOT INDUCE VOMITING. Seek immediate medical attention. Contact the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p><b>Eyes:</b> If product gets in the eyes, remove contact lenses (if used), flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek medical attention.</p> <p><b>Skin:</b> Discontinue use of the product and wash with soap and water. If discomfort persists, seek medical attention.</p> <p><b>Inhalation:</b> Remove victim to fresh air at once. If not breathing, give artificial respiration and contact a physician or local emergency services immediately.</p>
4.2	Effects of Exposure:	<p><b>Ingestion:</b> If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p><b>Eyes:</b> Moderately irritating to the eyes - may cause redness, itching, irritation and watering.</p> <p><b>Skin:</b> This product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.</p> <p><b>Inhalation:</b> None expected.</p>

## 4. FIRST AID MEASURES– cont'd

4.3	Symptoms of Overexposure:	Overexposure in eyes may cause redness, itching and watering. Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. The product may cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.			
4.4	Acute Health Effects:	Moderate irritation to eyes and skin near affected areas.			
4.5	Chronic Health Effects:	No harmful or chronic health effects are expected to occur from a single accidental ingestion.			
4.6	Target Organs:	Eyes, Skin			
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin).	<b>HEALTH</b>	<b>1</b>	
			<b>FLAMMABILITY</b>	<b>0</b>	
			<b>PHYSICAL HAZARDS</b>	<b>1</b>	
			<b>PROTECTIVE EQUIPMENT</b>	<b>B</b>	
			<b>EYES</b>	<b>SKIN</b>	

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO <sub>2</sub> , NOx).	
5.2	Extinguishing Methods:	Water Spray, Foam, CO <sub>2</sub> , Dry Chemical, Halon (if permitted)	
5.3	Firefighting Procedures:	As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personnel. Fight fire upwind. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.	

## 6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	<p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment (PPE).</p> <p>For <u>small spills</u> (e.g., &lt; 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows). Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.:</p> <p>For <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows). Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.:</p>
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## 7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Do not eat, drink, or smoke while handling this product. Wash thoroughly after handling. Wash residues with soap and warm water.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans). Keep away from excessive heat and open flames. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage.
7.3	Special Precautions:	Spilled material may present a fire and slipping hazard if left unattended. Clean all spills promptly.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m <sup>3</sup> )	ACGIH		NOHSC			OSHA			<b>OTHER</b>			
		<b>CHEMICAL NAME(S)</b>		<b>TLV</b>	<b>STEL</b>	<b>ES-TWA</b>	<b>ES-STEL</b>	<b>ES-PEAK</b>	<b>PEL</b>		<b>STEL</b>	<b>IDLH</b>	
		AMMONIUM HYDROXIDE		25	35	25	50	NF	25		NA	NA	25 NIOSH
		PROPYLENE GLYCOL		NA	NA	150	474	NF	NA		NA	NA	
		SODIUM HYDROXIDE		2	NA	2	NF	NF	2	NA	10		
8.2	Ventilation & Engineering Controls:	When working with large quantities of product, provide adequate ventilation (e.g., local exhaust ventilation, fans). Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.											
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134, applicable U.S. state regulations, or the appropriate standards of Canada, its provinces, E.C. member states, or Australia.											

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION– cont'd

8.4	Eye Protection:	<b>AVOID EYE CONTACT.</b> Protective eyewear recommended. Always use protective eyewear when cleaning spills or leaks. Contact lenses pose a special hazard as soft lenses may absorb and concentrate irritants.	
8.5	Hand Protection:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. If anticipated that prolonged & repeated skin contact will occur during use of this product, wear latex, rubber or nitrile gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the E.C. member states.	
8.6	Body Protection:	No special body protection is required under typical circumstances of use and handling. Apron recommended when handling large quantities (e.g., ≥ 1 gallon). Eye wash stations and deluge showers should be available.	

