

SAFETY DATA SHEET

Issue Date 08-Jun-2017 **Revision Date** 10-Jan-2018 **Version** 1.1 **Page** 1 / 14

1. IDENTIFICATION

Product identifier

Product Name Metals Prep Set Reagent C

Other means of identification

Product Code(s) TNT890C

Safety data sheet number M01970

UN/ID no UN1824

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

Uses advised against None. Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address

Hach Company P.O.Box 389 Loveland, CO 80539 USA +1(970) 669-3050

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word - Danger

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Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

Precautionary statements

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P363 - Wash contaminated clothing before reuse

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P390 - Absorb spillage to prevent material damage

P405 - Store locked up

P406 - Store in corrosive resistant stainless steel container with a resistant inliner

P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards Known

Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Family Mixture.

Chemical nature Aqueous alkaline solution.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Sodium hydroxide	1310-73-2	20 - 30%	-

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4. FIRST AID MEASURES

Description of first aid measures

General advice No hazards which require special first aid measures. Use first aid treatment according to

the nature of the injury.

Inhalation Remove to fresh air.

Eye contactRinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact Wash skin with soap and water.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for additional Toxicological Information.

Indication of any immediate medical attention and special treatment needed

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

Hazardous combustion products This material will not burn.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear.

6. ACCIDENTAL RELEASE MEASURES

U.S. NoticeOnly persons properly qualified to respond to an emergency involving hazardous

substances may respond to a spill according to federal regulations (OSHA 29 CFR

1910.120(a)(v)) and per your company's emergency response plan and

guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations

should respond to a spill involving chemicals.

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

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Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Flammability class Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	IDLH: 10 mg/m ³
CAS#: 1310-73-2		(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Appropriate engineering controls

Engineering Controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand Protection Wear suitable gloves.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protectionNo special protective equipment required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained. Do not

allow into any sewer, on the ground or into any body of water.

Thermal hazards None under normal processing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

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Appearance aqueous solution

Odor None

Color colorless
Odor threshold No data available

Property Values Remarks • Method

Molecular weight No data available

pH > 14

Melting point/freezing point 320 °C / 608 °F

Boiling point / boiling range 1390 °C / 2534 °F

Evaporation rate 0.96 (water = 1) Estimation based on theoretical

calculation

Vapor pressure 19.802 mm Hg / 2.64 kPa at 25 °C / 77 °F Estimation based on theoretical

calculation

Vapor density (air = 1) 0.62 (air = 1)

Specific gravity (water = 1 / air = 1)

No data available

Partition Coefficient (n-octanol/water) Not applicable

Soil Organic Carbon-Water Partition

Coefficient

Not applicable

Autoignition temperature No data available

Decomposition temperature No data available

Dynamic viscosity No data available

Kinematic viscosity No data available

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature		
Soluble	> 1000 mg/L	25 °C / 77 °F		

Solubility in other solvents

Chemical Name	<u>Chemical Name</u> <u>Solubility classification</u>		Solubility Temperature	
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F	

Other Information

Metal Corrosivity

Classified as corrosive to metal according to GHS criteria

Steel Corrosion RateNo data availableAluminum Corrosion RateNo data available

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium hydroxide	1310-73-2	No data available	-

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Explosive properties

Upper explosion limitNo data availableLower explosion limitNo data available

Flammable properties

Flash point No data available

Method No information available

Flammability Limit in Air

Upper flammability limit:No data availableLower flammability limit:No data available

Oxidizing properties No data available.

Bulk density

Not applicable

Particle Size No information available

Particle Size Distribution No information available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None Sensitivity to Static Discharge None.

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials Strong oxidizing agents, strong acids, and strong bases.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation No known effect based on information supplied.

Eye contact No known effect based on information supplied.

Skin contact No known effect based on information supplied.

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Ingestion No known effect based on information supplied.

No information available. **Symptoms**

Aggravated Medical Conditions Eye disorders. Skin disorders. Respiratory disorders.

Toxicologically synergistic None known.

products

Toxicokinetics, metabolism and No information available.

distribution

Product Acute Toxicity Data

Oral Exposure Route No data available **Dermal Exposure Route** No data available Inhalation (Dust/Mist) Exposure Route No data available Inhalation (Vapor) Exposure Route No data available Inhalation (Gas) Exposure Route No data available

Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	36,337.00 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

<u>Ingredient Acute Toxicity Data</u>

Oral Exposure Route

Oral Exposure Route				If available, see data below		
Chemical name	Reported	Exposure	Toxicological effects	Key literature references and		
	type	dose	time		sources for data	
Sodium hydroxide (20 - 30%)	Rabbit LD50	500 mg/kg	None reported	None reported	No information available	
CAS#: 1310-73-2						

Chemical name Endnaint		Danastad		Taylanlarian offeets
Dermal Exposure Ro	oute	If available, see data below		

	Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
	Sodium hydroxide	Rabbit	1350 mg/kg	None	None reported	IUCLID (The International
1	(20 - 30%)	LD ₅₀		reported		Uniform Chemical Information
Į	CAS#: 1310-73-2					Database)

Inhalation (Dust/Mist) Exposure Route If available, see data below Inhalation (Vapor) Exposure Route If available, see data below If available, see data below Inhalation (Gas) Exposure Route

Product Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route No data available **Dermal Exposure Route** No data available Inhalation (Dust/Mist) Exposure Route No data available Inhalation (Vapor) Exposure Route No data available Inhalation (Gas) Exposure Route No data available

Ingredient Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route	If available, see data below
Dermal Exposure Route	If available, see data below
Inhalation (Dust/Mist) Exposure Route	If available, see data below
Inhalation (Vapor) Exposure Route	If available, see data below
Inhalation (Gas) Exposure Route	If available, see data below

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Aspiration toxicity

No data available

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

If available, see data below

	· · · · · · · · · · · · · · · · · · ·					
Chemical name	Test method	Species	Reported	Exposure	Results	Key literature
			dose	time		references and
						sources for data
Sodium hydroxide	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS (Registry of
(20 - 30%)			_			Toxic Effects of
CAS#: 1310-73-2						Chemical Substances)

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

If available, see data below

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide	Standard Draize	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of
(20 - 30%)	Test				•	Toxic Effects of
CAS#: 1310-73-2						Chemical Substances)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route

Respiratory Sensitization Exposure Route

No data available.

No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure RouteIf available, see data below.Respiratory Sensitization Exposure RouteIf available, see data below.

Chronic Toxicity Information

Product Specific Target Organ Toxicity Repeat Dose Data

Oral Exposure Route

Dermal Exposure Route

Inhalation (Dust/Mist) Exposure Route

Inhalation (Vapor) Exposure Route

Inhalation (Gas) Exposure Route

No data available.

No data available.

No data available.

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
Inhalation (Gas) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
If available, see data below

Product Carcinogenicity Data

Oral Exposure RouteNo data availableDermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Ingredient Carcinogenicity Data

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Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Sodium hydroxide	1310-73-2	•	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of	Does not apply
Labor)	·

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
If available, see data below
If available, see data below

Product Germ Cell Mutagenicity invitro Data

No data available.

Ingredient Germ Cell Mutagenicity invitro Data

No data available

Product Germ Cell Mutagenicity invivo Data

Oral Exposure RouteNo data availableDermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Ingredient Germ Cell Mutagenicity invivo Data

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
Inhalation (Gas) Exposure Route
If available, see data below

Product Reproductive Toxicity Data

Oral Exposure RouteNo data availableDermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Ingredient Reproductive Toxicity Data

Oral Exposure RouteIf available, see data belowInhalation (Dust/Mist) Exposure RouteIf available, see data belowInhalation (Vapor) Exposure RouteIf available, see data belowInhalation (Gas) Exposure RouteIf available, see data below

12. ECOLOGICAL INFORMATION

Ecotoxicity Not considered to be harmful to aquatic life

Product Ecological Data

Aquatic toxicity

Fish No data available Crustacea No data available

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Algae No data available

Ingredient Ecological Data

Aquatic toxicity

Fish If available, see ingredient data below

Chemical name	Exposure	Species	Endpoint	Reported	Key literature references and
	time		type	dose	sources for data
Sodium hydroxide (20 - 30%)	96 hours	Oncorhynchus mykiss	LC ₅₀	45.4 mg/L	IUCLID (The International Uniform Chemical Information
CAS#: 1310-73-2					Database)

If available, see ingredient data below Crustacea **Chemical name Exposure Species Endpoint** Reported Key literature references and time sources for data dose type Sodium hydroxide 48 Hours Daphnia sp. 40.4 mg/L **IUCLID** (The International EC50 (20 - 30%)**Uniform Chemical Information** CAS#: 1310-73-2 Database)

Algae No data available

Other Information

Persistence and degradability

Product Biodegradability Data

If available, see ingredient data below.

Ingredient Biodegradability Data

Test data reported below

Test method	Biodegradation	Exposure	Results
		time	
None reported	None reported	None reported	Readily biodegradable
			None reported None None None

Bioaccumulation

Product Bioaccumulation Data

No data available.

Partition Coefficient (n-octanol/water)

Not applicable

Ingredient Bioaccumulation Data

Mobility

Soil Organic Carbon-Water Partition Coefficient

Not applicable

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 ma/L	25 °C / 77 °F

Other adverse effects

No information available.

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D002

Special instructions for disposal

If permitted by regulation. Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

14. TRANSPORT INFORMATION

U.S. DOT

UN/ID no UN1824

Proper shipping name Sodium Hydroxide Solution

Hazard Class 8
Packing Group II
Emergency Response Guide 154

Number

<u>TDG</u>

UN/ID no UN1824

Proper shipping name Sodium Hydroxide Solution

Hazard Class 8
Packing Group ||

<u>IATA</u>

UN/ID no UN1824
Hazard Class 8
Packing Group II
ERG Code 154

IMDG

UN/ID no UN1824 Hazard Class 8 Packing Group II

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories

TSCA Complies
DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

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DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

Complies **EINECS/ELINCS ENCS** Does not comply **IECSC** Complies **KECL** Complies Complies **PICCS** Complies **TCSI AICS** Complies Does not comply **NZIoC**

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazardYesChronic Health HazardYesFire hazardNoSudden release of pressure hazardNoReactive HazardNo

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	Х

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide	1000 lb	-	RQ 1000 lb final RQ
1310-73-2			RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

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U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide	X	X	X
1310-73-2			

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sodium hydroxide	180.0910	21 CFR 184.1763

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and Chemical
				Properties -
HMIS	Health hazards - 3	Flammability - 0	Physical Hazards - 0	Personal protection - X
				- See section 8 for more
				information

Key or legend to abbreviations and acronyms used in the safety data sheet

NIOSH IDLH Immediately Dangerous to Life or Health

ACGIH (American Conference of Governmental Industrial Hygienists)

NDF no data

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
IVVA	r vvA (lime-weighted average)	SIEL	STEL (Short Term Exposure Limit)

MAC Maximum Allowable Concentration Ceiling Ceiling Limit Value

X Listed Vacated These values have no official status. The only

binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state

regulations.

SKN* Skin designation SKN+ Skin sensitization
RSP+ Respiratory sensitization ** Hazard Designation
C Carcinogen R Reproductive toxicant

M mutagen

Prepared By Hach Product Compliance Department

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Revision Note None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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End of Safety Data Sheet

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