## 9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Dye, various colors
9.2	Odor:	Perfumery (ammonia) odor
9.3	Odor Threshold:	NA
9.4	pH:	9.5 - 10.8
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	> 100 °C (> 212 °F)
9.7	Flashpoint:	NA
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	0.99 ± 0.02
9.12	Solubility:	Slightly soluble in water
9.13	Partition Coefficient (log Pow):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NA

## 10. STABILITY & REACTIVITY

10.1	Stability:	This product is stable.
10.2	Hazardous Decomposition Products:	Oxides of carbon (CO, CO <sub>2</sub> ), nitrogen (NO <sub>x</sub> ) and sulfur (SO <sub>2</sub> ).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Open flames, sparks and high heat, direct sunlight.
10.5	Incompatible Substances:	Store away from flammable liquids, flammable solids, aerosols and other incompatible materials (e.g., reducing materials, combustible materials, metal contamination like iron, copper their alloys). Avoid contamination. Do not store any tint, lightener lotion or bleach powder after it has been mixed with developer; the container may rupture. Never return unused material to original container. Avoid extreme heat and ignition sources.

## 11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: NO
11.2	Toxicity Data:	This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature, but are not presented in this document.		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	<u>Hydrogen Peroxide:</u> ACGIH Group A3; IARC Group 3 (Not classifiable as to it's carcinogenicity to humans). <u>Resorcinol:</u> IARC Group 3 (nNot carcinogenic to humans).		
11.6	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
11.7	Irritancy of Product:	See Section 4.3		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

## 12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	There is no specific data available for this product.
12.2	Effects on Plants & Animals:	There is no specific data available for this product.
12.3	Effects on Aquatic Life:	There is no specific data available for this product.

## 13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Dispose of in accordance with federal, state and local regulations.
13.2	Special Considerations:	NA

## 14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	NOT REGULATED	
14.2	IATA (AIR):	NOT REGULATED	
14.3	IMDG (OCN):	NOT REGULATED	
14.4	TDGR (CANADA):	NOT REGULATED	
14.5	ADR/RID (EU):	NOT REGULATED	
14.6	SCT (MEXICO):	NOT REGULATED	
14.7	ADGR (AUS):	NOT REGULATED	

## 15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product contains Ammonium Hydroxide, a substance subject to SARA Title III, section 313 reporting requirements.	
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.	
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.	
15.4	CERCLA Reportable Quantity (RQ):	Ammonium Hydroxide: 454 kg (1000 lbs)	
15.5	Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics). This material does not contain any hazardous air pollutants. None of the components in this product are listed as priority pollutants under the CWA. None of the components in this product are listed as toxic pollutants under the CWA.	
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS D2B (Other Toxic Effects)	
15.7	State Regulatory Information:	<p>Ammonium Hydroxide can be found on the following state right to know lists: CA, IL, MA, NJ, PA, RI.</p> <p>Propylene Glycol can be found on the following state right to know lists: MN, PA.</p> <p>No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).</p>	
15.8	Other Requirements:	This product is found on the following inventory lists: Australia - AICS, China - IECSC, Europe - ELINCS/EINEC, Japan - ENCS; Korea - KECL; New Zealand - NZIoC; {Philippines - PICCS; USA - TSCA	

## 16. OTHER INFORMATION

16.1	Other Information:	<p><b>WARNING! CAUSES SERIOUS EYE IRRITATION.</b>  Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  <b>KEEP OUT OF REACH OF CHILDREN</b></p>	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	<p>This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's &amp; Helias LLC knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.</p>	
16.4	Prepared for:	<p><b>Helias LLC</b>  17030 Ventura Blvd, Suite 200  Los Angeles, CA 91316 USA  Tel: +1 (310) 437-4480  Fax: +1 (310) 437-4481  <a href="http://www.heliascosmetics.com">www.heliascosmetics.com</a></p>	
16.5	Prepared by:	<p><b>ShipMate, Inc.</b>  P.O. Box 787  Sisters, Oregon 97759-0787 USA  Tel: +1 (310) 370-3600  Fax: +1 (310) 370-5700  <a href="http://www.shipmate.com">http://www.shipmate.com</a></p>	

## DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

### GENERAL INFORMATION:

<b>CAS No.</b>	Chemical Abstract Service Number
<b>RTECS No.</b>	Registry of Toxic Effects of Chemical Substances Number
<b>EINECS No.</b>	European Inventory of Existing Commercial Chemical Substances Number

### EXPOSURE LIMITS IN AIR:

<b>ACGIH</b>	American Conference on Governmental Industrial Hygienists
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>NOHSC</b>	National Occupational Health and Safety Commission (Australia)
<b>OSHA</b>	U.S. Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>STEL</b>	Short Term Exposure Limit
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time Weighted Average

### FIRST AID MEASURES:

<b>CPR</b>	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

#### HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

<b>HEALTH</b>
<b>FLAMMABILITY</b>
<b>PHYSICAL HAZARDS</b>
<b>PERSONAL PROTECTION</b>

#### PERSONAL PROTECTION RATINGS:

<b>A</b>		<b>G</b>	
<b>B</b>		<b>H</b>	
<b>C</b>		<b>I</b>	
<b>D</b>		<b>J</b>	
<b>E</b>		<b>K</b>	
<b>F</b>		<b>X</b>	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Protective Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

### OTHER STANDARD ABBREVIATIONS:

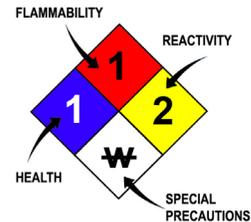
<b>Carc</b>	Carcinogenic
<b>Irrit</b>	Irritant
<b>NA</b>	Not Available
<b>NR</b>	No Results
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>Sens</b>	Sensitization
<b>STOT RE</b>	Specific Target Organ Toxicity – Repeat Exposure
<b>STOT SE</b>	Specific Target Organ Toxicity – Single Exposure

### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

<b>FLAMMABILITY LIMITS IN AIR:</b>	
<b>Autoignition Temperature</b>	Minimum temperature required to initiate combustion in air with no other source of ignition
<b>LEL</b>	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
<b>UEL</b>	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

### HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
<b>ACD</b>	Acidic
<b>ALK</b>	Alkaline
<b>COR</b>	Corrosive
<b>W</b>	Use No Water
<b>OX</b>	Oxidizer
<b>TREFOIL</b>	Radioactive



### TOXICOLOGICAL INFORMATION:

<b>LD<sub>50</sub></b>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
<b>LC<sub>50</sub></b>	Lethal concentration (gases) which kills 50% of the exposed animal
<b>ppm</b>	Concentration expressed in parts of material per million parts
<b>TD<sub>01</sub></b>	Lowest dose to cause a symptom
<b>TCLo</b>	Lowest concentration to cause a symptom
<b>TD<sub>01</sub>, LD<sub>01</sub>, &amp; LD<sub>01</sub> or TC, TC<sub>01</sub>, LC<sub>01</sub>, &amp; LC<sub>01</sub></b>	Lowest dose (or concentration) to cause lethal or toxic effects
<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program
<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances
<b>BCF</b>	Bioconcentration Factor
<b>TL<sub>m</sub></b>	Median threshold limit
<b>log K<sub>ow</sub> or log K<sub>oc</sub></b>	Coefficient of Oil/Water Distribution

### REGULATORY INFORMATION:

<b>WHMIS</b>	Canadian Workplace Hazardous Material Information System
<b>DOT</b>	U.S. Department of Transportation
<b>TC</b>	Transport Canada
<b>EPA</b>	U.S. Environmental Protection Agency
<b>DSL</b>	Canadian Domestic Substance List
<b>NDSL</b>	Canadian Non-Domestic Substance List
<b>PSL</b>	Canadian Priority Substances List
<b>TSCA</b>	U.S. Toxic Substance Control Act
<b>EU</b>	European Union (European Union Directive 67/548/EEC)
<b>WGK</b>	Wassergefährdungsklassen (German Water Hazard Class)

### WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

### CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment